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UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION

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Industrial Development Board
Fourth session, 1988

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ABBREVIATIONS

ACC	Advisory Committee on Co-ordination
ACT	Analysis of Technological Complexity
AGU	Arab Gulf University
AIDO	Arab Industrial Development Organization
APCCT	Asian and Pacific Centre for Technology Transfer
APPER	Africa's Priority Programme for Economic Recovery 1986-1990
ARCEDEM	African Regional Centre for Engineering Design and Manufacturing
ARSO	African Regional Organization for Standardization
ASEAN	Association of South-East Asian Nations
CAD/CAM	Computer-aided design/computer-aided manufacturing
CCAQ	ACC Consultative Committee on Administrative Questions
COGIT	Consultative Group on Informatics Technology for Development
COMFAR	Computer Model for Feasibility Analysis and Reporting
COPA	United Nations cross-organizational programme analysis
CORIS	Computerized Registry Information System
COSERA	Consultative Group on Solar Energy Research and Applications
CPC	Committee for Programme and Co-ordination
ECA	Economic Commission for Africa
ECBA	Economic Cost-Benefit Analysis Module
ECCAS	Economic Community of Central African States
ECDC	Economic co-operation among developing countries
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
FRAC	Field Representation Advisory Committee
GATT	General Agreement on Tariffs and Trade
GEPLACEA	Latin American and Caribbean Sugar Exporting Countries
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
ILO	International Labour Organisation
INECA	Industrial Energy Conservation Abstracts
INPRIS	Investment Promotion Information System
INTIB	Industrial and Technological Information Bank
IPF	Indicative planning figure

IPS	Investment Promotion Service
ISO	International Organization for Standardization
ITC	International Trade Centre UNCTAD/GATT
ITU	International Telecommunications Union
JPO	Junior Professional Officer
JUNAC	Commission of the Cartagena Agreement
LDCs	Least developed countries
LES	Licensing Executive Society
MEPS	Methodology for assessing, programming and managing integrated production/consumption systems
NC	Numerically-controlled
OAU	Organization of African Unity
OIC	Organization of the Islamic Conference
OLDEPESCA	Latin American Organization for the Fisheries Development
PAID-ESA	Pan African Institute for Development - East and Southern Africa
PER	Project self-evaluation reports
PPER	Project performance evaluation report
PTA	Preferential Trade Area for Eastern and Southern African States
REMLAC	Regional Network for Microelectronics in 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
TAS	Technological Advisory Services
TCDC	Technical co-operation among developing countries
TIES	Technological Information Exchange System
TIRDO	Tanzanian Industrial Research and Development Organization
UDEAC	Central African Customs and Economic Union
UNCHS	United Nations Centre for Human Settlements
UNCTAD	United Nations Conference on Trade and Development
UNDP	United Nations Development Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNIDPLAN	Use of computer-aided tools in industrial planning
UNOV	United Nations Office at Vienna
UNPAAERD	United Nations Programme of Action for African Economic Recovery and Development 1986-1990
VIC	Vienna International Centre
WHO	World Health Organization
XA	Regular budget (IDDA)
XP	Regular budget

Preface

The financial crisis that beset the Organization in 1986 continued throughout 1987. The fundamental problem was that of outstanding contributions which, by the end of the year, accounted for a deficit of no less than \$26.1 million. The lion's share of that deficit, some \$19.2 million, was attributable to one major contributor. However, it should not be overlooked that, at the end of 1987, no less than 50 other Member States - some 33.5 per cent of total membership - had also failed to contribute at all to the budget of the Organization for the 1986-1987 biennium, while another 34 Member States had made only partial contributions.

This shortfall in contributions made the reduction, and in some cases cancellation, of programmed activities necessary. It greatly compounded the difficulties of maintaining the daily operations of the Organization at a reasonable level of efficiency. Most significantly, however, the shortfall induced a substantial loss of staff, leaving gaps that could not be filled for want of funds.

Despite the inordinate constraints, UNIDO was able to deliver \$97.8 million of technical assistance in 1987 and, at the same time, build up an adequate number of project approvals for 1988. That paved the way for a possible overall increase in technical assistance delivery in 1988 and beyond.

Two major factors contributed to the achievements of 1987. First, the continued commitment of UNIDO staff to the Organization and their desire to maintain maximum effectiveness in the face of major financial and human resource constraints. Second, the confidence of Member States in the ability of the Organization to manage its resources and put them to good effect. The latter was evidenced by the increased pledges to the Industrial Development Fund, which have risen steadily from \$14.5 million in 1985 and \$17.7 million in 1986, to peak at \$23.3 million in 1987. The pledges and statements of intent in respect of 1988 that were announced at the second session of the General Conference totalled \$24.7 million. This clear trend, together with the prime emphasis accorded by donors to programmes and projects in Africa, bodes well for the future. These positive developments were bolstered by the ever-broadening range of donors, a trend that had become evident in 1986.

This broader vision of the work of the Organization and a common spirit of endeavour that transcends financial and other difficulties were evident at the second session of the General Conference held in November. In responding to that spirit, UNIDO shall first aspire to meeting the immediate and urgent needs of the developing countries; second, it shall endeavour to bring about conditions that will favour sustainable growth and long-term development in the third world. Third, it shall focus on a new perspective that combines the realities of the world with an innate sense of fairness.

The present annual report describes how UNIDO went about meeting those objectives in 1987. As in the report for the previous year, a conscious attempt has been made to keep the report concise and make effective use of summary tables and charts, while providing as comprehensive a picture as possible of achievements throughout the year, with an additional section devoted to the activities of area programmes.

CHAPTER I. POLICY ISSUES

1. As anticipated, 1987 was a difficult year financially for the Organization. The sharp and sudden drop in the value of the dollar precipitated a steep rise in costs to the Organization and adversely affected the programme of revitalization and innovation that had been introduced the previous year. While every effort was made to preserve the capacity of the Organization for effective technical co-operation, the requirement that UNIDO balance its operational budget (see decision IDB.3/Dec.20) led to a net loss of 108 posts in 1987. This in turn incurred the need to introduce programme cuts and related economies of the order of \$15 million, but it also induced higher productivity and prudent management of scarce resources.

2. Whereas technical assistance delivery, which is often governed by factors beyond the control of the Organization, reached a level of only \$97.7 million in 1987 as against \$99.6 million in 1986, actual delivery against project funds approved for 1987 was successfully maintained at the level of 77.2 per cent for both years; this represents an increase of 7.7 per cent over the previous two-year period. Similarly, project approvals increased from \$93.3 million in 1986 to \$117.8 million in 1987, thus offering good prospects for a technical assistance delivery in excess of \$100 million in 1988. These last two indicators, which point to increased efficiency despite cuts in resources, bear testimony to the efficacy of certain steps taken to enhance operational flexibility and capacity for change within the Organization.

3. The efforts made to improve the quality of technical co-operation projects through the institution of a comprehensive review and appraisal system showed encouraging results. Following the issuance of internal guidelines for project development in January 1987 and the development of new "user-friendly" guidelines for project design and preparation of project documents supported by a series of in-house workshops, independent appraisal was accepted as an effective contribution to the speedy approval and successful implementation of projects. These guidelines were followed by the issuance of a bulletin describing the policy and procedures for the management of UNIDO-administered funds and

for the review, approval and revision of technical co-operation projects financed from those funds. Incorporating the revised terms of reference of the Project Review Committee, the guidelines contributed to a stricter delineation of procedures, and thus to a simplification of the approval process.

4. Steps were also taken to introduce a new approach to project development, based on a subsectoral programming approach derived from systems analysis, it seeks to identify problems impeding the achievement of development objectives in each industrial subsector and to develop effective organizational strategies to address those problems. By its very nature, this approach involves close co-operation between studies and research staff, area officers, appraisal officers and their technical counterparts. Subsectoral analysis of this kind is intended to provide an effective framework for project identification at the country level, as well as the global and regional levels. Moreover, the initial experience with the integrated hides and skins, leather and leather products development scheme drawn up in the course of the year for two subregions in Africa bears out the validity of this approach, which involves different parts of the Organization.

5. Without doubt, the setting of a country focus within the Organization would also have benefited from the attempts made to increase the field experience of Headquarters staff by sending them out into the field for a period of time. However, current financial constraints and the need to derive the maximum from staff at Headquarters has combined to limit the scope of this experiment. In 1987, 30 staff members were seconded to field projects on short-term missions for a total of 34.2 work-months. At the same time, moves were made to enhance the effectiveness of UNIDO's continuous field presence. A Field Representation Advisory Committee (FRAC) was established in August 1987 to develop and formulate guidelines for the selection, classification, recruitment, appointment, location, reporting, administration and performance evaluation of Senior Industrial Development Field Advisers (SIDFAs). In the selection of SIDFAs, due consideration was also given to the candidature of qualified staff members willing to avail themselves of the

opportunity to serve in such a capacity or in similar posts as chief technical advisers or project co-ordinators. In the course of 1987, two staff members took up SIDFA appointments in addition to three staff members already in the field, and two others were posted at the outset of 1988.

6. The operational flexibility of the Organization was enhanced by the creation of the Section for Integrated Industrial Projects in the Department of Industrial Operations. The primary responsibility of the Section is the development, co-ordination and monitoring of the implementation of selected large-scale technical projects that involve several branches. It is also responsible for developing and managing joint technical co-operation programmes with the Food and Agriculture Organization of the United Nations (FAO), as well as managing pipeline projects within the Department of Industrial Operations. This latter function has been matched by the introduction of a pipeline project management system in the Area Programmes Division which permits more effective harmonization of the Organization's programming efforts with those of the United Nations Development Programme (UNDP), as well as closer co-ordination between the project development function of the Department for Programme and Project Development and the project implementation function of the substantive units.

7. The use of task forces and working groups, both formal and informal, was expanded throughout the year to include a broad range of concerns, thus helping to enhance inter-departmental and programme co-ordination, as well as to ensure a unified organizational approach to major issues. In addition to the development of the new programming approach described in paragraph 4 above, particular attention was devoted to developing a strategy for UNIDO in industrial rehabilitation, as well as to new concepts and approaches for the work of the Organization as a whole. An operational task force was established at the Deputy Director-General level to co-ordinate and expedite the clearance of various projects and ensure the more effective use of Special Industrial Services (SIS) programme funds.

8. Among the task forces of longer standing, the Task Force for the Industrial Development Decade for Africa initiated the preparation of a policy paper comprising an action plan for enhanced support to the industrial development of the region. Comprising a brief review of current economic trends and development programmes,

the paper identified key areas for action and a specific supporting role for UNIDO. Its main emphasis lay on industrial policies and strategies, agriculture-related industry, industrial rehabilitation, attraction of investments, small-scale industry and human resource development. A similar task force was set up for the Latin American and Caribbean Region. Designed to play a central co-ordinating role in all activities relevant to the co-operation of UNIDO with the countries of that region, it was actively involved throughout the latter half of the year in developing an integrated and coherent programme of technical co-operation and promotional activities at the national, subregional and regional, as well as sectoral levels.

9. As an outcome of the management audit undertaken in the last quarter of 1980, a number of organizational changes were introduced in the course of 1987. A series of structural moves were made to ensure closer co-ordination and reduce overlap of functions. Purchase and Contracts, for example, became an integral part of General Services, while Accounts and Payments were reconstituted as a single unit. The findings of the management audit contributed to the identification of measures subsequently taken to ensure the long-term financial viability of the Organization, such as agreed separations that helped to reduce the number of staff counted against the operational budget. The management audit also identified areas for organizational improvement and paved the way for the increased efficiency noted in paragraph 2 above.

10. A major factor in any endeavours on the part of UNIDO to improve efficiency and increase technical assistance deliveries is the quality of its staff. In the course of 1987, the staff showed itself capable of assuming appreciable increases in workload and maintaining the developmental thrust of the Organization. Adequate provision was thus made in the programme and budgets for the biennium 1988-1989 to ensure that extensive training would be available for staff taking on new duties and increased responsibilities.

11. In all these efforts, the Director-General was assisted by the Executive Management Committee. Composed of the Deputy Directors-General and other senior staff, the Committee met regularly throughout the year to consider policy and management issues. Advice on policy issues was also provided by the Special Advisory Group of eminent experts who at their meeting in February 1987 put forward

suggestions related to the medium-term plan as well as to new concepts and approaches to industrialization. Their valuable contributions were further refined by an open-ended working group of Member States. This elaboration of concepts and approaches is by its very nature an iterative and continuous process. The regular follow-up and possible revision of the original proposals, together with the launching of new ideas, will be carried out in close interaction with the Member States and other interested parties.

12. For all the financial difficulties that dogged the Organization throughout the year, the work of the Organization ended on a positive note. At the second session of the General Conference not only was the programme and budget for the next biennium approved by consensus, but clear steps were taken to improve the financial state of the Organization. A split-currency system of assessment was introduced. The Working Capital Fund of \$9 million was approved for the next biennium and a supplementary estimate of \$3.1 million was granted for the 1986-1987 biennium to cover resource shortfalls linked to the depreciation of the dollar.

13. Clear stands were adopted on human resource development, the industrialization of Africa, the mobilization of financial resources and external debt, the least developed countries, South-South co-operation, women in industry and technical assistance to specific countries or groups of countries. The notable increases in pledges to the Industrial Development Fund announced at the Conference also marked growing confidence in the innovative approaches being adopted by UNIDO in the utilization of those resources. The spirit of consensus that prevailed at the Conference was seen as a direct outcome of the extensive preliminary deliberations in the Contact Group of Permanent Missions in Vienna.

14. As the President of the Conference said in his closing statement, the new perceptions achieved at the Conference had brought about a clearer understanding of the factors constraining development. The results of the Conference would guide the Organization in its future work. The varied programmes of UNIDO were seen to have taken on a new and more effective dimension since its transformation into a specialized agency, and the Organization was seen to have proved itself capable of dealing more effectively with the complexities and inherent dynamism of international industrial co-operation.

Intergovernmental organs

15. The year 1987 saw the holding of the second session of the General Conference in Bangkok, Thailand, from 9 to 13 November (see paras. 12-14 above). 1/ The Conference was preceded by the third session of the Industrial Development Board which took place in July and October 2/ and the third session of the Programme and Budget Committee, held in March, June and October. 3/

16. At its first and second regular sessions of 1987, the United Nations Economic and Social Council called for action or contributions by specialized agencies in a number of fields. Also of relevance to UNIDO are various decisions adopted by the Governing Council of the United Nations Development Programme (UNDP) at its thirty-fourth session.

17. A number of decisions and resolutions adopted by the United Nations General Assembly at its forty-second session are also of interest to, or call for action by, UNIDO. Of particular relevance to the work of the board are resolutions 42/226 C dealing with the United Nations loan to UNIDO, 42/190 on operational activities for development and 42/215, in particular section III as it relates to the evaluation of UNDP-financed technical co-operation activities of UNIDO in the field of manufactures. 4/

1/ The decisions and resolutions adopted by the General Conference at its second session are contained in document GC.2/LNF.4.

2/ For the report of the Industrial Development Board on the work of its third session see documents GC.2/3 and Add.1.

3/ For the report of the Programme and Budget Committee on the work of its third session see documents IDB.3/2 and Add.1 and 2.

4/ A list of the resolutions and decisions of the United Nations General Assembly, the Economic and Social Council and the Governing Council of UNDP 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. In the course of 1987, the Studies and Research Division suffered a further reduction in its regular budget resources, including its staff, causing a delay in the output delivery under certain parts of the important programme elements, particularly those related to the African and Latin American regions and the agro-industry and the capital-goods industry studies. Nevertheless, the implementation of projects financed from extra-budgetary sources - predominantly field studies and related workshops - increased by nearly 50 per cent from \$0.7 million in 1986 to \$1.1 million in 1987 (the latter being almost three times as large a sum as the current annual regular budget allotment in terms of consultants, travel and meetings). Also, several staff members contributed directly to the implementation of technical co-operation projects in their capacity as experts. The Division continued to be actively involved in the preparation of policy papers, e.g. the work related to the open-ended working groups established by the Industrial Development Board on the question of new concepts and approaches for co-operation in industrial development (implementation of Article 2 (c) of the Constitution), contributions to internal working groups on UNIDO policies for industrial rehabilitation, and issue papers for the second session of the General Conference on external debt, policies for industrial recovery, mobilization of financial resources and development of human resources.

The Global Report and related studies

2. The work of the Global Studies branch continued to focus on an assessment of the rapidly changing and uncertain world industrial economy, with the main research findings being incorporated in Industry and Development: Global Report 1987 (ID/348). The Report, which has received much favourable comment since its first (1985) issue, continued to provide short-term economic and industrial projections, by country and region, and for 28 sectors of industry. In the 1987 issue greater sector detail was provided, and more information was given on UNIDO technical co-operation

activities within each sector. A special chapter dealt with the impact of the exogenous economic shocks of the 1980s on industrialization in the developing countries and the policy responses to those shocks. Work commenced on the Global Report 1988, which will feature chapters on small-scale industry - especially its role in relation to the new emphasis on price and policy reform sweeping through the developing countries - and an analysis of technical complexity in capital goods industries.

3. Four further issues of the journal Industry and Development (ID/SER.M/20-23) were prepared. These contained articles on small-scale industry, on efficient policy and price interventions, on implications of the micro-electronics revolution for developing countries and on other current topics. A book on the design of price-based policy measures (e.g. indirect taxes) and the impact of such measures on industrial development was completed for commercial publication in 1988. Work related to projections methodology and the updating of statistics, including input-output tables, continued during the year. Various policy-oriented documents were prepared for the second session of the General Conference and other United Nations meetings, dealing in particular with an analysis of the current problems, the future outlook of the global industrial economy and related policy issues. In addition, a staff member assisted the Secretariat of the Economic and Social Commission for Western Europe to prepare a study on the region's energy plan and another staff member participated in the World Bank study team on industrial restructuring and export policy in Ghana.

Country- and region-specific studies and related support activities for programme and project development

4. The Regional and Country Studies branch continued to develop its work as a research service aimed at (a) providing support to other UNIDO programmes and (b) rendering direct advisory services to developing countries. The economic research service in support of other UNIDO programmes covered firstly studies for country programming, programme formulation and project development. The country focus policy of the Organization increased the need for country data and analyses. This need was primarily met by the Industrial

Development Review Series, which provide basic information and analyses on the manufacturing industry in individual developing countries. In 1987, eight of the Reviews, covering 27 developing countries, were completed. Specific field studies were also carried out to identify technical co-operation requirements for a medium-term perspective, e.g. a study entitled "People's Democratic Republic of Yemen: A Framework for Technical Assistance Programming in the Industrial Sector" ^{1/} which is currently being used as a programming tool to define the future role of UNIDO in the industrial development process of Democratic Yemen. Staff of the branch also participated in a UNDP Needs Assessment Mission in Sudan.

5. In support of the special trust fund programmes, staff of the branch participated in a mission to Indonesia and the Philippines organized jointly by UNIDO and the Engineering Consulting Firms Association of Japan and aimed at (a) elaborating an overview of the countries' private, medium-sized support industries (i.e. production parts and components for final product industries); (b) identifying technical co-operation needs and opportunities for modernization or expansion investment; and (c) the design of appropriate tripartite institutional arrangements, i.e. between the trust-fund donor (in this case Japan), UNIDO and the recipient country. This type of analytical back-up for trust-fund programmes in developing countries is expected to gain importance in the work of the branch.

6. Work in support of the programme of integration of women in industrial development included studies on the role of women in industrial development in Nepal, Sri Lanka and Zimbabwe. The studies, which were financed by a special-purpose contribution, identify the prospects and future challenges for enhancing the role of women in industrial development, and discuss policy measures for increased integration of women in the industrial and technological planning process and in entrepreneurship. Among the research service for investment promotion activities, an industrial development review of Indonesia was prepared as a source of essential background information for a UNIDO meeting held in Indonesia. The information coverage in the series of reviews is, in fact, being extended to include national investment regulations and priorities. At the request of the Department of Industrial Operations, the

branch co-ordinated activities in regional co-operation in the field of industrial energy conservation and participated in research work on industrial energy conservation policies in some European countries receiving technical assistance.

7. Besides these various support studies, some research activities were undertaken for specific national and regional policy-making bodies. This type of activity is seen as an important element of the continuing substantive dialogue UNIDO has with policy makers of developing countries, and serves as a forerunner for subsequent, larger technical co-operation programmes of UNIDO or bilateral agencies. In some Asian countries, policy-oriented studies were carried out and national seminars held on policies for the development of small-scale and rural industries. Advisory services financed under the regular budget (Xb) were provided to Mexico, Nicaragua, and Peru. Advisory activities were also carried out at regional and subregional levels. The four Regional Advisers provided policy advice to Governments in their respective regions and participated in regional activities within the work of the Joint Industry Divisions of the Regional Commissions. A regional seminar on industrial policy and structural adjustment, with special focus on the textile and garment industry, was organized with the Korea Development Institute and held in September at Seoul, Republic of Korea, at which policy makers in developing countries of the region shared their experience pertaining to structural adjustment policies and reviewed options for future policies and prospects for relevant regional co-operation. For the Committee on Industry, Minerals and Energy of the Association of South-East Asian Nations (ASEAN), a study was prepared on new forms of industrial co-operation and investment policies in regional arrangements. The study covered the comparative experience of Latin American countries and the European Economic Community pertaining to industrial co-operation and development and examined possible ways in which their schemes could be utilized by ASEAN in strengthening its industrial co-operation mechanisms. Moreover, policy-oriented studies were carried out in some Asian countries and seminars were held on development of small-scale and rural industries.

8. In recognition of the need for broadening and diversifying the industrial base of the Pacific and Caribbean island countries, the branch, with the Section for Economic Co-operation among Developing Countries, organized a workshop-cum-study tour for representatives from seven Pacific

^{1/} PPD.40 (SPEC).

member countries of the Commonwealth Heads of Governments Regional Meeting to Caribbean countries for an exchange of views and experiences on common industrial development problems and issues. Focus was placed on the processing of natural resources, particularly marine food resources, tropical fruits and other agro-food industries. Towards the end of the year, a meeting with policy makers and economic researchers from Latin America and the Caribbean was held at Montevideo, Uruguay, in co-operation with the Economic Commission for Latin America and the Caribbean (ECLAC) on policies for increasing industrial competitiveness. The need for closer interaction between national entities and for a regular interchange of information at the regional level on measures for enhancing competitiveness was emphasized, as was the need for UNIDO and ECLAC to pursue and increase their joint support activities in this field.

Sectoral studies and related support activities for programme and project development

9. Efforts continued to incorporate the results of the sectoral studies into UNIDO operational activities and to support those activities in a number of ways. Methods for integrated sectoral programme development were elaborated and tested. Several studies were issued that identified future trends and new areas where UNIDO action would be required. Staff members from the Sectoral Studies branch participated as experts in technical co-operation projects that addressed industrial subcontracting, industrial planning, development of the pharmaceutical industry and industrial information systems. Twenty-three documents covering nine sectors were issued in the Sectoral Studies or Sectoral Working Paper Series.

10. A large part of the work was concentrated in food and agriculture-related industries. A major study on industrial development strategies for fishery systems in developing countries, completed in 1986, was issued and given wide dissemination. A special study on the integration of women in the fisheries industry was completed. Also in relation to the fisheries industry work on indicative programmes for UNIDO support activities was initiated and a case study was undertaken on the impact of proposed technical co-operation projects on the fisheries industrial systems in Guinea. A users' guide to the method for assessing, programming and managing integrated production/consumption systems (MEPS) was issued and its practical application continued for the fisheries industry in

Peru and for food security in the Andean Pact countries. A major study was finalized on guidelines for the development of the agricultural machinery and implements industry in Latin America, including three in-depth country case studies for Brazil, Guatemala and Venezuela.

11. The second area of concentration of the sectoral studies concerned the development of the capital goods industries and, in particular, the impact of the introduction of industrial automation technologies. Several studies on Latin America, especially of the Andean subregion, were issued, which examined prospects for small- and medium-scale enterprises in view of the introduction of automation technologies and the possibilities for regional and subregional co-operation in the production of capital goods. A study on strategies and policies for the development of the capital goods sector in the Arab world was also issued. Several expert meetings and seminars were organized with the purpose of disseminating study results and laying the basis for further action in the area of capital goods and industrial automation. Regional co-operation possibilities were discussed at the first Meeting of Latin American Institutions dealing with the Capital Goods Sector, organized jointly by UNIDO, the Latin American Economic System and ECLAC and held at Caracas, Venezuela, in July. Similar topics were discussed at the Fourth ECLAC/UNIDO expert group meeting on capital goods industries in Latin America, held at Santiago de Chile in November. A technical working group for the formulation of a working programme for the Commission of the Cartagena Agreement (JUNAC) on microelectronics in the capital goods industry recommended a joint UNIDO/JUNAC programme for technical innovation in the capital goods industries in the Andean Pact countries. Preparatory work has already begun on such a programme which is expected to include technical assistance, training, development of managerial and entrepreneurial capacities and industrial studies. A particularly important seminar on the production and use of machine tools in selected developing countries was held on the occasion of the 7th European Machine Tool Exhibition at Milan, Italy, in October. The seminar, which was financed by a special contribution from the Government of Italy, identified the progression of automation technologies in the capital goods industry, from the upgrading of conventional machine tools to the introduction of computer-numerically-controlled machine tools and the introduction of computer-aided design/computer-aided manufacturing (CAD/CAM), industrial robots, flexible manufacturing systems and computer-integrated

manufacturing. The strategic situation of developing countries at each one of these stages was discussed and recommendations for UNIDO support activities were made. Technical assistance and investment requirements in the sector were also identified at the seminar and several project concepts were formulated. Contacts were initiated between investors present at the exhibition and participants of the seminar, which are being followed up by the UNIDO Investment Promotion Service office in Milan.

12. In the field of building materials, UNIDO contributed to the International Year of Shelter for the Homeless a document entitled "The building materials industry: its role in low-cost shelter programmes". A special study on industrial research and services in the building materials and construction sector was issued. In the metallurgical sector a review of the iron and steel industry in the Economic and Social Commission for Western Asia region was issued, and a study on environmental assessment and management in the non-ferrous metals industry was prepared for use in the First Consultation on Non-ferrous Metals held late in the year.

13. Apart from the ongoing work on pesticides, the work in chemical industries concentrated on the pharmaceutical industry. A study on the phyto-pharmaceutical supply system in China was issued for the Third Consultation on the Pharmaceutical Industry in October. Under a special trust-fund arrangement, opportunities for the manufacture of pharmaceutical chemicals in the Arab region and two developing countries in Africa were identified and a special volume of demand/supply profiles was compiled. Studies on tariff and non-tariff barriers to world trade in pharmaceuticals and in pesticides were issued. Work on the prospects for the production of pesticides in developing countries was continued but could not be finalized during the year owing to lack of staff resources.

Industrial statistics and related programme support activities

14. Work in this domain focused on three broad types of interrelated activities: the improvement and extension of the UNIDO data base to better meet the needs of users both within and outside UNIDO; the development of project concepts and related forms of technical co-operation pertaining to the field of industrial statistics; and the dissemination of industrial statistics and related empirical studies.

15. In their work on the UNIDO data base, statisticians focused on the development of

estimates and adjustments in order to achieve a comparable and standardized set of industrial data. Industrial statistics receive primary attention in this regard although other data, i.e. national accounts, production commodity, trade, finance and population, are also included in the data base. A related feature of this work is the extension of the level of detail and specificity of the industrial data. This issue has been the subject of discussion between UNIDO and the United Nations Statistical Office. The desire of UNIDO to collect more relevant and useful types of data has led to modification of the United Nations industrial statistics questionnaires that are forwarded to Member States.

16. In supporting the development of project concepts and related forms of technical co-operation, work in the Industrial Statistics and Industrial Development Survey Section focused on the construction of computerized systems for collection, storage, retrieval and dissemination of industrial data at the national and subregional levels. The development of such systems is based on an international format but takes into account the specific needs and collection practices of individual countries. In addition to contributing to improvements in data collection practices, the computer systems are designed to meet the statistical needs of policy officials and analysts who have decision-making responsibilities in the industrial sector. The Section has also actively participated in other forms of technical co-operation which have a distinct statistical element.

17. With regard to data dissemination, the Section served users within UNIDO through several means. 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. For users outside the Organization, the Section supplies machine-readable copies of the UNIDO data base. These are 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 and the World Tables of the World Bank and the Handbook of International Trade and Development Statistics of the United Nations Conference on Trade and Development (UNCTAD).

18. Three statistical documents were published in 1987: "An inventory of industrial statistics: UNIDO data base,

1987" (PPD/35 (SPEC.)) provides users with an overview of the contents of the data base; "Comparisons between industrial statistics and national accounts" (PPD.61 (SPEC.)) summarizes the results of a comparison between manufacturing data drawn from national accounts and figures obtained from industrial censuses; and "Improving the international comparability of industrial statistics" (PPD.68 (SPEC.)), describes the adjustments necessary for international data to meet standards of consistency and comparability. Preparations for a new edition of the Handbook of Industrial Statistics have been initiated. The Handbook, to be published in 1988, provides a large volume of international data on structural change, industrial performance and productivity trends and represents a set of industrial indicators which will not be available elsewhere. In a related form of empirical research a quantitative evaluation of structural change and its impact on international differences in competitive abilities is under preparation. The manuscript is scheduled for completion in 1989.

B. TECHNICAL CO-OPERATION

I. Programme and Project Development

19. The major emphasis of the work of the Area Programmes Division within the Department for Programme and Project Development during 1987 was on planning, developing and monitoring programmes and projects of country, regional, interregional and global nature. Since the year marked the beginning of the fourth country programming cycle (1987-1991) of the United Nations Development Programme (UNDP), a major effort was devoted to formulating industry sector projects at both the country and regional levels for implementation during the cycle. Twenty-five programming and project formulation and review missions were carried out. The aim of these missions was to build up, in consultation with Governments and UNDP Resident Representatives, a new portfolio of pipeline projects, review the ongoing ones and resolve any outstanding issues in order to ensure smooth programming activities. As a result of close monitoring of programme and project development, 616 new projects were approved in 1987 with a total value of \$89.9 million financed from various sources of funds. A remarkable increase over 1986 was recorded for projects funded under the UNDP/indicative planning figure (IPF) and cost sharing - from \$58.9 million to \$83.3 million in the

overall net value of projects approved, i.e. more than 40 per cent. There was also a significant growth in the development of projects funded from IDP. The number of new projects rose from 201 in 1986 to 231 in 1987 with a value of \$13.5 million and \$20.8 million respectively. For more details see chapter VIII, part A.

Africa Region

20. The technical co-operation programme of UNIDO for the industrial development of the African region is carried out within the overall framework of the United Nations Programme of Action for African Economic Recovery and Development 1986-1990 (UNPAAERD), and the objectives of the Industrial Development Decade for Africa (IDDA). To guide the UNIDO programme, an action plan for enhanced support to the industrial development of Africa was developed. In the activities of UNIDO in 1987, emphasis was placed on the following major areas: industrial policy reform, industrial rehabilitation and restructuring with particular emphasis on agro-related industries, human resources development and efficient industrial manpower planning and utilization - particularly the development of entrepreneurial capabilities, including an expanding role for women in industrial activities.

21. During the year, the majority of African countries took concrete steps to bring about a structural adjustment of their economies in consonance with Africa's Priority Programme for Economic Recovery 1986-1990 (APPER) adopted by the Assembly of Heads of State and Government of the Organization of African Unity (OAU) in 1985. Within that framework UNIDO assistance was requested by some of the Governments to carry out comprehensive reviews of their industrial policies and programmes and formulate recommendations as to their restructuring or reorientation in order to facilitate the achievement of the goals of UNPAAERD and APPER. Programmes and projects for such structural adjustment were developed for four countries in West Africa, two in Central Africa, two in East Africa and four in Southern Africa. In the area of the development of entrepreneurial manpower and technological capabilities assistance in the identification and formulation of the requisite programmes and projects was given to several countries, e.g. Gambia, Kenya, Mozambique, Nigeria, Senegal, Sierra Leone, United Republic of Tanzania, Zaire and Zimbabwe.

22. In the agro-related subsector, including food processing, assistance was provided in developing projects involving

agricultural machinery, equipment, implements and tools as well as pesticides and fertilizers. Subregional organizations (e.g. Economic Community of West African States (ECOWAS) and Preferential Trade Area for Eastern and Southern African States (PTA)) and individual countries (e.g. Angola, Burkina Faso, Mozambique, Nigeria and Zimbabwe) were assisted in these fields. Project development assistance also included the development of new and renewable forms of energy (United Republic of Tanzania, Zimbabwe) and the development of building materials from locally available raw materials (Cameroon, Madagascar, Zimbabwe). Projects were also formulated in a wide variety of areas including: the production of pumps and irrigation equipment, standardization and quality control, development of wood industries, processing and conservation of agricultural products, development of small and medium-scale industries (Botswana, Burundi, Cameroon, Côte d'Ivoire, Ethiopia, Guinea-Bissau, Mozambique, Senegal, Togo, Uganda, Zaire, Zambia), the development of repair and maintenance centres (Angola, Cameroon), industrial manpower training (Côte d'Ivoire, Mozambique), assistance in feasibility studies and investment promotion (Ghana, Guinea-Bissau, Kenya), the production of vaccines (Madagascar), metallurgical development and the development of leather and leather products (Nigeria), and industrial planning (Cameroon, Senegal, Zaire). Assistance was also provided in the development of projects to enhance private sector initiatives and to expand the role of women in industrial activities particularly in small- and medium-scale industries.

23. At the regional and subregional levels, technical co-operation programmes and projects were developed to assist the African countries and relevant intergovernmental organizations and institutions in addressing their common problems and undertaking activities aimed at their economic integration. In line with the importance given by these countries and a number of financing institutions, including UNDP, to industrial maintenance and rehabilitation, UNIDO, in consultation with ECA, launched the preparatory phase of a UNDP-financed \$5 million programme for industrial maintenance and rehabilitation. Full implementation of the project, in co-operation with ECA is expected to last well into the current cycle. Other regional projects developed or under development during the year included assistance to the African Regional Organization for Standardization (ARSO) aimed at promoting metrology, standardization and quality control, and assistance to the African Regional Centre

for Engineering Design and Manufacturing (ARCEDEM) to promote engineering design and the production of industrial spare parts and prototypes.

24. For the African region as a whole, including the least developed countries, a total number of 36 new IPF projects with a value of \$13.7 million was approved. Within UNIDO-administered funds, 20 new projects valued at \$0.7 million were approved under the Special Industrial Services (SIS) programme; 52 new projects valued at \$2.9 million under the IDP and 28 other projects valued at \$5 million from other sources of funds. In total, 136 new projects valued at \$22.3 million were approved in 1987. In view of the importance of the programme, steps are being taken to strengthen UNIDO's presence in Africa with the appointment of additional SIDFAs in the region.

Arab States

25. The high investment in the industrial sector of certain Arab countries, which reached its peak in the early part of the 1980s, has slowed down considerably, adversely influenced by rapidly decreasing earnings when oil production and prices started to fall. With the level of industrial development still at an early stage, the Arab States have taken the initiative to intensify their efforts to overcome the shortfalls of the sector particularly in view of the importance of diversifying their economic outputs while decreasing their dependence on oil. It is within this context that UNIDO is being considered an important source of technical assistance. The UNIDO programme for technical co-operation in the Arab region has been guided and shaped in the light of the prevailing economic and social conditions in the Arab States and took into account the programmes of the various regional Arab organizations as well as the United Nations Economic and Social Commission for West Asia (ESCWA). In addition to continuous dialogue with the Governments concerned, resolutions of high-level multilateral forums and of meetings of the Arab Ministers of Industry form an important basis for the programme development process.

26. For the current IPF cycle, UNIDO has conducted a series of consultations with the Governments concerned and with UNDP to identify priority areas for technical co-operation irrespective of the source of funds. While some of the projects are carried on from the previous cycle, new concepts are being introduced to answer the urgent needs as dictated by the recent

restructuring processes and policies in different countries: rehabilitation of specific industrial units struck with ill-performance, assistance to the private sector especially for the development of downstream industries, high-technology and development of relevant capabilities.

27. During 1987 programme and project development activities focused mainly on two tasks: (a) project formulation in those countries where UNDP country programmes for the cycle 1987-1991 had been approved (Algeria, Democratic Yemen, Djibouti, Egypt, Iraq, Kuwait, Mauritania, Morocco, Oman, Saudi Arabia, Somalia, Syrian Arab Republic, Tunisia, United Arab Emirates); (b) project identification and development in support of the preparatory process of the 1987-1991 UNDP country programmes (Bahrain, Jordan, Lebanon, Libyan Arab Jamahiriya, Qatar, Yemen and the Sudan) as well as the inter-country (regional) programme, which are to be presented to the UNDP Governing Council in 1988. In the process of identifying and developing projects, particular efforts were made to secure additional sources of finance to augment the IPF by cost sharing (mostly on a 100 per cent cost-sharing basis in the case of the country programmes for the member States of the Co-operation Council for the Arab States of the Gulf Secretariat General) and increased government contribution in local currency (e.g. in Algeria). Special efforts were also made to promote trust-fund arrangements to finance projects in several countries.

28. As a result, under various sources of funding, 18 projects amounting to \$2.1 million were approved in least developed countries and 44 new projects with a total sum of \$6.5 million in other developing countries covering numerous industrial activities such as the development of small- and medium-scale industries, introduction of new technologies, industrial planning, industrial advisory services, manpower training, pre-investment and feasibility studies and special services in such areas as petrochemicals, engineering industries and biotechnology.

Asia and the Pacific Region

29. At the end of 1987, 23 of the 31 country programmes in the region covering the fourth cycle 1987-1991 had been approved or prepared which, together with the inter-country programme that had also been approved, amounted to an estimated IPF value of \$1,045 million. The

industry share would thus be in the vicinity of 20 to 25 per cent of the total IPF. In order to ensure that the new projects came onstream at the earliest stage of the programming cycle, thereby minimizing the possibilities of delays and the consequent underspending that occurred in the previous cycle, the UNDP Regional bureau for Asia and the Pacific and UNIDO agreed to set up a pipeline formulation plan. This plan gives an overview of projects in the firm pipeline, the target dates for project formulation and approval, and the actions expected to be taken. It has, from the outset, proven to be an excellent managing tool and has significantly stepped up the pace of approvals.

30. The projects emerging from within and outside the various country programmes in the region represented in large measure a continuation or expansion of efforts to apply new, or upgrade existing technologies that would improve efficiency in food processing, textile and clothing industries, leather and rubber products industries, materials and construction industries. Projects in these fields were approved during the year in China, Burma, Democratic People's Republic of Korea, India, Indonesia, Sri Lanka and Viet Nam. There was a noticeable increase in the requests for UNIDO services in the area of packaging (mainly for food products) as exemplified in the projects requested by China, Indonesia, Democratic People's Republic of Korea, Thailand and Viet Nam. Projects to strengthen capabilities and modernize facilities for the production of major agricultural and industrial inputs such as fertilizers, pesticides, basic chemicals, synthetic fibres and plastics are high in the list of programmes in Burma, China, Democratic People's Republic of Korea, Iran (Islamic Republic of), India, Indonesia, Mongolia, Pakistan and Viet Nam. The development of new energy sources and better management of energy in industry were the subject of project requests from China, Republic of Korea, the Philippines, and Viet Nam. "High tech" figured in the requests for the development of new materials such as carbon fibres (Republic of Korea), the development of novel shape selective zeolite catalysts, and the development of amorphous silicon solar cells (both in India). Assistance to the metallurgical industries was requested in the fields of heat treatment (China, Viet Nam), foundry (Iran (Islamic Republic of), Sri Lanka), metallic corrosion and protection (China). The application of new technologies in the aluminium and copper industries was the subject of assistance requests from China, India and Iran (Islamic Republic of). A preparatory

mission was launched to examine the feasibility of setting up a computer-based maintenance management system for the iron and steel plants in the Association of South-East Asian Nations (ASEAN) region. Projects that included CAD/CAM elements were requested by China and Sri Lanka.

31. While requests for assistance in the application of new technologies is on the upswing, several countries in the region underlined the need for continuing assistance to small-scale industries on matters ranging from policy evaluation to setting up integrated entrepreneurship and technological services. Projects in these areas were prepared in China, Indonesia, Malaysia, Philippines, Solomon Islands and Tonga. At the level of specific enterprise and productive plants, projects to assist in management and rehabilitation were developed for China, Indonesia, Pakistan and the Philippines with the aim of coping with critical bottlenecks.

32. Groundwork has therefore been laid that permits an optimistic outlook for 1988. The programme reviews held in 1987, particularly in Viet Nam and Indonesia, and the various preparatory assistance missions that were fielded are expected to make 1988 a crucial year for ensuring that projects funded under IPF are delivered in full during the cycle.

33. In a region where there are evidently demands of a higher sophistication, the challenge remains to design and implement projects that call for quick and effective responses to the need for short-term advisory services, study tours, and placement of trainees, delivery and installation of equipment.

34. In 1987, 55 new IPF projects were approved with a value of \$21.1 million. Within the resources managed by UNIDO, 20 projects were approved under SIS, valued at \$0.7 million; 40 projects under IDF, valued at \$3.4 million; and 23 projects under other sources valued at \$2.0 million. A total of 138 new projects with a value of \$27.2 million were approved, which compares favourably with 1986 figure of 116 new projects, valued at \$24.3 million. In terms of net approvals, i.e. including revisions of on-going projects, the amount is \$25.1 million.

Europe and Mediterranean Region

35. Three factors determined to a decisive degree the type of UNIDO technical

co-operation with the countries of the region: (a) a relatively advanced stage of economic and industrial development coupled with well-established industrial infrastructure in a majority of the cases; (b) current government programmes directed towards rationalization, better economic performance and modernization of industrial structures; and (c) the acquisition of advanced industrial technologies. Consequently, the Governments directed the scarce UNDP resources mainly to the areas of sophisticated technologies for which external assistance is indispensable.

36. UNIDO concentrated its work in 1987 on three basic activities: (a) project formulation under IPF in the countries for which UNDP country programmes for 1987-1991 had been approved (Albania, Bulgaria, Cyprus, Hungary, Malta, Poland, Turkey, Yugoslavia and the regional programme for Europe); (b) project identification under IPF for Portugal and Romania, whose country programmes were to be considered by UNDP in February 1988; and (c) project development and formulation in all countries concerned for financing under resources other than IPF, mainly SIS and IDF.

37. The characteristic features of the IPF projects executed by UNIDO in the region are their relatively small UNDP/UNIDO inputs, which consequently have a high multiplier effect. The limited amount of IPF resources allocated to the countries of the region, and their somewhat advanced stage of economic development require the selection of increasingly sophisticated and complex projects. Examples of such projects are: the Training and Consultancy Centre for Advanced Manufacturing Technologies (Bulgaria); high-strength ceramics (Hungary, Romania and Turkey); biotechnology (Bulgaria, Poland); CAD/CAM (Hungary, Poland and Turkey); electronic components and polymer mixtures and compounds (Yugoslavia); optical communication technology (Turkey); and industrial robotics application (regional programme).

38. Total IPF resources and Government cost-sharing available for the countries of the region for the fourth cycle 1987-1991 account for \$47.9 million, out of which the UNIDO share in project execution is estimated at \$11.6 million. By the end of 1987, 22 IPF projects had been approved with a total value of \$4.8 million. For some countries, such as Bulgaria, Hungary and Poland, almost all IPF projects for UNIDO execution during the current UNDP cycle had already been finalized and approved.

Latin America and the Caribbean Region

39. The changing international and regional economic situation has induced Governments of countries in Latin America and the Caribbean: (a) to intensify their search for new and effective industrialization strategies and policies; (b) to apply restructuring and reconversion mechanisms to their industrial sectors so as to make them more efficient and internationally competitive; (c) to experiment with managerial, technical and financial methods and procedures to reactivate dormant enterprises in the industrial sectors; (d) to continue to build up their basic industries, in particular their capital goods industry, to achieve a more self-sustained industrial development; (e) to put greater emphasis on agro-industry, small-scale and micro industries as a means of tackling food insufficiency, unemployment and other problems related to poverty; (f) to stress the development and adaptation of new technologies in the industrial sector; and (g) to place particular emphasis on co-operation among the countries of the region as a means of industrial development. These priorities have been reflected in the types of projects approved or developed for the region during the year under review. A few illustrative samples of projects designed to fulfil these priorities are described below.

40. During the visit of the Director-General in Brazil, a Memorandum of Understanding was signed which provides for technical co-operation among developing countries (TCDC) activities. In addition, a working arrangement was signed with National Industrial Apprenticeship Service (SENAI) in which SENAI will furnish training and consultants under TCDC. The visit of the UNDP Resident Representative in Brazil to UNIDO resulted in a request for a preparatory assistance for a large-scale agro-industry project in northeastern Brazil, while the Government of France has shown interest in providing a special-purpose donation for a project aimed at agro-industrial development of the Paraná State. In Venezuela, a proposal for assisting the Ministry of Development in formulating industrial policies in key sectoral areas was approved and a large-scale project for establishing a multi-purpose pharmaceutical plant was developed with cost sharing from the Government of Venezuela. For Chile, preparatory assistance for a UNDP-financed capital goods project was approved. That project is the most recent of similar UNIDO-executed projects to develop the capital goods industry in the region. In

Colombia, a UNDP-financed project was approved that will give support to the development of micro-, small- and medium-scale industries aimed at generating employment. A UNDP-financed project was also approved that is aimed at giving support to industrial reconversion efforts in Mexico.

41. For Costa Rica, preparatory assistance for the management of a science and technology project was approved that should result in a large-scale IPF project. With the peace initiative taking place in Central America, there should be good prospects for the approval of a large-scale project for assistance to the Central American bank for Economic Integration (CABEI) in the reconstruction and reconversion of industry in the region. The Secretary-General of the United Nations has requested UNIDO to participate in developing a special plan for the reactivation of industry in Central America, and the planned assistance to CABEI would be a key project in this effort.

42. Programme and project development activities in the region were focused in particular on project formulation efforts as most UNDP country programmes and the regional programme for the cycle 1987-1991 were approved in 1986 and 1987. During the year, 38 new IPF projects were approved with a value of \$8.7 million. Within the resources managed by UNIDO, 14 projects were approved under SIS valued at \$0.5 million and 19 projects under IDF valued at nearly \$1 million. Twenty-seven projects valued at \$2.2 million were also approved under other sources. Thus a total of 98 new projects were approved with a value of \$12.3 million, which compared favourably with the 1986 figure of \$9 million. The net approvals in 1987, including revisions of on-going projects, was \$17.1 million, which represents an increase of 125 per cent over the net approvals figure attained in 1986. In comparing these amounts with corresponding figures for other regions, it should be noted that country IPFs are relatively smaller than in the other regions, and yet UNDP is still the major source of funding of UNIDO technical co-operation activities in Latin America and the Caribbean.

43. The search for alternative sources of technical assistance funding for projects in the region was intensified during the year. Discussions involving co-operation projects with the European Economic Community (EEC), the World Bank, the Inter-American Development Bank and UNFDAC have been the subject of considerable efforts on the part of UNIDO. Moreover, negotiations have been initiated with the

Governments of Mexico and Venezuela, as well as with subregional development banks in Central America and the Caribbean, to explore possibilities of UNIDO executing projects in these subregions, to be financed from funds earmarked under the "San José Agreement".

Global and Interregional Projects and Programmes

44. Nearly 120 interregional and global projects that average \$130,000 each were processed by the Area Programmes Division in 1987. Of these, 99 were approved and funded in 1987, with a total amount of \$13 million - nearly \$1.5 million higher than the level of approvals reached in 1986 (after deducting \$17.3 million for two projects of the Interregional Centre for Genetic Engineering and Biotechnology (ICGEs) that were approved in 1986). Several projects approved in 1987 were completed within the year; others will continue to be implemented in 1988 and beyond.

45. One important activity continued to be group training programmes and workshops in specialized areas. The group training programmes were offered in association with institutes in industrialized countries as well as in developing countries. Austria, Belgium, China, Czechoslovakia, France, German Democratic Republic, Hungary, Japan, Turkey, Union of Soviet Socialist Republics, Yugoslavia, are not only the main donors but also among the countries that actively participate in the programme. Four training programmes were programmed with UNDP and funded from the convertible and non-convertible trust funds allocated by the Union of Soviet Socialist Republics to UNDP for training. It is intended to develop more group training programmes in 1988 and subsequent years with UNDP along the same lines. The sectors in which training programmes and workshops were offered varied widely, including plastics, iron and steel, computer-aided design and manufacturing, railway transportation, food processing and specialized energy saving projects are a few examples. Large-scale projects were also approved in fields such as plant-level co-operation between small- and medium-scale enterprises and design and pattern-making for the leather industry.

46. A programme initiated in earlier years to identify idle plants in developing countries that would qualify for technical assistance and/or capital assistance has been completed at the interregional/global level, and follow up was started in 1987 at

the country and regional levels. It is expected that the programme will offer a considerable contribution to the efforts of developing countries that are striving to use more fully their existing capacities. A project was completed at increasing interregional co-operation between Pacific and Caribbean island countries in the development of small- and medium-scale agro-industries (live marine resources and tropical fruits). The project included a workshop in Jamaica for high-level civil servants with study tours to Trinidad and Tobago, Barbados and St. Lucia, during which common areas of co-operation were identified.

II. Implementation overall in 1987

47. As in previous years, by far the largest portion of technical co-operation activities was financed from UNDP resources (IPF, SIS, Special Programme Resources and Special Measures) although expenditures from these resources slightly decreased; the overall expenditures for technical co-operation activities declined from \$99.6 million in 1986 to \$97.7 million in 1987.

48. During the year, due to budgetary constraints, the implementation of projects financed from the regular programme and the allocations for the programme for IDDA was again reduced. If this had not occurred, the overall level of implementation would have been several million dollars higher. A total of 1,822 projects were implemented or were under implementation in 1987, comprising 177 projects larger than \$1 million in value, 487 projects larger than \$100,000 in value and 1,158 projects below that value. Tables 1 and 2 below show the overall technical co-operation expenditures in 1987, by source of funds and project component.

49. A breakdown of technical co-operation 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).

50. The value of projects executed by UNIDO in Africa in 1987 amounted to \$32.6 million (including \$9.6 million for African Arab States), which constituted a decrease of \$3.2 million or 8.9 per cent (despite an increase for African Arab States) over technical co-operation delivery for Africa in 1986. Although the technical co-operation delivery for Africa

that was financed from UNDP resources (IPF, SIS, Special Programme Resources and Special Measures) increased by \$0.7 million from \$24.8 million in 1986 to \$25.5 million in 1987, there was a decrease in the overall delivery for this region, resulting from continuing constraints under the regular programme of technical co-operation and under the programme for IDDA as well as from a decline in the allocation of trust funds.

51. The value of projects executed by UNIDO in the Americas in 1987 amounted to \$9.3 million, a decrease of \$1.2 million or 11.8 per cent from technical co-operation delivery for the Americas in 1986. The lower level in 1987 is mainly due to the delays in implementation of several large-scale UNDP-financed projects.

52. The value of projects executed by UNIDO in the Arab States in 1987 amounted to \$12.6 million (including \$9.6 million for African Arab States), an increase of \$0.7 or 5.6 per cent as compared to technical co-operation delivery for the region in 1986 (an increase of \$1.1 million or 12.4 per cent for African Arab States).

53. The value of projects executed by UNIDO in Asia and the Pacific during the year amounted to \$37.9 million, increasing \$0.9 million or 2.3 per cent as compared to technical co-operation delivery for the region in 1986, largely resulting from an increase of funds made available under special-purpose contributions to the Industrial Development Fund.

54. The value of UNIDO technical co-operation delivery to Europe in 1987 amounted to \$2.6 million, a decrease of \$0.6 million or 18.7 per cent over the figure for 1986, reflecting some delays in the implementation of several large-scale projects.

55. The technical co-operation delivery by individual branches in the Department of Industrial Operations 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 Annual Reports, brief accounts are given here, with appropriate references to those earlier Reports. It should be borne in mind that even though projects may be mentioned under very specific "activity" readings - e.g. metallurgical industries - their implementation cuts across administrative lines to include 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 the Department for Programme and Project Development.

56. The number of technical co-operation projects under implementation and the regional distribution of technical assistance delivery during the year by fields of activity are shown in tables 13 and 14 below.

Table 1

Technical co-operation expenditure,
by source of fund

	1 9 8 7	
	\$ thousand	%
UNIDO regular budget		
Regular programme of technical co-operation	1,200	1.2
Industrial Development Decade for Africa	879 ^{a/}	0.9
Subtotal	2,079	2.1
UNDP		
IPF and cash counterpart	66,544	68.1
SIS	2,836	2.9
Special programme resources and special measures	264	0.3
Subtotal	69,644	71.3
UNDP-administered trust funds	1,149	1.2
Other funds		
Other trust funds	6,049	6.2
Industrial development fund	16,610	17.0
UNFDAC	628	0.6
Non-UNIDO funds	1,567	1.6
Subtotal	24,854	25.4
T O T A L	97,726	100.0

^{a/} Including one interregional project

Table 2

Technical co-operation expenditure,
by project component

	1 9 8 7	
	\$ thousand	%
Project personnel	41,874	42.8
Subcontracts	14,367	14.7
Fellowships and training	14,515	14.9
Equipment	24,470	25.0
Miscellaneous	2,500	2.6
T O T A L	97,726	100.0

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

	1 9 8 7	
	\$ thousand	%
UNIDO regular budget		
Regular programme of technical co-operation	223	0.7
Industrial Development Decade for Africa	856	2.6
Subtotal	1,079	3.3
UNDP		
IPF and cash counterpart	24,526	75.3
SIS	842	2.6
Special programme resources and special measures	129	0.4
Subtotal	25,491	78.3
UNDP-administered trust funds	305	0.9
Other funds		
Other trust funds	2,476	7.6
Industrial development fund	2,810	8.6
UNFDAC	0	0.0
Non-UNIDO funds	409	1.3
Subtotal	5,695	17.5
T O T A L	32,570	100.0

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

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

	1 9 8 7	
	\$ thousand	%
Project personnel	18,147	55.7
Subcontracts	5,424	16.6
Fellowships and training	2,726	8.4
Equipment	5,203	16.0
Miscellaneous	1,070	3.3
T O T A L	32,570	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

	1 9 8 7	
	\$ thousand	%
UNIDO regular budget		
Regular programme of technical co-operation	284	3.0
Industrial Development Decade for Africa	0	0.0
Subtotal	284	3.0
UNDP		
IPF and cash counterpart	5,940	63.9
SIS	659	7.1
Special programme resources and special measures	0	0.0
Subtotal	6,599	71.0
UNDP-administered trust funds	27	0.3
Other funds		
Other trust funds	518	5.6
Industrial development fund	928	10.0
UNFEDAC	562	6.0
Non-UNIDO funds	384	4.1
Subtotal	2,392	25.7
T O T A L	9,302	100.0

Table 6

Technical co-operation expenditure in the Americas
by project component

	1 9 8 7	
	\$ thousand	%
Project personnel	5,236	56.3
Subcontracts	872	9.4
Fellowships and training	663	7.1
Equipment	2,260	24.3
Miscellaneous	271	2.9
T O T A L	9,302	100.0

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

	1987 a/		1987 b/	
	\$ thousand	%	\$ thousand	%
UNIDO regular budget				
Regular programme of technical co-operation	94	0.7	53	0.6
Industrial Development Decade for Africa	11	0.1	11	0.1
Subtotal	105	0.8	64	0.7
UNDP				
IPF and cash counterpart	9,895	78.9	7,595	79.5
SIS	382	3.0	98	1.0
Special programme resources and special measures	0	0.0	0	0.0
Subtotal	10,277	81.9	7,693	80.5
UNDP-administered trust funds	2	0.0	2	0.0
Other funds				
Other trust funds	1,855	14.8	1,572	16.4
Industrial development fund	359	2.9	229	2.4
UNFDAC	0	0.0	0	0.0
Non-UNIDO funds	(48)	(0.4)	0	0.0
Subtotal	2,166	17.3	1,801	18.8
T O T A L	12,550	100.0	9,560	100.0

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

b/ African Arab States only.

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

	1987 a/		1987 b/	
	\$ thousand	%	\$ thousand	%
Project personnel	8,062	64.2%	5,699	59.6
Subcontracts	1,844	14.7%	1,756	18.4
Fellowships and training	276	2.2%	154	1.6
Equipment	2,170	17.3%	1,809	18.9
Miscellaneous	198	1.6%	142	1.5
T O T A L	12,550	100.0%	9,560	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

	1 9 8 7	
	\$ thousand	%
UNIDO regular budget		
Regular programme of technical co-operation	174	0.4
Industrial Development Decade for Africa	0	0.0
Subtotal	174	0.4
UNDP		
IPF and cash counterpart	31,557	83.2
SIS	837	2.2
Special programme resources and special measures	135	0.4
Subtotal	32,529	85.8
UNDP-administered trust funds	37	0.1
Other funds		
Other trust funds	740	1.9
Industrial development fund	3,629	9.6
UNFDAC	0	0.0
Non-UNIDO funds	822	2.2
Subtotal	5,191	13.7
T O T A L	37,931	100.0

Table 10

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

	1 9 8 7	
	\$ thousand	%
Project personnel	10,669	28.1
Subcontracts	6,318	16.6
Fellowships and training	5,795	15.3
Equipment	14,553	38.4
Miscellaneous	596	1.6
T O T A L	37,931	100.0

Table 11

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

	1987	
	\$ thousand	%
UNIDO regular budget		
Regular programme of technical co-operation	55	2.1
Industrial Development Decade for Africa	0	0.0
Subtotal	55	2.1
UNDP		
IPF and cash counterpart	2,202	83.9
SIS	214	8.1
Special programme resources and special measures	0	0.0
Subtotal	2,416	92.0
UNDP-administered trust funds	0	0.0
Other funds		
Other trust funds	21	0.8
Industrial development fund	133	5.1
UNFDAC	0	0.0
Non-UNIDO funds	0	0.0
Subtotal	154	5.9
T O T A L	2,625	100.0

Table 12

Technical co-operation expenditure in Europe,
by project component

	1987	
	\$ thousand	%
Project personnel	771	29.4
Subcontracts	261	9.9
Fellowships and training	629	24.0
Equipment	899	34.2
Miscellaneous	65	2.5
T O T A L	2,625	100.0

Table 13

Number of technical co-operation projects under implementation in 1987
by region, by field of activity and size of project

Field of activity		Africa	The Americas	Arab States	Asia & the Pacific	Europe	Inter-regional/ Global	Subtotal	Total
		(i).....<\$150,000							
		(ii) \$150,000 - \$999,999							
		(iii).....>\$1,000,000							
Agro-based Industries	(i)	39	49	8 (5)	40	4	11	146	
	(ii)	10	13	4 (3)	24	2	6	56	
	(iii)	7	2	2 (2)	12	0	0	21	223
Chemical Industries	(i)	71	29	31 (18)	53	19	22	207	
	(ii)	25	11	13 (10)	62	11	3	115	
	(iii)	15	3	11 (11)	24	2	2	46	368
Metallurgical Industries	(i)	34	13	11 (8)	21	3	2	76	
	(ii)	15	5	4 (3)	20	4	0	45	
	(iii)	5	6	2 (2)	10	0	0	21	142
Engineering Industries	(i)	21	20	17 (10)	23	14	12	97	
	(ii)	17	5	8 (7)	29	11	0	63	
	(iii)	4	3	1 (0)	24	1	0	33	193
Industrial Planning	(i)	22	15	8 (7)	10	0	4	52	
	(ii)	13	11	1 (1)	4	1	0	29	
	(iii)	7	0	1 (0)	3	0	0	11	92

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

Chapter II

Size of project
 (i).....<\$150,000
 (ii) \$150,000 - \$999,999
 (iii).....>\$1,000,000

Field of activity		Africa	The Americas	Arab States	Asia & the Pacific	Europe	Inter-regional/Global	Subtotal	Total
Institutional Infrastructure	(i)	30	28	15 (8)	23	7	4	99	
	(ii)	31	9	10 (5)	16	4	1	66	
	(iii)	10	4	3 (1)	4	0	1	21	186
Industrial Management and Rehabilitation	(i)	9	13	6 (4)	6	2	1	33	
	(ii)	11	1	2 (2)	6	1	0	19	
	(iii)	4	0	3 (2)	3	0	0	8	60
Industrial Training	(i)	35	9	2 (1)	12	4	111	172	
	(ii)	8	0	1 (1)	1	2	13	24	
	(iii)	2	2	0 (0)	0	0	0	4	200
Feasibility Studies	(i)	26	8	9 (1)	13	1	8	64	
	(ii)	12	1	5 (3)	13	0	2	30	
	(iii)	3	0	2 (0)	2	0	0	7	101
Other <u>b/</u>	(i)	54	27	12 (5)	44	6	74	212	
	(ii)	3	6	1 (0)	8	0	22	40	
	(iii)	0	0	0 (0)	0	0	5	5	257
TOTAL	(i)	341	211	119 (67)	245	60	249	1,158	
	(ii)	145	62	49 (35)	183	36	47	487	
	(iii)	57	20	25 (18)	82	3	8	177	1,822

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

b/ See Statistical Annex, Table 6, Expenditures on technical co-operation activities in 1987, by Department/Programme Component and geographical area for breakdown.

Table 14
Regional distribution of technical co-operation expenditure,
by field of activity

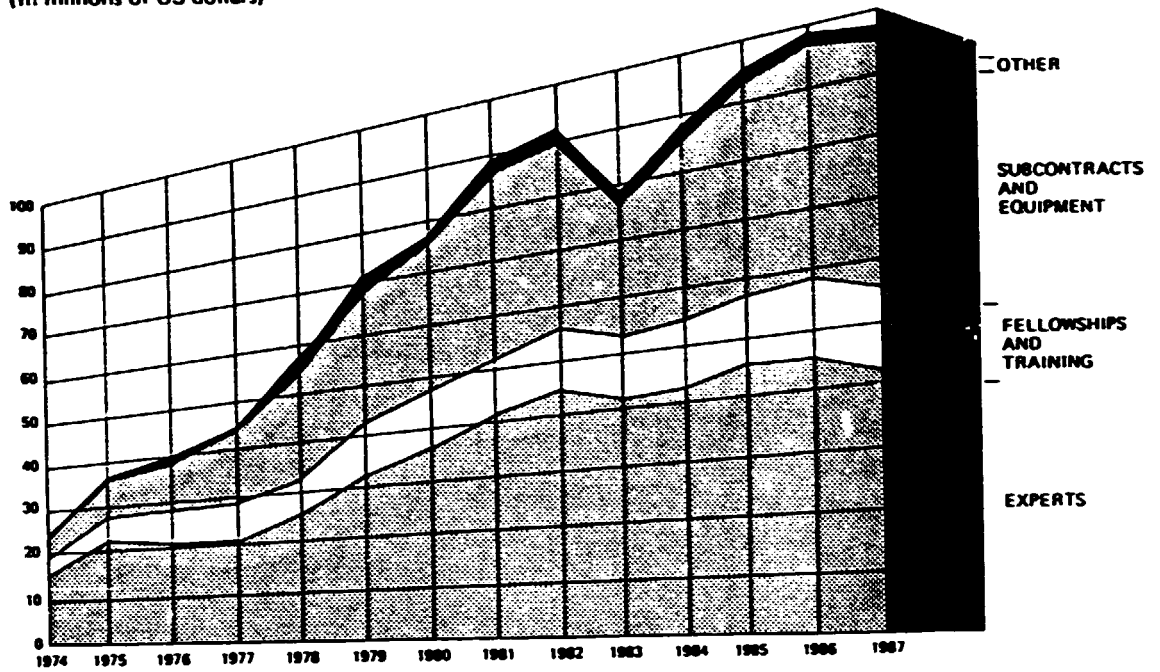
(Percentage)

Field of activity	Africa	The Americas	Arab States a/	Asia & the Pacific	Europe	Inter-regional/ Global	Total
Agro-based industries	20.3	23.0	6.0 (4.6)	48.7	0.5	6.1	100.0
Chemical industries	37.5	4.3	25.4 (24.3)	48.3	3.8	5.0	100.0
Metallurgical industries	30.9	14.6	16.2 (12.6)	48.4	2.5	0.0	100.0
Engineering industries	20.5	4.2	6.8 (4.0)	68.1	3.8	0.6	100.0
Industrial planning	66.2	21.1	5.9 (2.1)	7.8	0.3	0.8	100.0
Institutional infrastructure	48.7	13.4	12.9 (3.6)	22.0	2.7	3.9	100.0
Industrial management and rehabilitation	39.0	10.4	13.6 (11.1)	42.3	7.0	(1.2)	100.0
Training	26.2	7.1	0.0 (0.0)	1.3	2.5	62.9	100.0
Feasibility studies	49.2	1.7	16.5 (7.1)	32.7	0.0	7.0	100.0
Other b/	10.2	6.9	2.4 (1.7)	13.4	1.6	67.2	100.0
Total technical co-operation expenditure	33.3	9.5	12.9 (9.8)	38.8	2.7	12.6	100.0

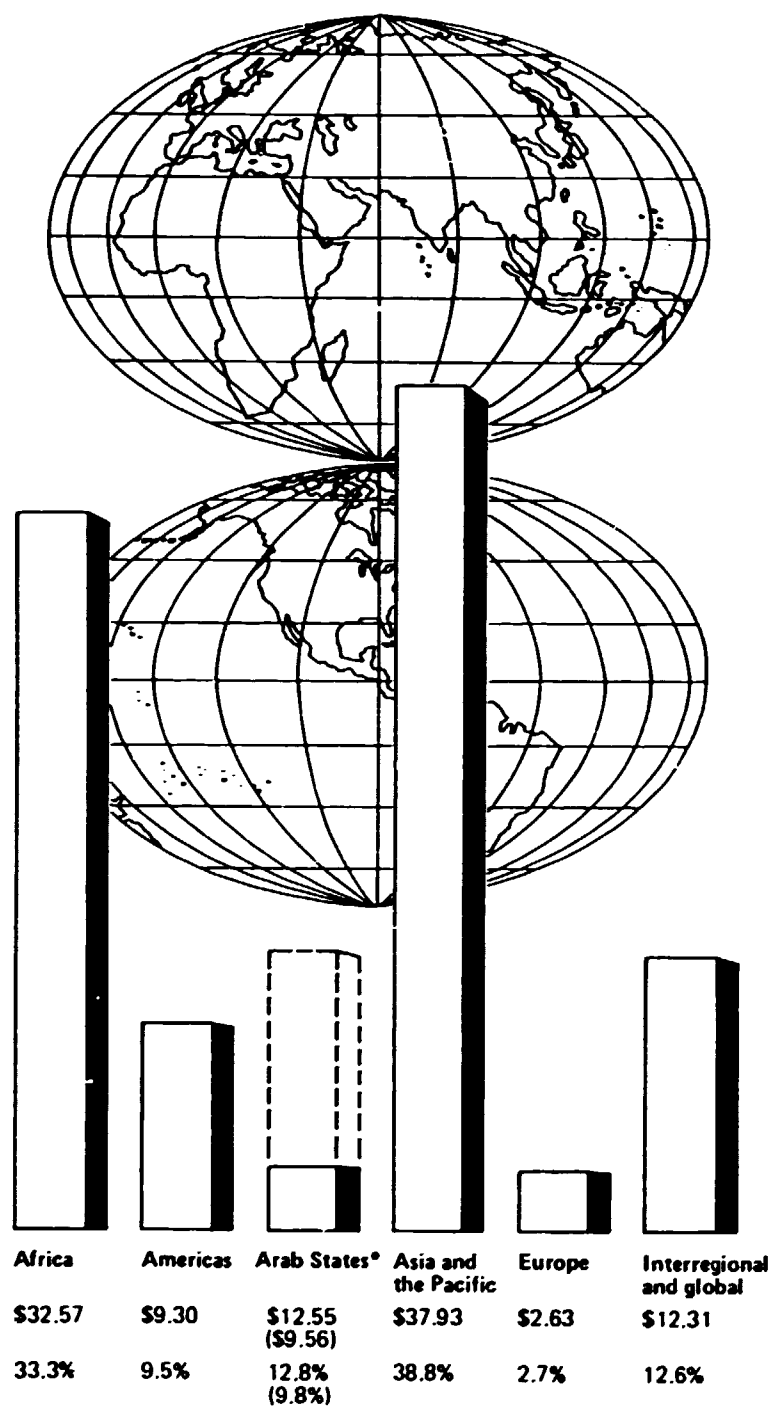
a/ Figures in parentheses relate to African Arab States and are already included under Africa.

b/ See Statistical Annex, Table 6, Expenditures on technical co-operation activities in 1987, by Department/Programme Component and geographical area for breakdown.

**TECHNICAL CO-OPERATION PROJECT EXPENDITURES
BY PROJECT COMPONENT, 1974-1987**
(In millions of US dollars)

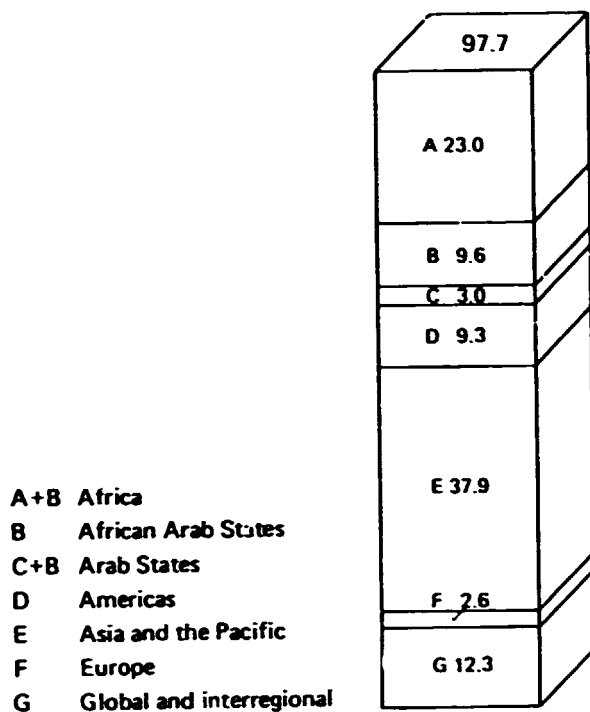


TECHNICAL ASSISTANCE DELIVERED BY UNIDO IN 1987
 (By geographical area, in percentages and millions of United States dollars)

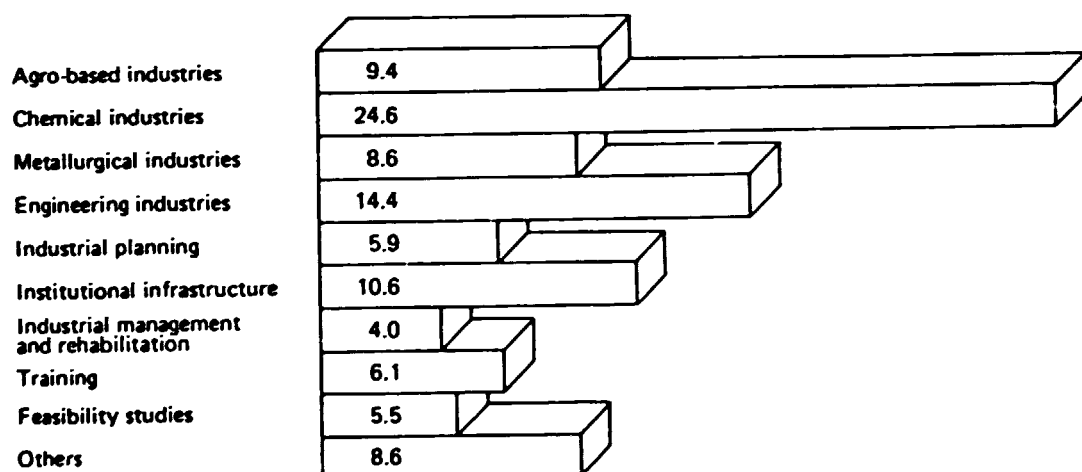


*Broken lines and figures in parentheses give an indication of the African Arab States which are also included under the column "Africa".

TECHNICAL ASSISTANCE DELIVERED BY UNIDO IN 1987
(In millions of US dollars)



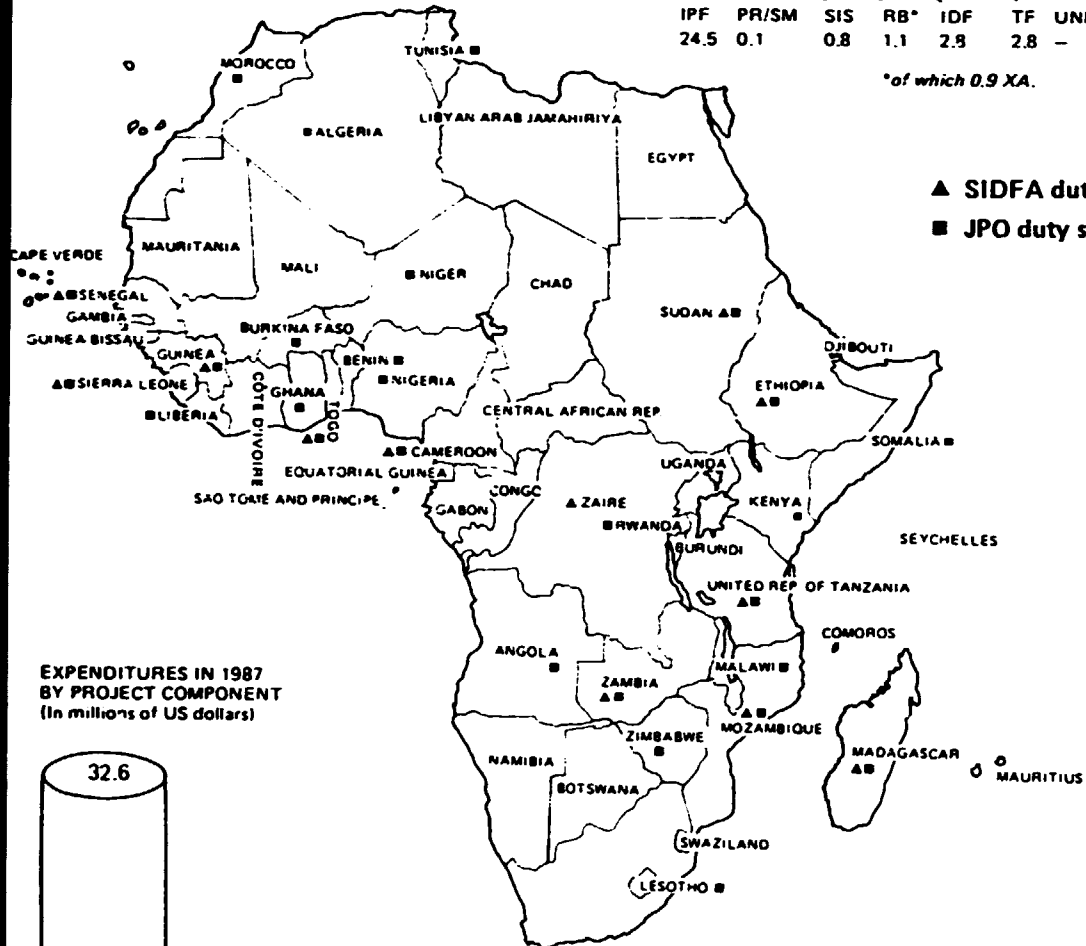
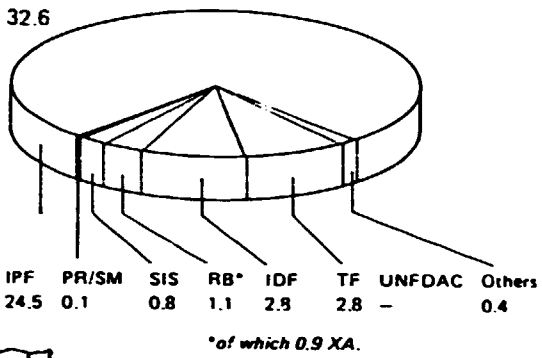
DISTRIBUTION OF TECHNICAL CO-OPERATION ACTIVITIES IN 1987
(In millions of US dollars)



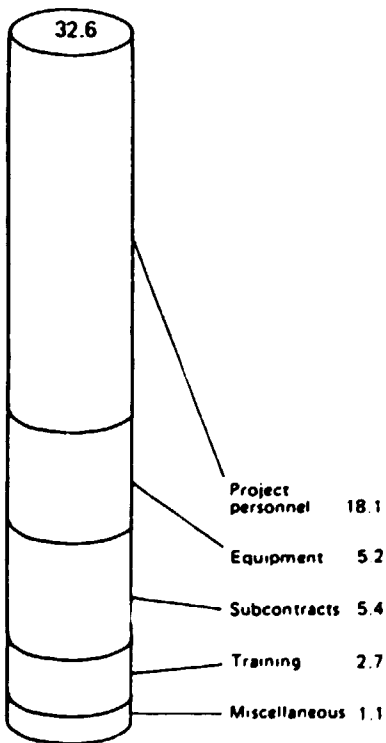
AFRICA

EXPENDITURES IN 1987 BY SOURCE OF FUNDS
(In millions of US dollars)

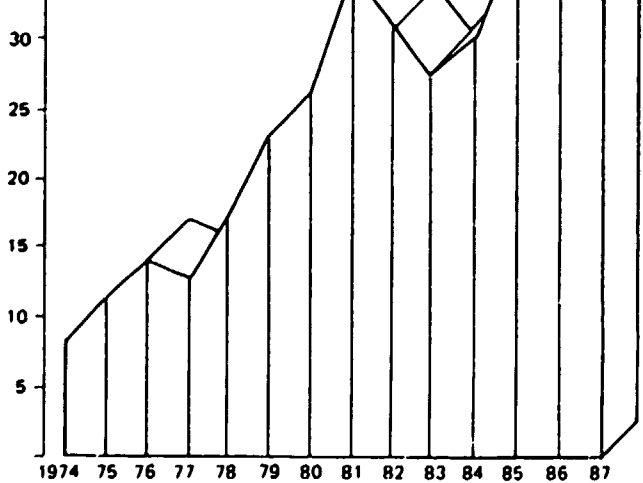
32.6



EXPENDITURES IN 1987
BY PROJECT COMPONENT
(In millions of US dollars)

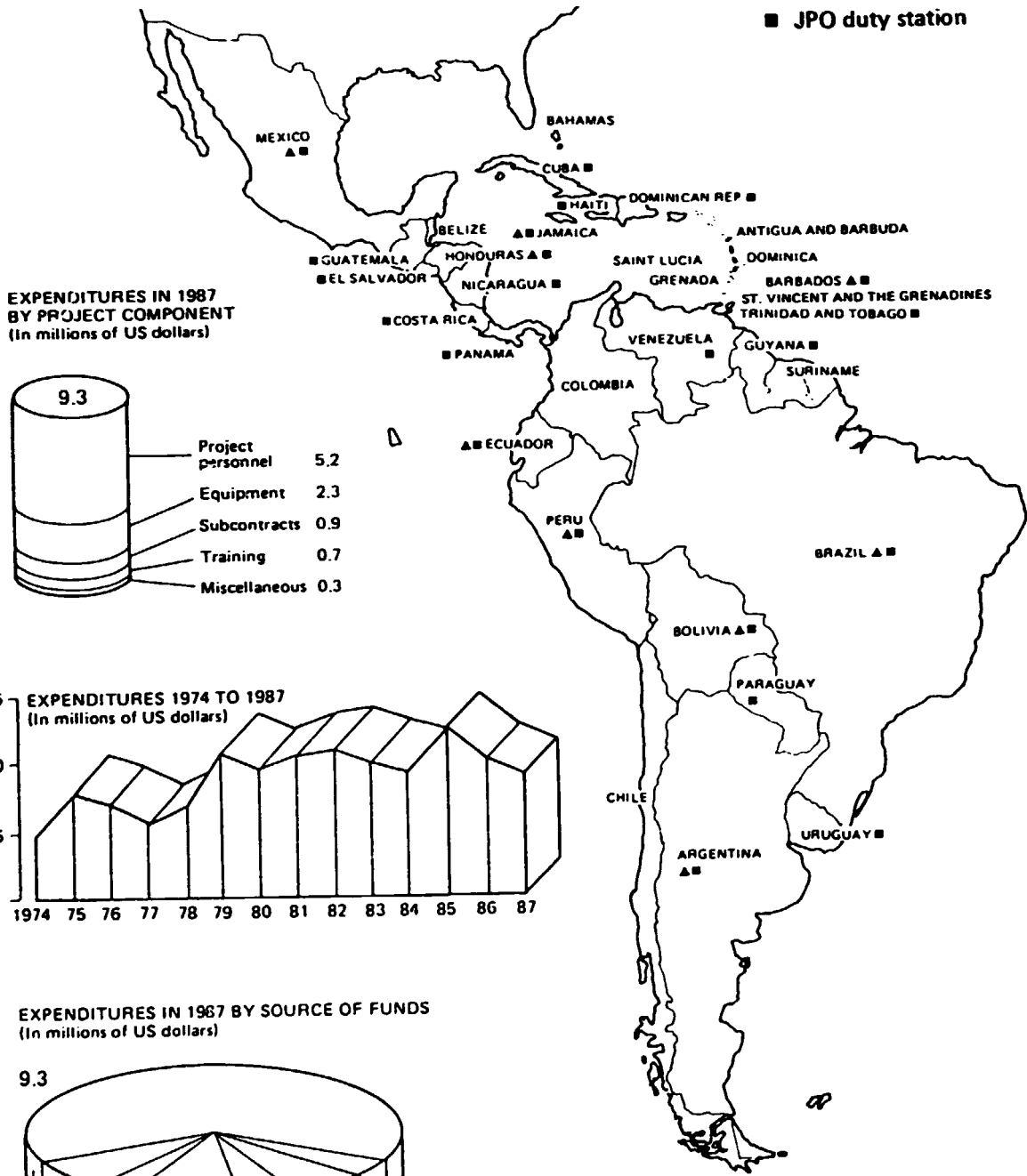


EXPENDITURES 1974 TO 1987
(In millions of US dollars)

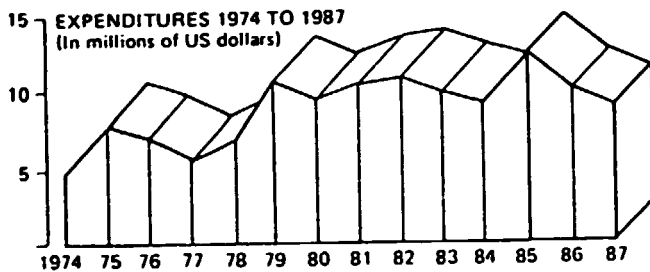
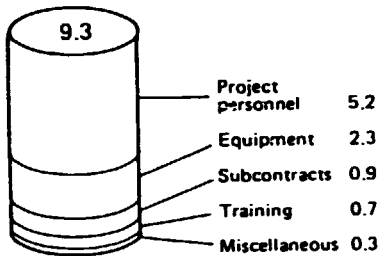


THE AMERICAS

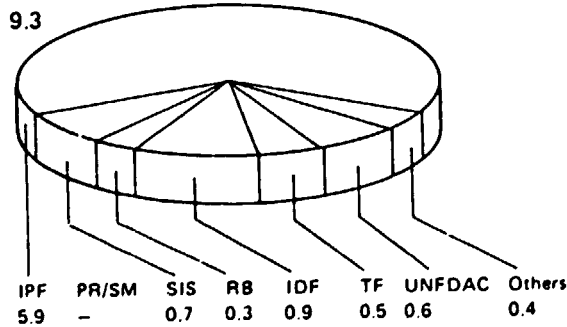
▲ SIDFA duty station
 ■ JPO duty station



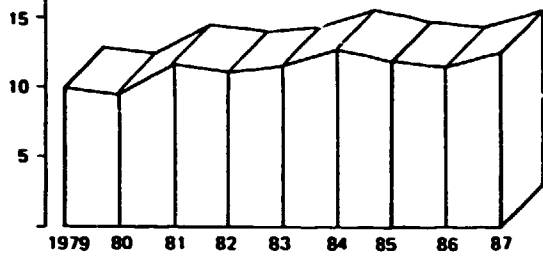
EXPENDITURES IN 1987 BY PROJECT COMPONENT
 (In millions of US dollars)



EXPENDITURES IN 1987 BY SOURCE OF FUNDS
 (In millions of US dollars)

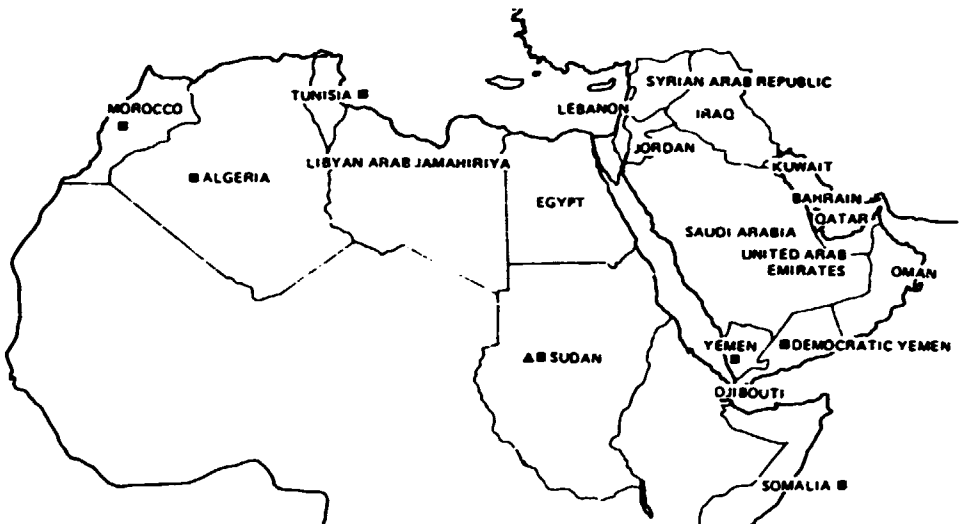
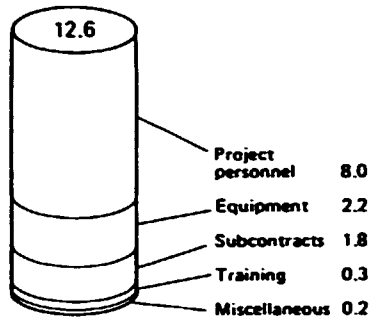


EXPENDITURES 1979* TO 1987
(In millions of US dollars)

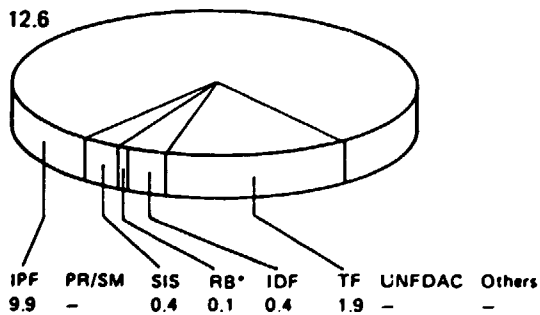


* For previous years, expenditures related to Arab States were reported partly under Africa and partly under Europe and Western Asia.

EXPENDITURES IN 1987 BY PROJECT COMPONENT
(In millions of US dollars)



EXPENDITURES IN 1987 BY SOURCE OF FUNDS
(In millions of US dollars)

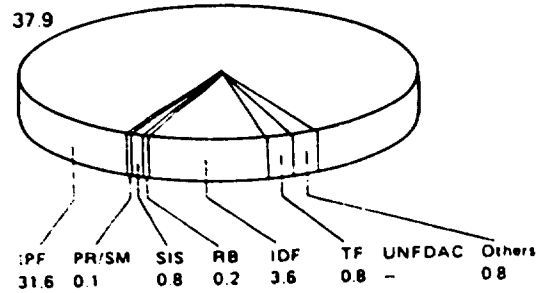


*of which 0.01 XA.

ARAB STATES

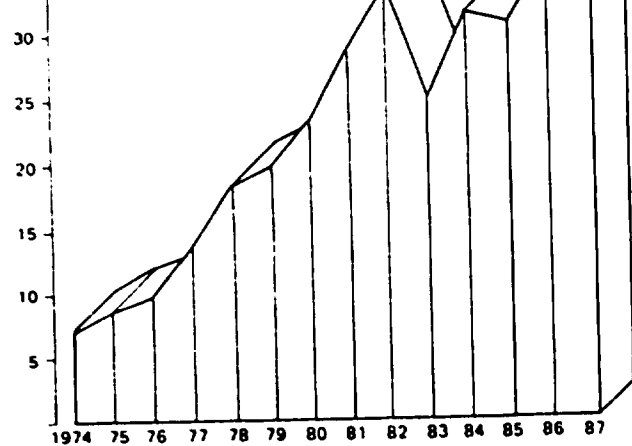
- ▲ SIDFA duty station
- JPO duty station

EXPENDITURES IN 1987 BY SOURCE OF FUNDS
(In millions of US dollars)

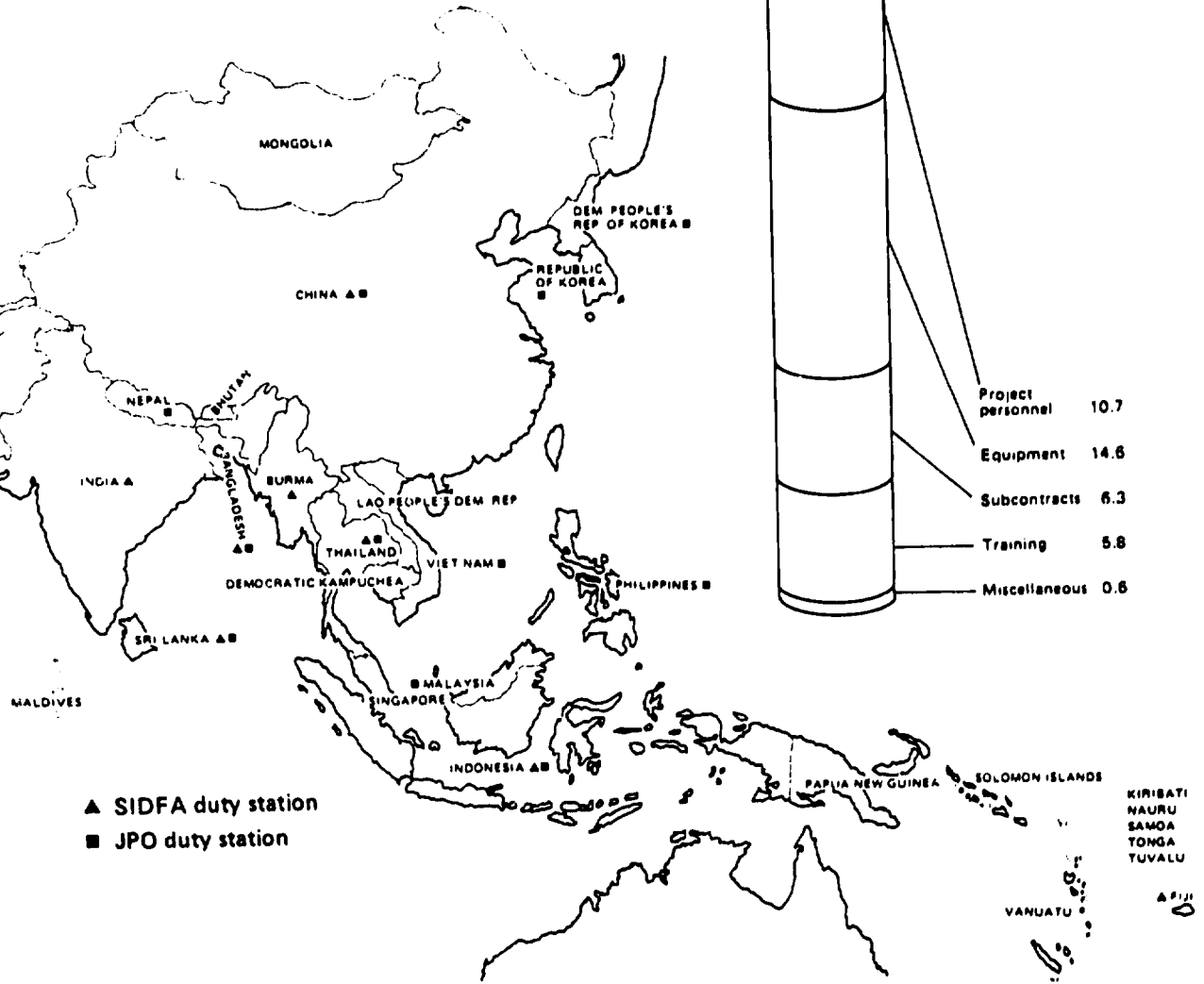
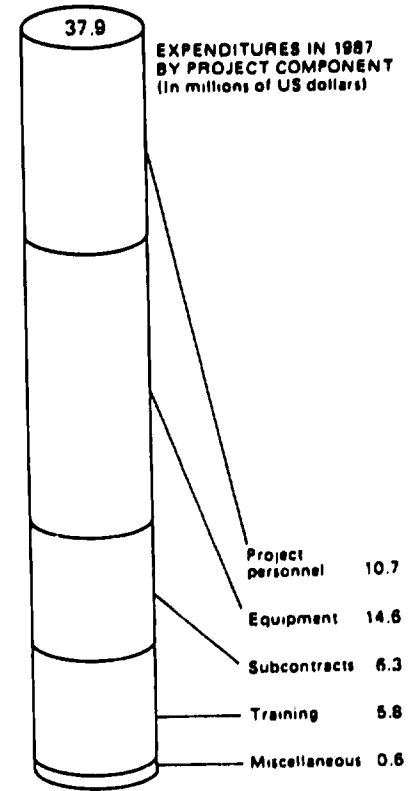


ASIA AND THE PACIFIC

EXPENDITURES 1974 TO 1987
(In millions of US dollars)

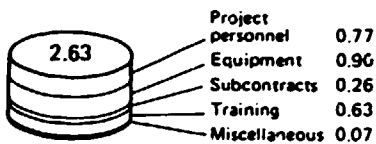


EXPENDITURES IN 1987
BY PROJECT COMPONENT
(In millions of US dollars)

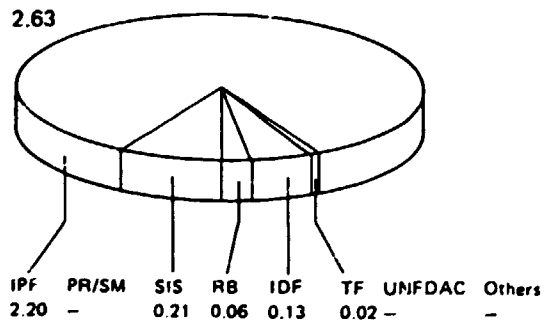




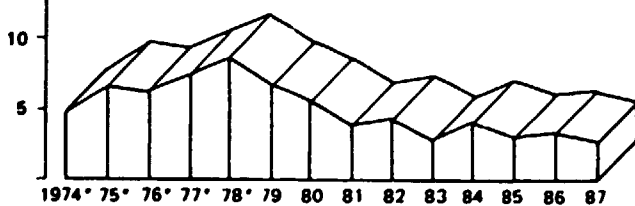
EXPENDITURES IN 1987 BY PROJECT COMPONENT
(In millions of US dollars)



EXPENDITURES IN 1987 BY SOURCE OF FUNDS
(In millions of US dollars)



EXPENDITURES 1974 TO 1987
(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.

III. Implementation of Industrial Operations by Field of Activity

AGRO-BASED INDUSTRIES

57. In 1987, expenditures for technical co-operation activities under the heading of agro-based industries amounted to \$9.4 million. About 58 per cent of the total implementation was financed from UNDP resources. A total of 223 projects were implemented or under implementation.

58. As in past years, institution-building projects continued to dominate the technical co-operation activities in the textile industry. ^{2/} The emphasis was on R and D in nearly all projects but the scope varied a great deal: garment production, CAD, jute, ramie, pineapple fibre and fashion design. The growing interest in fashion in several developing countries appears to be a direct consequence of keen competition for textile and garment export markets; two projects dealing with fashion design were operational in 1987: one in India and one in Egypt. Other institution-building projects were carried out in China for strengthening the China Ramie Technology Development Centre and the China Garment Technology Development Centre and in India to assist the Indian Jute Industries Research Association and the South India Textile Research Association as well as in CAD application for woven or printed textiles. In Sri Lanka, a project of assistance to the Textile Training and Service Centre, which was completed in 1986, was followed up by a second phase in 1987 to develop the consultancy skills of the staff of the Centre.

59. The clear emphasis on R and D in practically all these projects - both operational and pipeline - reflects the growing sophistication of the textile manufacturing technology at all processing stages. The CAD/CAM techniques in process control are very capital-intensive but they are indispensable for the improvement of quality and a faster response to market requirements. Wider application of such techniques in developing countries is essential if they are to remain competitive in international markets.

60. In the food industry, project activities continued or were completed in Mexico and Sri Lanka and industrial plants were established for gari processing in Sierra Leone and for onions, cassava and

tomato processing in Niger in support of an agro-industry that makes full use of locally available raw materials. In Peru, a large-scale project in Tingo Maria financed by the United Nations Fund for Drug Abuse Control and carried out in co-operation with the Food and Agriculture Organization of the United Nations (FAO), continued to provide coca growers with economic and safe production and marketing alternatives through the integrated agro-industry development of the local cocoa processing into various products. ^{3/} Assistance continued to be provided to Peru and to Bolivia in the wine making sector. The project in El Salvador on the strengthening of institutional sectoral infrastructures aimed at agro-industrial diversification and development made steady progress during the year. ^{2/}

61. A pilot plant for cane sugar development and training in specific unit operations was established within one sugar mill in Egypt. The installation of all equipment in a small plant for the production of wet and dry bakers' yeast, based on a by-product of the molasses sugar industry, was completed in Viet Nam. Implementation was also initiated in Angola of a three-year large-scale project aimed at rehabilitating a bakers' yeast factory and a wheat milling unit. ^{2/}

62. Other activities related to the establishment and increase of the capacities of food production and quality control institutions included fruit processing in the Democratic People's Republic of Korea, baby food production in Mongolia, food quality control in Mongolia, Afghanistan and Yemen; improvement of plant operation and expansion of manufacturing plants such as biscuit production in Uganda, fish processing in Palau and in Guinea Bissau, food freeze-drying in Mongolia and the Democratic People's Republic of Korea, food processing in Vanuatu and the Solomon Islands; improvement of agro-industry development in order to increase the food production, e.g. intersectoral linkages between agriculture and industry in Ethiopia and meat processing in Uruguay; the preparation of studies for the establishment, rehabilitation and expansion of food plants, e.g. a food centre in Uganda, and an agro-industrial complex in Angola. Studies were also carried out on the utilization of agricultural and marine-based raw materials, e.g. fish processing in Barbados, the utilization of snarks in Trinidad and Tobago and the

^{2/} IDB.3/10, chap. II, para. 30.

^{3/} *Ibid.*, para. 31.

utilization of meat by-products in Ethiopia. ^{3/} The technology for rice bran oil refining ^{4/} was reviewed and documented, special research assistance was provided to the Beijing Food Additives Development Centre and the framework was laid for the development of extruded food products at the Beijing Grain Research Institute. Preparatory research activities were carried out at the Food Development Centre in Egypt while product and process research continued on rubber-seed ^{5/} and *balanites aegyptiaca* processing under global projects. ^{6/}

63. In the utilization of agricultural raw materials, a preparatory study was carried out in Sri Lanka for the development of technologies for selected agro-based industries. A global pilot study was commenced to identify new end-uses for pepper and pepper products. The castor bean detoxification and de-allergenation technology developed by UNIDO ^{7/} was introduced to the commercial industry and the prototype equipment is being installed in Thailand. In the field of tobacco processing, assistance was provided to the Peru national tobacco enterprise to improve its technical and economic competitiveness.

64. A regional meeting on the leather and leather products industry in Africa held in Alexandria, Egypt, in January 1987 (see chap. III, para. 11) recommended the starting in selected African countries of regional schemes for the improvement of hides and skins as well as leather and leather products. Preparatory field work for starting the schemes was completed in eight countries in East Africa and seven countries in West Africa. It is expected to result in large-scale projects in this sector for joint execution by UNIDO, FAO and the International Trade Centre UNCTAD/GATT (ITC) amounting to an approximate total value of \$20 million to be financed under special-purpose contributions to the IDF. The implementation of large-scale projects in footwear, leather and leather products continued in Brazil, China, India, Indonesia, Kenya, and the Philippines. ^{8/} A successful tannery effluent treatment seminar was conducted in Brazil for

dissemination to participants from other Latin American countries of the experience gathered during the past six years by a major tannery effluent treatment project assisting hundreds of tanneries in Brazil. ^{9/} In the shoe industry marketing assistance was given to Argentina and a preparatory mission was conducted in Costa Rica to evaluate the first phase and prepare the second one of a large-scale institution-building project. ^{10/} In Egypt, a preparatory survey resulted in the selection of a shoe factory suitable for upgrading into a model factory through technical inputs from a major European shoe manufacturer. A preparatory assistance phase was also completed in Viet Nam for starting up a large-scale technical co-operation project in the tanning industry. Co-operation continued between the Chinese and Philippine leather and leather products industry; it included in 1987 the training of three Chinese shoe technologists in the Philippines for obtaining internationally-recognized certificates in their field of work. ^{9/}

65. Food security, including appropriate protection during storage and distribution of fresh and processed food, with a view to maintaining quality, reducing losses and increasing shelf-life, has been a common concern of most UNIDO technical co-operation in packaging during the year. Experts' missions, training of specialists and delivery of laboratory equipment for applied research and quality control of food packaging materials took place mainly in the Arab region, with collaboration of the Arab Industrial Development Organization (AIDO) and of the Moroccan Packaging Institute. ^{11/} In addition, a survey of the national packaging industries, together with a thorough analysis of the incidence of package costs on the final cost, and thus the price, of food and consumer goods at the point of sale, was carried out within the technical assistance to the Centre of Food Packaging Technology at the Institute of Food Technology of Brazil. ^{11/}

66. In Nicaragua, packaging studies for the industrial sector began at the Laboratory of Food Technology with the co-operation of the Central American Institute for Research and Industrial Technology, and a country-wide survey was made to appraise and plan institutional

^{4/} IDB.2/10, chap. III, para. 213.

^{5/} *Ibid.*, para. 214.

^{6/} IDB.3/10, chap. II, para. 32.

^{7/} ID/B/340, chap. III, para. 195.

^{8/} IDB.3/10, chap. II, para. 33.

^{9/} IDB.2/10, chap. II, para. 33.

^{10/} IDB.3/10, chap. III, para. 215.

^{11/} *Ibid.*, para. 35.

support to the national packaging industries. ^{11/} Preparatory assistance was provided to Chile for the study and elaboration of a technical co-operation project for the development of the packaging production sector for export products.

CHEMICAL INDUSTRIES

67. In 1987, technical co-operation expenditures under the heading of chemical industries amounted to \$24.6 million with some 78 per cent financed from UNDP resources. A total of 368 projects were implemented or under implementation.

68. Activities again 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.

69. In the field of building materials and construction industries, assistance to the cement industry continued, particularly through projects financed by the developing countries themselves. Examples are to be found in Egypt, the Libyan Arab Jamahiraya, Nigeria and Yemen. The aim of such projects is to improve utilization of installed capacity by supplementing the capacities of local staff and to reduce dependency on foreign assistance training operating personnel. In a pilot cement plant in Botswana, an "industrial performance monitoring" activity was started, under which UNIDO experts check the plant performance to identify any shortcomings that might prevent achievement of the planned outputs; this service is intended to protect the interests of investors by achieving full capacity operation. In Democratic Yemen, an evaluation was made of a proposal for a new large-scale cement factory. Advice on energy conservation and improved capacity utilization was provided to cement factories in Ecuador and Yugoslavia. In a UNIDO workshop held at Bangkok, Thailand, on cement, lime and related industries, technical co-operation among the developing countries was promoted. The main objective of the workshop was to introduce participants from African countries to technologies available in China and India on small-scale cement production for application in the African region. Research work for the development of the small-scale lime industry using local raw materials continued with the design of a one-ton per day test batch kiln for the

Gambia and a five-ton-per-day pilot kiln for Botswana, both of which are under construction.

70. Activities in the field of low-cost building materials manufacture reached an unprecedented level in Africa. Two large-scale projects in Chad and Madagascar were engaged in a broad range of materials including small-scale manufacture of lime and fired clay bricks. In Madagascar, assistance in artisanal production of stabilized soil blocks covered the design and manufacture of manual presses and the construction of demonstration houses in an effort to promote not only the production of materials but also construction methods appropriate to local conditions and requirements. Preparatory assistance for two similar projects was approved for Cameroon and Guinea. In Mongolia, a laboratory for the processing and testing of natural mineral pigments went into full operation. On the basis of a large number of tests on local raw materials, the most promising deposits have been selected and the technology elaborated for a pigment production pilot plant, which will be established under the second phase of the project. This is one example of many projects currently under implementation for the use of domestic resources of non-metallic minerals. A project in Ethiopia carried out experiments to investigate the effect of the non-metallic sorbents pumice and bentonite on the reclamation of agricultural lands with heavy soils. The available one-season data on experiments with the test crops sorghum, maize and cotton have shown that the sorbents could be used to increase crop yield (maize by 41 to 50 per cent and cotton by 9 to 16 per cent). It is known that some non-metallic minerals used in crude form reduce the leaching of fertilizers, improve the water retention capacity of the soil within the ploughing depth and, with their cation exchange capacity, provide vital nutrients to the crop at an increased level. The UNIDO investigations in this field are expected to continue. Since results for a minimum of five seasons are needed in order to determine the economic parameters of industrial scale quarrying and larger agricultural application programmes.

71. The project on the development of building materials for low-cost housing in Indonesia was completed with the establishment of six pilot units in East Java, South Sumatra and East Kalimantan for the production building materials for government mass-housing schemes. ^{12/} In

^{12/} *Ibid.*, para. 40.

the framework of the regional project in Asia and the Pacific on low-cost building materials technologies and construction systems, ^{12/} technology manuals were published and distributed on bamboo as a building material and on rice-husk ash cements. The main preparatory work was finished for the publication of another four technology manuals, two monographs, one bibliography and one directory on collected data on low-cost building materials and construction technologies. In co-operation with UNDP and four other United Nations agencies, preparatory work started on a project for the Mediterranean region on seismic risk reduction. UNIDO and the United Nations Centre for Human Settlements (UNCHS) began co-operation for the development and production in Viet Nam of natural fibre-reinforced concrete roofing tiles. A project in Yugoslavia on neat insulation systems for external parts of buildings was completed in 1987; the research carried out provided guidelines to the Government for improving and up-grading the existing regulations concerning heat-insulation of buildings.

72. In the petrochemicals field, activities continued to concentrate on the main petrochemical downstream and related industries and included the development of sophisticated technology of polymer-based composite materials and polymer modifications. A number of seminars and training programmes in the polymer field also took place. The production of carbon fibres and their polymer composites for various technical and civil applications was the objective of projects under implementation in both China and the Republic of Korea; the latter include R and D for the production of carbon fibres from pitch. Also in China, assistance was provided to an R and D institute in the development of additives to prevent degradation of polymers. Another project of highly sophisticated technology in China assisted an R and D institute in the development and production of silicone-based materials for various applications. Some products are already on the market. Through assistance financed under the Special Industrial Services (SIS) programme, a new pyrolysis system for polymethylmethacrylate was developed in China, which will lead to considerable reduction of pollution in the environment. An interregional project on production and use of composite materials based on natural rubber, which involved the co-operation of all the natural rubber producing countries, was completed. As a result, composite materials based on natural rubber are currently being produced in India, Japan, Malaysia and the United States of

America. ^{13/} As a follow-up to a project in Yugoslavia on polyurethane R and D, a new project was developed and directed towards pilot plant and full-scale production and application of new cost-effective polyurethane materials. ^{14/} In India, a project was under implementation involving energy saving and optimization of the petrochemical and related industries.

73. The programme in the field of mineral fertilizers production had among its major objectives the promotion of locally-available raw materials and development of the required facilities and infrastructure. Priority was given to institution-building and direct support, e.g. the up-grading of techniques for different types of rocks, the establishment of R and D institutions and the organization of preventive plant maintenance. This included assistance to China in the beneficiation of its low and middle grade phosphate rock, to India in the organization of preventive maintenance, to Indonesia in the integrated development of nitric acid based industries, and to Pakistan in strengthening fertilizer R and D and the organization of preventive maintenance. ^{15/} Preparatory activities were carried out in Egypt for large-scale assistance in establishing an industrial fertilizer development centre.

74. In the area of pesticides, assistance was also provided to Egypt ^{14/} for completing a multi-purpose pilot plant for the manufacture of organo-phosphorous insecticides. Successful product test runs to manufacture malathion and dimethoate according to FAO specifications were carried out. It was an important milestone for Egypt to enter the field of manufacture of pesticide active ingredients. In India, the pesticide development programme assisted by UNIDO not only provided training to local formulators in trouble-shooting exercises but also organized in collaboration with the Regional Network on Pesticides for Asia and the Pacific, a formulation technology training course for the Asian region. ^{15/} Under the same network, UNIDO, in collaboration with the World Bank, held two pesticide evaluation and safety testing (PEST) programmes, one on quality control in India and the other on residue analysis

^{13/} *Ibid.*, para. 42.

^{14/} *Ibid.*, para. 43.

^{15/} *Ibid.*, para. 44.

in Thailand. These programmes benefited from facilities provided by the relevant national institutions within the framework of technical co-operation among developing countries. The second project management committee meeting of the pesticide network was held at New Delhi, India, and the member countries, in the light of the benefits accrued, unanimously recommended extension of the project beyond 1988. In the Republic of Korea ^{15/} and in China, technical co-operation was provided to carry out toxicological evaluation under accepted international guidelines. ^{15/} In China, based on UNIDO advice, the Government approved plans for the construction of biological laboratories to screen new chemicals as potential pesticides. In the United Republic of Tanzania, UNIDO assisted the national chemical industries to plan the establishment of a pesticide complex to be financed under an Italian soft loan agreement. In Hungary, novel chemicals for biological control of insects were further evaluated, and in Poland a new project on research and development on novel pesticides was started.

75. As in the past, emphasis continued on activities in the pharmaceutical sector connected with the industrial utilization of medicinal and aromatic plants. In Nepal, equipment installed at Herb and Processing Production Co.Ltd. started operation. The aim of the project is to produce extracts and to generate and adapt technology that will enable the production of a variety of export-oriented products such as pine oil and pine resin, essential oils and plant-derived pharmaceuticals. ^{16/} In Viet Nam, the capability of the Institute of Materia Medica has been enhanced by the introduction of process equipment, and the production of plant-derived medicines based on their traditional pharmacopoeias, but in modern formulations, was initiated on a pilot scale. An important venture was initiated in Viet Nam with the project to enhance and revive the essential oil industry. ^{16/} Both in Thailand and Turkey, second-phase projects that provide emphasis on commercial and marketing aspects are expected to consolidate the institution building and the technology transfer achieved in the first phase. Advice to the Democratic People's Republic of Korea in the development of the essential oils and perfumery industries led to a large-scale project in this field.

76. In co-operation with the United Nations Educational, Scientific and Cultural Organization (UNESCO), execution

^{16/} *Ibid.*, para. 46.

of a regional programme for biotechnology involving 11 Latin American countries ^{17/} started with the initiation of research activities for the production of diagnostic reagents. In Algeria, a detailed techno-economic study for the local production of oral contraceptives was prepared. In Cuba, the technologies for the production of steroids utilizing local raw materials, were introduced and the pilot plant erected. ^{18/} In Poland, a project started for the development of industrial enzymes and biological reagents. In Algeria, a plan prepared for the development of an integrated pharmaceutical industry led to several technical co-operation projects. A study was conducted in Colombia on the possibility of establishing a programme for the supply and distribution of pharmaceuticals. A survey was carried out in Zaire on the availability of medicinal plants, and the production and quality control of pharmaceuticals. In Mongolia, assistance was provided in the production of blood derivatives and enzymes from locally-available raw materials and technological profiles were prepared for the establishment of a pilot unit for biochemical products. A project for the diversification and expansion of manufacturing facilities for pharmaceuticals was completed in Zambia. Within the UNIDO programme on the Industrial Production of Biologicals (IPB), ^{19/} an Asiatic symposium on blood and its derivatives and a regional meeting for production and distribution of biologicals (both for human and veterinary use) were held at Macao, China, and Dakar, Senegal, respectively. As a follow-up of the model programme for the production of vaccines in developing countries, ^{19/} a monograph on oral polio vaccine was prepared.

77. In the field of biofuels and synthetic fuels, projects concerned with coal utilization ^{20/} in Bulgaria and Poland were brought to a successful conclusion. UNIDO was approached by authorities in China, India and the Philippines to provide technical co-operation in fluid bed combustion for utility applications, integrated coal gasification combine cycle (IGCC) development, and coal preparation technology. New projects in coal water mixture combustion and coal gasification

^{17/} *Ibid.*, para. 49.

^{18/} *Ibid.*, para. 48.

^{19/} *Ibid.*, para. 49.

^{20/} *Ibid.*, para. 50.

started in Chile and China. In biofuels development, the production of charcoal fuel from cotton stalks was demonstrated in the Sudan: over 20 small kilns were made to produce charcoal that was subsequently briquetted and sold in local markets. In bioprocess engineering, support continued for projects in citric acid production in the Philippines, bioreactor process modelling in Bulgaria and alcohol production using a new "flocculated yeast process" in India. The Shanghai Industrial Water Treatment Centre received equipment and training for the treatment of water for industrial use. In Tonga the possibility of installing a reverse osmosis desalination plant was assessed.

78. In the petroleum sector, in addition to the project to develop catalyst evaluation and technology in fluid catalytic cracking units, 21/ an important five-year project started in India aiming at synthesis and characterization of new zeolite catalysts that are used in petroleum refining and other petrochemical processes, some of high interest for the domestic production of middle distillates from natural gas. In the field of petroleum products transformation and distribution, a pricing study was made for Ghana and technical advisory services rendered to the Tanzania Petroleum Development Centre. The two projects in China 22/ reached a level of development that allowed the production at the Beijing Institute of Chemical Reagents of a certain number of chemical reagents and the designation of the Beijing Speciality Gas Research and Development Centre by the Government as a national centre for safety and toxicology. In Africa, the petroleum training centre in Sumbe, Angola, a regional project, 23/ reached an optimum level, offering a full range of training services to all member States of the Southern African Development Co-ordination Conference (SADCC). A study for the manufacture of industrial chemicals in the SADCC region was initiated with the aim of establishing the basis for a co-ordinated and complementary approach to production.

79. In the field of pulp and paper, projects concentrated on up-grading products, such as cigarette paper in the Democratic People's Republic of Korea, or producing new products, such as binders and surfactants from pulp mill black liquors in Burma and India. The first UNIDO

desalination plant for a 50 tons per day bamboo/reed pulp mill is being set up in India. Several new process technologies for small-scale chemical recovery systems for non-woody pulp mills are under investigation at the Central Pulp and Paper Research Institute at Sanaranpur, India, and these investigations are expected to result in a recommendation for an economic process for the recovery of chemicals from black liquors for small mills that produce below 50 tons per day.

80. In the basic chemicals industry, small solar evaporators have been accepted by the local women in the Gambia, Niger and Nigeria, and are increasingly being used in place of the traditional way of making salt by using fuel wood, which was one of the factors that led to deforestation. 24/ In Jordan, the artisan salt-making method in the Azraq oasis has been modified, and salt is now being harvested on a salt rather than a mud floor thereby producing cleaner, whiter salt; a newly erected salt refinery was assisted in the start-up period. In Trinidad and Tobago, a private salt refinery was advised on how to produce a better-washed salt at lower costs. In Egypt, a study is underway on whether potassium sulfate can be produced economically from the brines of the El Max Salt Works in Alexandria.

81. Activities in the field of environmental protection took a new momentum. A workshop on hazardous waste management, industrial safety and clean technologies, was organized at UNIDO Headquarters, with financing by the Federal Republic of Germany. The workshop, at which 170 experts from 36 industrialized and industrializing countries participated, provided recommendations for future UNIDO activities in such areas as: cleaner technologies, recycling, industrial safety, environmental impact assessment, and hazard assessment. UNIDO continues to develop and implement projects in all areas of pollution control as well as to disseminate relevant technical information to Governments, institutions and industry. Co-operation in this field continues with national as well as other international organizations.

82. In 1987, the methodology of a system for the integrated development of the chemical industries was applied in two planning projects. 25/ In the Islamic Republic of Iran, a computerized methodology for long-term planning and

21/ Ibid., para. 52.

22/ Ibid., para. 51.

23/ ID/b/340, chap. III, para. 278

24/ IDb.3/10, chap. II, para. 54.

25/ Ibid., para. 56.

project selection was introduced and self-reliant organizational units were established within the Ministry of Industry to continue the work begun by the project. This methodology enables the country to analyse alternative solutions in accordance with changes in raw material requirements and availability as well as changes in regional and world markets; selected investment projects were already identified. In Algeria, a multibillion dollar long-term development programme was prepared, and the full set of government policies and economic instruments was specified, showing alternatives for the implementation of such a complex programme. A preliminary programme for the establishment of the small-scale chemical industry was suggested that would provide opportunity for national and private sector participation in basic chemical industries development.

METALLURGICAL INDUSTRIES

83. In 1987, technical co-operation expenditures under the heading of metallurgical industries amounted to \$8.6 million. Some 94 per cent of the total implementation was financed from UNDP resources. A total of 142 projects were implemented or under implementation.

84. Emphasis continued to be placed on the following areas: investigation and beneficiation of metallic minerals to identify their processing characteristics; introduction of computer-based managed maintenance systems in metallurgical plants, particularly iron and steel plants; and sophisticated technologies that yield higher added value products such as the production of electronic materials, high purity metals and special alloys. Assistance was also provided in the strengthening or establishment of centres for metallurgical technology and, in some developing (particularly least developed) countries, to the foundry, forging, heat treatment, welding and metal-mechanics sub-sectors.

85. In the area of non-ferrous metals, special emphasis was given to the aluminium industry. Laboratory, bench and pilot scale tests with alunites from the Islamic Republic of Iran were successfully completed and the final stage was thus reached in the preparation of a techno-economic study for bauxites. ^{26/} Assistance to Yugoslavia in the establishment of an aluminium R and D

institute completed its institution-building phase and continued in the provision of direct advisory services. ^{27/} The laboratory buildings and premises were completed and most of the equipment was ordered for a bauxite processing plant in Viet Nam. ^{28/} In Mexico, tests were undertaken with bauxitic clay samples with the aim of possible production of alumina. Three experts provided practical assistance in starting up the aluminium extrusion press of a redeployed plant in Nicaragua. Expert advice on the production of cryolite was provided to the Democratic People's Republic of Korea. Equipment for establishing experimental tube digestion in a Chinese alumina plant was delivered and installed. ^{28/} Also in China, laboratory investigations of alunites showed that these are suitable for processing into alumina, potassium sulphate and sulphuric acid; thus, apart from metallurgical use, the ores would also yield the inputs for the production of much-needed potassium sulphate fertilizer.

86. Many of the projects under implementation in 1987 were related to the development of the iron and steel industry. Assistance was provided in the introduction of computer-based managed maintenance systems in plants of the Steel Authority of India Ltd. and preparatory work was done on a similar project in Algeria. Building on previous UNIDO assistance, a national centre for managed maintenance systems in metallurgical and other industries was established in Egypt within the intercountry programme and actively promotes such systems in some African countries. Missions were also undertaken to ASEAN countries and preparatory assistance was launched to introduce computer-based managed maintenance systems in iron and steel plants of the ASEAN region. In the Arab region, assistance continued to the Arab Iron and Steel Union to enhance the technical skills of manpower in the industry. Three seminars on managed maintenance were held in Algeria, Syria and Tunisia.

87. A number of projects in Egypt and India were aimed at reducing energy consumption in metallurgical plants. The strengthening of the technological development of the iron and steel industry in Argentina through UNIDO co-operation ^{29/} resulted in a significant increase in

^{26/} IDB.2/10, chap. III, para. 234; IDB.3/10, chap. II, para. 59.

^{27/} IDB.2/10, chap. III, para. 245.

^{28/} IDB.3/10, chap. II, para. 59.

^{29/} IDB.2/10, chap. III, para. 226.

productivity. Assistance to Angola continued in the reconstruction and expansion of the country's steel tube plant and in metal scrap transportation. Expertise in plant operation, a feasibility study on local scrap utilization and a market demand study were provided to Uganda with the goal of rehabilitating the East African Steel Company at Jinja. In Benin a pre-feasibility study on the establishment of a mini-steel plant recommended as a first step the establishment of a re-rolling plant. Assistance continued to Viet Nam, on the testing of raw materials for the production of sponge iron through direct reduction.^{30/} A modernization programme for the automation of the bar rod rolling mill of the Zimbabwe Iron and Steel Company (ZISCOSTEEL) was elaborated, and will be implemented during a second phase following the procurement of suggested new equipment.^{31/} At the same plant assistance continued to improve metallurgical quality control and work began on the establishment of a physical metallurgy laboratory at the Department of Metallurgy.

88. Projects related to the establishment of foundry development centres, repair and maintenance centres and forging and heat treatment shops were under implementation in Burma, Guinea, India, Iran (Islamic Republic of), Lesotho and United Republic of Tanzania. In Democratic Yemen, UNIDO assistance to a company that produces metal goods resulted in the development of products for metal furniture and the product-mix of the plant was considerably enlarged. In Burma, technical assistance to the Simalaik Foundry resulted in recommendations for the establishment of a quality control laboratory and the introduction of appropriate technology of cast grinding balls.

89. At a workshop for the African region organized in Poland, appropriate technologies and equipment for the metallurgical and metal processing industries were discussed. A large number of technical co-operation project proposals were identified, of which 21 were selected for follow-up by the Economic Commission for Africa (ECA) in co-ordination with a Polish company. Co-operation with the African Regional Centre for Engineering Design and Manufacturing (ARCEDEM) continued through the joint organization of the fourth workshop and study tour on core metallurgical industries, held in Hungary

in October 1987. A number of projects were aimed at strengthening or establishing centres or pilot plants for metallurgical technology. Such institution-building projects were carried out in Cuba and Pakistan for the establishment of mineral beneficiation pilot plants^{32/} in Czechoslovakia for the establishment of a national technical consultancy and training centre, in the Republic of Korea for the establishment of a metals surface treatment centre,^{33/} in Viet Nam for the establishment of a unit for manufacture of magnetic materials and components for use in electronic engineering, and in Peru for the Metallurgical Research Institute.^{34/} In Paraguay, the establishment of a centre for the training of personnel for the production of charcoal for metallurgical purposes led, apart from technology transfer in this field, to the first attempt at a reforestation programme in the country.

ENGINEERING INDUSTRIES

90. In 1987, technical co-operation expenditures under the heading of engineering industries amounted to \$14.4 million. Some 90 per cent of the total implementation was financed from UNDP resources. A total of 193 projects was implemented or under implementation.

91. Significant 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 and water-borne transport equipment, measuring and control and precision instruments and energy-related equipment.

92. In the field of agricultural machinery and implements, emphasis continued to be placed on employment generation and rural industrialization through local fabrication of tools, manually-operated equipment, animal-drawn implements and simple power-operated machines. A project on the development of agricultural machinery industry in Algeria, carried out in co-operation with FAO, assessed possible further agricultural mechanization, the design of agricultural equipment, the production of agricultural machinery and

^{30/} *Ibid.*, chap. III, para. 225.

^{31/} *Ibid.*, chap. III, para. 230; IDB.3/10, chap. II, para. 60.

^{32/} IDB.2/10, chap. III, para. 243; IDB.3/10, chap. II, para. 62.

^{33/} IDB.2/10, chap. III, para. 244.

^{34/} IDB.3/10, chap. II, para. 62.

the dissemination of information. ^{35/} In Togo, after the installation of new production machinery, the co-operating company has increased its production output in agricultural machinery and has initiated the manufacture of manually-operated water pumps. ^{35/} In Burkina Faso, workshop equipment was installed, but, owing to reduction of IDDA resources, only one repair and maintenance workshop for servicing agricultural tractors became operational. ^{35/} In Poland, a project was completed on strengthening research and design capabilities of the Industrial Institute of Agricultural Engineering at Poznan. The project introduced computer systems, hardware and software, to a number of factories producing agricultural machinery and tools. In Viet Nam, a large-scale project for the rehabilitation of sugar mills was also completed with the setting up of a workshop which produces spare parts and sugar milling equipment and undertakes major repairs. ^{36/} In Madagascar, the first major phase was completed of a project designed to improve industrial maintenance and spare parts manufacturing. ^{37/} The project along the Senegal river to strengthen regional workshops for the maintenance of motor-driven irrigation pumps was also completed. ^{38/} In Somalia, pump tests began in the pump repair section of the Central Foundry and Mechanical Workshop in Mogadiscio. The project was completed with the training in maintenance of the mechanical parts of pumps. ^{39/}

93. In the field of electronics and electrical machinery, technical co-operation activities continued to incorporate high technology in both hardware and software. Repair and maintenance activities in electro-mechanical and electronic-electrical equipment were carried out in all projects in this field. In Malta, two specialized units were established for the repair, maintenance and servicing of electronic, telecommunication, bio-medical and hospital equipment. In the Democratic People's Republic of Korea assistance was provided in the preparatory phase of a project for testing components used in the electrical power distribution systems. In El Salvador, technical assistance was given in formulating a

^{35/} *Ibid.*, para. 66.

^{36/} *Ibid.*, para. 67.

^{37/} *Ibid.*, para. 66.

^{38/} *Ibid.*, para. 67.

^{39/} IDB.2/10, chap. III, para. 279.

strategy for the development of the electronic and telecommunication industries.

94. UNIDO continued to provide assistance in the field of high technology involving electronics application to products and industrial processes. For example, under a project which was completed in India, a microprocessor-based infra-red grain analyser for measuring protein and moisture content in cereal grains was designed and a prototype developed. ^{40/} Also in India, the laboratory line for the production of double-sided plated and through-hole printed circuit boards was commissioned within the framework of India-UNIDO-Bulgaria co-operation. ^{41/}

95. A project on the development and introduction of advanced technologies for materials processing started in Bulgaria with the provision of equipment and training. Also in Bulgaria, a project was completed in the field of computer-aided design and the introduction of standards for computer graphic software, which benefited a number of local industries.

96. The interrelationship between high technology and products such as machine tools, process planning, instrumentation, control systems and data bases was a critical element in many technical co-operation activities implemented by the Engineering Industries Branch. In the Democratic People's Republic of Korea, preparatory assistance was provided for a project on the development of analytical instruments; the aim of this project will be to assist in the design, development and production of analytical instruments, particularly infra-red spectrophotometers and chromatographs. In Viet Nam, preparatory assistance was completed for the establishment of a repair and maintenance unit for precision equipment within Centre III in Ho Chi Minh City.

97. With SIS funding, immediate assistance was provided to the Himachal Pradesh Electronic Development Corporation project in India for identifying those electronic products and technologies which are compatible with local conditions. Preparatory assistance was given to Algeria to elaborate a project proposal for strengthening the capabilities of the Ministry of Heavy Industry in the development of engineering industries according to local needs. In Chile, a project was completed that introduced the application of new digital and protection

^{40/} IDB.3/10, chap. II, para. 69.

^{41/} *Ibid.*, para. 70.

techniques and computer-aided methods for the reliable operation of electrical systems and training of technical personnel. In Sri Lanka, preparatory assistance was completed for the establishment of a CAD/CAM centre to upgrade local capability for the introduction of computerized techniques within industry. A UNIDO workshop on instrumentation policies with emphasis on repair and maintenance was held at Budapest under the Joint UNIDO/Hungary Programmes for International Co-operation with a view to promote technical co-operation among developing countries and an interlink between industrialized and developing countries in the area of high technology.

98. Technical co-operation in the metal-working and machine tools sector concentrated on plant level assistance, engineering design and development institutions and the application of high technology in this sector. It also continued to give priority to the higher utilization of production capacities, repair and maintenance and human technical skills development. In India, a project designed to assist the Central Institute of Hand Tools Industry, at Jullundur, continued to enable the industry to achieve higher value added for the tools manufactured for domestic and export markets. Also in India, a project on the introduction of CAD/CAM in the metal-working industry continued to be implemented, and activities progressed in another project on the introduction of computer techniques in industrial design and process control in critical areas, such as specific sectoral engineering plants, semi-conductor electronic system industries, heavy engineering plants, as well as storage and distribution systems. In Hungary, a project aimed at the establishment of computer-aided engineering training commenced. Activities also began in Poland on a project to improve CAD capabilities in the machine-building industry.

99. In the Republic of Korea, the Numerical-controlled Centre for Metal-Working Industry was equipped during the year. The computer systems and expertise that were provided have given good results in increasing the utilization of numerically-controlled (NC) machine tools in use and increasing the application of NC machine tools in the metal-working industry. Also in the Republic of Korea, another project using CAD/CAM techniques in mechanical industries was completed. The project provided engineering consultancy to industrial organizations in determination of CAD applications, including economical justification of CAD installation or service and selection of a CAD system. In

India, a project of assistance to the National Institute of Design at Anmedabad was completed. The project made major progress in strengthening the service of the Institute to industries in the application of industrial design techniques for reducing costs and improving productivity. In the Democratic People's Republic of Korea, the development of NC machine tools was achieved through the completion of a large-scale project. ^{42/} In Indonesia, preparatory assistance for the establishment of a machine tools design and development centre was completed. In China, a project was initiated for the strengthening of a CAD/CAM centre in Beijing. Project activities dealt so far with the introduction of modern design and manufacturing procedures in industry through the use of computers and with the building up of a national cadre.

100. In the Republic of Korea and in Tunisia two similar projects were carried out on the application of CAD/CAM for the fabrication of moulds and dies in the plastic and metal forming industries. ^{43/} In Ethiopia, as part of a large-scale four-year project for the establishment and operation of an engineering design and tool centre, a contract was concluded that provides for services in civil engineering design, experts and consultants, and the development of training curricula for national staff. ^{43/} A special engineering rehabilitation centre was set up in Luanda, Angola, with basic sections and workshops established and adequately equipped to provide their services to industrial enterprises.

101. Technical co-operation activities in transport industries related to both land transport and water-borne equipment. Land transport varied from the production of simple two- and three-wheeled vehicles to the automobile and locomotive industries. Assistance was provided at the plant level, in spare parts manufacture and in technical institutional support. In China, a project was initiated to improve the design of a prototype of a high performance locomotive diesel engine. Also in China, the overall design of the processor-control and data acquisition system for a test stand of railway locomotives was completed that provided the basis for the judicious selection of equipment. ^{44/} A modest project was completed in Romania that deals with rehabilitation of spare parts for diesel engines and turbines by applying

^{42/} *Ibid.*, para. 72.

^{43/} *Ibid.*, para. 73.

^{44/} *Ibid.*, para. 74.

modern reconditioning technologies to worn-out mechanical spare parts. 45/ In Bangladesh, technical assistance to the Bangladesh Diesel Plant continued which has become the main supplier of diesel engines for the country's transport sector. Also of an innovative nature, the plant has designed and produced prototypes, such as generator sets for rural areas, a gas diesel engine, an improved irrigation pump for low lift application and a three-wheeled vehicle. Assistance to the Pakistan Automobile Corporation continued 46/ with the setting up of a "vendor development and training cell" that provides consultancy services to small and medium automotive ancillary industries. In Bhutan, the long-term project to strengthen the maintenance and overhauling departments of the governmental Transport Service Organization was operationally completed, 46/ resulting in improvement of the maintenance and overhauling department in Phuntsholing.

102. In the field of energy, technical co-operation covered the areas of conventional as well as renewable and new sources of energy. Energy conservation, hardware and software development, and improvement of efficiency continued to be the priorities. In Egypt, a project to establish and operate an industrial energy conservation centre is nearing completion, and in Pakistan, a project to assist in the development and implementation of an integrated energy saving programme in industry was operationally completed. 47/ In India, a large-scale project on the development of two-stroke and four-stroke engines using methanol as fuel was also completed. The results will enable the Government to adopt a policy for producing methanol on a large scale, since, with only minor modifications, the petrol-run engines can be operated with methanol. 48/

103. In the Asia and Pacific region, co-operation continued with the Regional Energy Development Programme of the Economic and Social Commission for Asia and the Pacific (ESCAP) in support of the training programmes of the Regional Network for Small Hydropower. In Uruguay, a recently started project for the assessment of wind energy will assist the Government in establishing local capabilities for the installation of windmill systems to

supplement the national electricity grid. In Jordan, a large project was completed with the design, manufacture and installation of a second large solar water heating system in a hotel complex in Aqaba. 48/ In Madagascar, training was provided in the operation and maintenance of the hardware of solar heating systems installed for the provision of hot water in hospitals and a preliminary study was conducted on the installation of a small pilot demonstration hydropower plant in Viet Nam. 48/

INDUSTRIAL PLANNING

104. In 1987, technical co-operation expenditures under the heading of industrial planning amounted to about \$5.9 million. Some 81 per cent of the total implementation was financed from UNDP resources. A total of 92 projects were implemented or under implementation.

105. Most of the projects assisted developing countries either in the formulation of strategies, plans and policies for industrialization or in the establishment or strengthening of the institutional infrastructure for industrial planning. Large-scale projects in the formulation of industrial plans and strategies financed by UNDP and under implementation in Africa in 1987 included assistance in the preparation of industrial master plans in Cameroon, Cape Verde, Côte d'Ivoire, Ghana, Senegal and Zaire. An innovative measure in the assistance to Senegal was a meeting held at UNIDO Headquarters in December to acquaint potential donor countries and financing institutions with the new industrial policies and programmes of Senegal and to seek their support in carrying out these programmes. The meeting, organized at the request of the Government of Senegal, was attended by a number of senior officials from Senegal and representatives of potential donor Governments and financing institutions. Experience was encouraging, and a similar meeting is planned to introduce the industrial master plan for Zaire which is being prepared with UNIDO assistance. The importance of the close involvement of financing institutions in industrial planning projects is fully recognized; thus a planning project in Ghana is being carried out in co-ordination with the World Bank within the framework of its Industrial Sector Adjustment Credit to Ghana; 49/ and a project to strengthen the Planning Unit of the Ministry of Industry

45/ ID/b/340, chap. III, para. 253.

46/ IDb.2/10, chap. III, para. 281.

47/ IDb.3/10, chap. II, para. 75.

48/ Id., para. 76.

49/ IDb.2/10, chap. III, para. 110.

in Uganda is financed entirely from an International Development Association loan. Activities in the Asia and Pacific region, included follow-up assistance to Thailand ^{50/} in the implementation of a financial plan within the framework of the Government's regional development plan (the Eastern Seaboard Programme) and assistance in planning - including human resources planning - to Bhutan, Maldives and Nepal. Co-operation was extended to Cyprus in a critical assessment of its industrial sector and setting out a new innovative industrial strategy and to Jordan in formulating a strategy to stabilize, strengthen and promote the industry sector on the basis of the results of an industrial survey. In Venezuela, assistance continued in the preparation and implementation of an industrial strategy and policy and in Honduras, assistance was given in the design of a questionnaire for an industrial census.

106. Assistance in planning for the industrial sector and for selected industrial subsectors continued to be given in 1987 - particularly as regards Latin America, where UNIDO is carrying out second-phase projects in Colombia and Venezuela and has started preparatory work for relevant activities in Chile. The projects aim at programming the development of the capital goods sector through modifications of the pattern of industrial production, replacing imported capital goods with equipment produced domestically. This objective is being achieved through the adoption of new policy tools, in which the reorganization of production processes and upgrading of technological capabilities are essential elements. Attention is also being given to the role of the industry sector in international trade in selected countries. In Peru and Mexico, projects were directed towards increasing the ability of the industry sector to compete in international markets and in Bolivia, the possibility of establishing an industrial free zone was investigated.

107. In addition, UNIDO has carried out activities to encourage the application of computers in industrial planning. An Expert Group Meeting on Computer-aided Industrial Information Systems for Industrial Planning was held at Riga, USSR, in September and October, in co-operation with the Soviet Government; experts from Algeria, Austria, China, Egypt, German Democratic Republic, Hungary, Jordan, Peru, Poland and USSR participated in the meeting. As a result of the discussions, a

comprehensive programme was drawn up to introduce the use of computer-aided tools in industrial planning (UNIDPLAN) and to develop international co-operation in this field through the establishment of a network of specialized planning institutions in industrialized and developing countries.

108. Within the framework of IDDA, UNIDO held in Vienna, in March, an evaluation workshop on the national seminars held in 1985 and 1986 on industrial strategies and policies in 13 African countries (Benin, Burkina Faso, the Central African Republic, Côte d'Ivoire, Ethiopia, Madagascar, Mali, Mauritania, Niger, Rwanda, Sierra Leone, Uganda and Zaire).

109. There have also been measures to promote regional industrial integration and co-operation. For example, UNIDO continued to assist the Central African Customs and Economic Union (UDEAC) in the promotion of sub-regional industrial projects and co-operated with the Secretariat of the Economic Community of Central African States (ECCAS) in the preparation of an action programme to promote industrial co-operation and integration. UNIDO also organized a workshop at Algiers, in June, in co-operation with the Institut Supérieur de Gestion et de Planification on public industrial enterprises and their environment, which examined in particular the conditions for their efficiency and their relationships with the central administration.

INSTITUTIONAL INFRASTRUCTURE

110. In 1987, technical co-operation expenditures under the heading of institutional infrastructure amounted to \$10.6 million. Some 88 per cent of the total implementation was financed from UNDP resources. A total of 186 projects were implemented or under implementation.

111. Technical co-operation in this field followed an integrated approach with mutually supportive programmes in areas such as promotion and development of small- and medium-scale industries, entrepreneurship development, special support programmes for small- and medium-scale industries, rural industrial development, institutions for industrial research and for industrial information, quality control, standardization and metrology. During the year under review, a broad range of multidisciplinary activities were implemented that aimed at providing a comprehensive package of technical services and facilities to those industries. Technical co-operation was provided at the

^{50/} *Ibid.*, para. 111.

policy-making, the institution-building and the entrepreneurial levels.

112. At the policy-making level projects contributed, *inter alia*, to the design of appropriate policy measures and strategies for the promotion and development of small- and medium-scale industries and the formulation of legal instruments and investment incentives. For example, in Bahrain, UNIDO continued to support the Government in its aim to use primarily private sector investment to achieve a doubling of the size of the industrial sector over a five-to-ten-year period. ^{51/} Government policy foresees incentives to capitalize on import substitution opportunities that encourage Arab and other foreign participation in joint ventures through licensing agreements and technology transfer. To pursue this policy actively, the Bahraini Government approved the establishment of an industrial development centre within the Ministry of Development and Industry. A project in Mexico focused on building an appropriate information system on which to base controlled policy support and incentive mechanisms conducive to the development and growth of the small- and medium-scale industry sector. The project places particular emphasis on development and decentralization measures designed to stimulate micro-industries and the informal sector at the regional level within Mexico.

113. Projects at the institution-building level dealt with transferring expertise and improving capacities to enable institutions engaged in the promotion of small- and medium-scale industries to provide the required technical services and facilities for their development and upgrading. In Africa, such assistance was provided through large-scale technical co-operation projects in Burundi, Chad, Ethiopia, Kenya, Liberia, Niger, Rwanda, Sierra Leone, Zaire and Zambia. The trend in most African countries has been to encourage entrepreneurship initiatives and Governments have therefore put emphasis on UNIDO programmes that support the required institutional infrastructure.

114. At the entrepreneurial level, direct assistance was provided to small industries in countries with varied degrees of industrialization. For example, a package of technical services provided to the micro- and small-industries in the Pacific island countries, Solomon Islands, Tonga and Vanuatu ^{52/} was designed to meet the

specific requirements of those countries; in the Republic of Korea, extension services to small- and medium-scale industries in specialized fields (e.g. glass and glassware, textile printing, electronics and steel foundries) responded to very specific needs of the country.

115. Enterprise-to-enterprise co-operation continued to be encouraged between small- and medium-scale industries in industrialized countries and those in developing countries. For example, an interregional project aiming at establishing in-plant co-operation agreements between small- and medium-scale industries in Italy and similar industries in the developing countries commenced its second phase under a special contribution by the Government of Italy. ^{53/} While the first phase (1985-1987) involved Colombia, Peru and Tunisia and was limited to the engineering industries, activities are currently being extended to Argentina, Brazil, Egypt, India, Indonesia, Morocco and Turkey and will also include other sectors, e.g. agro-industry, textiles and electronics. Four co-operation agreements have already been signed between small entrepreneurs in Colombia and their respective partners in Italy. They cover licensing, transfer of technology, sub-contracting and joint ventures and include direct technical assistance and training from the Italian partner to the Colombian entrepreneurs for manufacturing new lines of production, introduction of quality control, and improvement in productivity. Other programmes, financed by the Federal Republic of Germany and France, aim at promoting enterprise-to-enterprise co-operation between Brazil and Morocco on the basis of a methodology for Analysis of Technological Complexity (ACT) developed with UNIDO assistance. ^{54/} The application of ACT methodology in projects in Algeria and Tunisia demonstrated its practical value in the development of national electro-mechanical small- and medium-scale industries and in the identification of investment projects. Therefore, as part of its Headquarters activities, UNIDO continued to elaborate the ACT package: instruction manuals and related computer software were used in applying the methodology and in creating capabilities in developing countries. These measures should in turn enable the developing countries to use and further develop the ACT methodology independently.

^{51/} IDB.3/10, chap. II, para. 89.

^{52/} *Ibid.*, para. 87.

^{53/} *Ibid.*, para. 90.

^{54/} *Ibid.*, para. 94.

116. In view of the importance of entrepreneurs in stimulating investment and innovation in the private sector, increased attention was given to enhancing entrepreneurial capacities. The UNIDO entrepreneurial development programme aims not only to achieve in general terms the development of entrepreneurial skills but also to provide selective support to specifically identified target population groups. Projects in entrepreneurial development were carried out in Kenya, Malaysia, Micronesia, the Pacific island countries, the Philippines and Zimbabwe, while regional projects started in the Caribbean and Europe. 55/

117. The UNIDO sub-contracting programme is mainly seen as an instrument to develop the small- and medium-scale industries by increasing the rate of utilization of installed manufacturing capacities, facilitating access to new markets, transferring technology and upgrading the quality of products. In many countries where UNIDO has provided such assistance, industrial sub-contracting has become a cornerstone of their industrialization policies and an efficient instrument of import substitution. National sub-contracting exchanges were successfully established in 1987 in Colombia, Egypt and Tunisia. A regional Arab programme for the development of sub-contracting, launched by the Governments of Algeria, Egypt, Iraq, Jordan, Morocco and Tunisia, continued. 56/ The activities carried out in 1987 under this programme, included: two initiation seminars on sub-contracting, with panels of international experts, for technical staff from the six participating countries, at Tunis (September) and at Cairo (December); two collective study tours to specialized sub-contracting fairs "PARTENARIAT 1987" at Tunis in June, and "MIDEST" in Paris in November; two sessions of the Regional Arab Committee for the Co-ordination of Sub-contracting at Tunis and at Cairo.

118. In view of the important role played by chambers of commerce and industry, federations of industry, and manufacturers' associations in the industrialization process, assistance was provided to Guinea in the establishment of such institutions and to Colombia and Morocco in their strengthening. Within its programme of product adaptation for export, UNIDO also assisted the Republic of Korea to establish a national industrial design centre and to

promote product design as an efficient means of improving the quality of manufactured products and gain new foreign markets.

119. To achieve a balanced industrialization between urban and rural areas, UNIDO endeavours to strengthen institutional infrastructure capabilities for the promotion of small- and medium-scale industries in rural areas and provides an integrated package of technical services to rural entrepreneurs. In 1987 particular emphasis in Africa was on human resource development and provision of direct technical support to small industries in rural areas. In Zambia, an extension service programme combined with on-the-spot training on book-keeping, costing, pricing and management accounting was provided to more than 90 rural-based small industrial units. In Liberia, in a second-phase project, 57/ and in the United Republic of Tanzania, training was continued to upgrade the industrial engineering capabilities and other specializations of staff. For three counties of Liberia an industrial area development survey report was completed, an entrepreneurship development programme introduced and institutional set-up for financing small enterprises established. A new project in Sierra Leone aims at establishing three production-cum-training centres in rural areas to be managed at the grass-roots level. A project to establish rural small-scale industrial centres in drought affected areas of Ethiopia started with the assessment of locations, selection of items to be produced and related technical specifications. Projects for the promotion of rural industries were also initiated in Guinea, Guinea-Bissau and Madagascar. In Latin America, to consolidate the success achieved through previous support to the promotion of small-scale rural industries in Santa Fé, Rosario, Argentina, a follow-up project was launched to develop applied research and transfer of technology to rural industries.

120. Multibranch industrial research and service institutions play a crucial role in the development of small- and medium-scale industries; therefore, the development of R and D capabilities and activities aimed at facilitating the acquisition, transfer and development of technology were integral elements of the comprehensive package of assistance provided to the small- and medium-industries sector. Two large-scale projects for technical co-operation to multi-branch industrial research institutions already functioning in Guyana

55/ Ibid., paras. 87 and 92.

56/ Ibid., para. 88.

57/ Ibid., para. 91.

and the Libyan Arab Jamahiriya were close to completion in 1987, but in both cases, further UNIDO co-operation was requested. ^{58/} In Guyana, a follow-up phase of the large-scale project became operational in late 1987 and in the Syrian Arab Republic activities started under a new large-scale project for the establishment of a centre for technological development. The continued technical assistance to the Tanzanian Industrial Research and Development Organization (TIRDO) focused mainly in 1987 on the chemical department and, in particular, on putting into operation the pilot plant for the production of caustic soda and precipitated calcium carbonate. The successful operation of TIRDO is proven by its income which, in 1986/87, increased five times over that in 1985/86.

121. Two projects that deal with linking R and D with the requirements of the industrial sector were under implementation in Costa Rica and Mexico. The objectives are to increase the technological capabilities of the countries through creation of better absorption capacities in industry, the Governments, and the science and technology establishment itself, and to increase the number and level of technology transfer arrangements between R and D institutions and industry.

122. Developing countries are increasingly aware of the need to establish, or upgrade, their capacities in industrial information services. Six technical co-operation projects aimed to improve such capacities were under implementation in 1987. For example, in Nigeria, steps were undertaken towards the establishment of information and documentation services and a computerized industrial information data bank as well as the training of staff within the Federal Institute of Industrial Research. ^{59/}

123. Another important element of the integrated programmes mentioned in paragraph 55 above is standardization, quality control and metrology. The developing countries were assisted in establishing their own national systems and institutions in this area or in increasing and diversifying such facilities so as to promote the adaptation and utilization of modern technology, the improvement in the quality of domestic and export goods, and better consumer protection. In 1987, 35 such projects were implemented or under

implementation. New bodies were being created, e.g. the National Bureau of Standards in Nepal, institutions on dimensional measurements in China and the Quality Control and Metrology Institution in Yemen.

INDUSTRIAL MANAGEMENT AND REHABILITATION

124. In 1987, technical co-operation expenditures under the heading of industrial management and rehabilitation amounted to \$4.0 million. Some 98 per cent of total implementation was financed from UNDP resources. A total of 60 projects were implemented or under implementation.

125. In line with the aims of the reorganization of the Secretariat and in accordance with the high priority attached by Member States to the rehabilitation and rationalization of existing industrial capacity in developing countries, the Factory Establishment and Management branch was renamed to Industrial Management and Rehabilitation Branch. Since 1987, the branch also deals with the technical and administrative aspects of projects on wood processing and products, which were transferred from the Agro-based Industries branch. ^{60/}

126. In addition to continuing assistance in industrial management, in development of consultancy and in application of computers and management information systems, efforts during 1987 focused on comprehensive rehabilitation programmes at the sectoral and plant levels. Activities were carried out that dealt with particular aspects of up-grading industry, such as the preparation of concepts that combine new industrial possibilities with rehabilitation programmes for existing factories, e.g. in Burkina Faso. Also, in co-operation with other branches, projects were developed with the objective of increasing exports, e.g. in Zaire for the implementation of specific modernization activities and in Jamaica for the rehabilitation of and investment in the wooden furniture industry. Direct advisory services on wood processing were provided to Bhutan, Mexico and Yugoslavia through field missions by staff members.

127. Projects aimed at industrial rehabilitation of public sector enterprises in Malawi, Somalia ^{61/} and Uganda focused on improving management structures,

^{58/} *Ibid.*, para. 95.

^{59/} *Ibid.*, para. 96.

^{60/} UNIDO/DC/B.61 of 20 November 1987.

^{61/} IDB.3/10, chap. II, para. 105.

production and financial management systems through direct assistance and on-the-job training. An important feature of rehabilitation, especially in Africa, is the creation and upgrading of national consultancy services that can provide on-the-spot long-term technical and managerial advice and, at the same time, upgrade skills at national and plant level. Diagnostic methodology was perfected during an analysis of some 150 enterprises in Côte d'Ivoire as part of a pilot project to strengthen the Crédit de la Côte d'Ivoire to enable the institution to reinforce, restructure and rehabilitate the enterprises it finances; local consultants are expected to complete their rehabilitation plans. Another example of local consultancy development is the upgrading of the engineers and technicians of the Centre d'Etudes et de Promotion Industrielle in Mali in their ability to improve the productivity of enterprises. The Centre now attracts enough consultancy fees to be almost self-sustaining. Regional co-operation to develop industrial consultancy continued in Asia.

128. Further assistance to develop modern management techniques and consultancy operations in China ^{62/} was financed from voluntary contributions received from China and France. A core of Chinese specialists were given access to such techniques at a firm in France, and, in turn, they will provide training and advice, backed up by an expatriate team of experts in China.

129. In Haiti, assistance was given to analyse the financial, technical and organizational structures of an edible oil-producing co-operative with a view to its rehabilitation. Assistance to three idle plants in the Philippines provided alternatives for private sector equity participation in plans to reactivate them. The comprehensive assistance in management provided to the Chittagong Dry Docks and Heavy Steel Structural Works in Bangladesh ^{62/} resulted in a doubling of ship repair orders. A silversmith workers' co-operative in Botswana was reorganized, new designs introduced and areas of planning, pricing and marketing were strengthened, with a concomitant improvement in the financial situation. In Indonesia, UNIDO assisted a state-owned heavy equipment manufacturing enterprise in management aspects of production, design and manufacturing, value analysis, group technology, accounting and materials control - a key aspect being the introduction of systems software.

130. Computer-aided management systems were introduced in a large project executed with the Chinese Government to improve operating efficiency for a machine tool production facility in Beijing. Various computer techniques to improve management were applied in Argentina and Iraq such as diagnostic analysis, management simulation techniques, and management information systems in general. A new network of co-operation for computerized management systems has been established in Europe that covers more than 20 institutions, organizations and plants. It deals with research, development and adaptation of new computerized systems and other advanced managerial and information processing techniques in maintenance and other management areas of enterprises. It also offers high-level training, consultancy, industrial information exchange and maintenance databank access.

131. Particular attention continued to be devoted to industrial energy management. In the Philippines, a large-scale industrial energy management consultancy and training project yielded positive results and an extension is envisaged. Also, two projects in Sri Lanka resulted in establishing national capabilities for energy efficiency, diagnostic and consultancy services and in energy conservation improvements. Enterprises, including the chemical industry in Yugoslavia and small-scale industry in Haiti, received direct assistance in energy management and conservation. A number of developing countries have been invited to participate in the European co-operation project on industrial energy conservation ^{63/} in which 30 national institutions participate and which provides for exchange of experience, information, consultancy and training in industrial energy conservation.

132. High-level technical advice and management training featured in the wood processing and products field in Yugoslavia with the repetition of a workshop on production management and in Guyana as part of a sectoral development programme that includes the establishment of a tool maintenance centre and prototype solar timber drying kilns. Very detailed advice was provided to the Caribbean Community countries for the development of intra-regional trade in sawwood and in components for furniture manufacturing. The UNDP/FAO/ECA/UNIDO Africa Forest Industries Advisory Group project to

^{62/} IDB.2/10, chap. III, para. 84.

^{63/} Ibid., para. 152; IDB.3/10, chap. II, para. 101.

promote the use of plantation timber was completed and the large-scale pilot furniture plant project in the Lao People's Democratic Republic entered its final phase. ^{64/} UNIDO supported international efforts to promote rational timber construction through the recently-established Working Commission dealing with tropical and hardwood timber structures of the International Council for Building Research and Documentation. The Commission aims to harmonize building codes and related standards. Activities related to the UNIDO prefabricated wooden bridge system continued: two bridges were completed in Bhutan, strong interest continued in the Americas, and the provision of one bridge in kit form to a project in El Salvador from the workshop established by UNIDO in Honduras provided a good example of technical co-operation among developing countries.

INDUSTRIAL TRAINING

133. In 1987, expenditures for fellowships and training components in all technical co-operation projects implemented by UNIDO amounted to \$14.5 million. Of that total, \$9.3 million were spent on fellowships and study tours and \$5.2 million on group training activities and meetings. Technical co-operation expenditures under the heading of training that received substantive backstopping from the Training branch amounted to \$6.1 million. Some 15 per cent of the total implementation was financed from UNDP resources. A total of 200 projects were implemented or under implementation in 1987.

134. The Training branch carried out its activities mostly within the framework of institution building that involve, as an integral part thereof, the training of trainers and the production of training materials. Efforts were made to identify institutions such as industrial training centres, research and development institutes and universities that could take part in the "Centres of Excellence" programme and could then serve not only their own country, but other developing countries as well. Measures were taken to increase the awareness among managers of public and private enterprises of the importance of promoting in-service staff training to ensure the most effective use of human resources in the achievement of plant objectives. Technical and managerial group training programmes were organized

with the aim of giving industrial personnel a better understanding of the challenges confronting them and provide them with specific tools for greater professional effectiveness. Sixteen projects related to infrastructure for training had been implemented or were under implementation at the end of the year, out of which nine projects (seven country and two regional projects) were financed through UNDP resources.

135. 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 1987 was 1,532, compared with 1,598 in 1986. A total of 144 or 9 per cent of the candidates came from least developed countries and 191 or 12 per cent were female. The number of placement arrangements by host countries was 2,278 in 1987, compared with 2,501 in 1986. Of these placements 488 or some 21 per cent were arranged in developing countries. The trend towards study tours for high-level industrial personnel continued.

136. A total of 77 in-plant and other group training programmes with a total of 1,262 participants were implemented. Of those participants, 410 came from least developed countries and 125 were women. Of the 77 programmes 36 (47 per cent of the total) were carried out in developing countries, compared to 28 (36 per cent of the total) in 1986.

137. Training activities for improving energy management and maintenance were pursued through a group training programme for petroleum refineries carried out in France. Also in the field of energy, a UNDP/UNIDO interregional workshop on mini hydro power development was held in Vienna in June in co-operation with the Government of Austria and the Transfer of Technology Programme branch. The workshop was aimed at upgrading the skills of senior policy makers, planners, plant managers and engineers so as to make better use of untapped hydrological resources and to improve energy supply, mainly in rural areas. New programmes in maintenance included an in-plant group training programme in China on maintenance of textile machinery and another in Romania covering reconditioning of spare parts and machinery components. Former participants were engaged as training experts in a group training programme on industrial maintenance in Cameroon. Similarly, at the Second Consultation on the Training of Industrial Manpower, held in Paris, in

^{64/} IDB.2/10, chap. III, para. 205.

September, a Cameroonian trainee acted as resource person and vice-chairman of a technical committee.

138. The activities related to environment included one interregional group training programme on environmental assessment and management aspects of air and water pollution from industry held at Ghent, Belgium, in August and September, for participants from African countries and one regional programme on waste treatment and pollution in the textile industry held at Verviers, Belgium in May to July 1987. These programmes promoted the awareness of government officials and industries on the impact of industrial activities on the environment. In the field of pharmaceutical technology a new regional group training programme for African participants was launched in France. Managers of medium-size industrial enterprises from 9 English-speaking African countries participated in a group training programme held in Bulgaria to explain an integrated approach to management concepts that emphasizes the human development aspect in the performance of management functions.

139. Following the regional group training programme on railroad maintenance organized partly in Belgium and Gabon in September and November, co-operation has developed between Mali and Senegal on the exchange of information in this field. A number of participating countries also agreed to exchange trainees. Also under technical co-operation among developing countries (TCDC) arrangements, Turkey hosted a new group training programme in the field of food processing and one study tour each for senior policy- and decision makers from French-speaking African countries in the field of cement industry.

140. Evaluation of group training programmes continued. ^{65/} Thus missions were fielded to Burma and Thailand to evaluate group training programmes organized in China in the field of repair and maintenance of diesel engines, and in design and manufacture of agricultural machinery. Evaluation missions were also sent to Kwanda, Uganda, Zambia and Zimbabwe for the programme of small-scale foundry operations organized in Turkey.

141. Regional co-operation was given a new impetus as a result of growing awareness of the importance of human resource development and its incidence on the industrial activities of a region or sub-region. At the request of Heads of

States of the Central African Customs and Economic Union (UDEAC) UNIDO, in close co-operation with the UDEAC Secretariat, carried out a series of country studies aimed at identifying and defining manpower requirements of small- and medium-scale industries in order to strengthen the co-operation among the member countries in the field of human resources development and to promote the training of trainers. In two regional field projects, assistance was provided to an industrial training programme for the Portuguese-speaking countries in Africa and to the Subregional Multisectoral Institute for Applied Technology (ISTA). An effort was also made to develop further co-operation with the Portuguese-speaking African countries in the formulation of national and subregional strategies in the field of human resource development. Two regional group training programmes for member countries of the Preferential Trade Area for Eastern and Southern African States (PTA) on maintenance engineering and maintenance systems were organized to enhance co-operation among the African countries in the field of iron and steel industry at the Training Centre of the Zimbabwe Iron and Steel Company (ZISCOSTEEL). The programmes were financed from contributions from the Governments of Austria and the United Kingdom of Great Britain and Northern Ireland. Together with the Latin American Centre for Development Administration (CLAD) and the Inter American Centre of Training in Public Administration of the Organization of American States (CICAP-OEA) a guide was completed on curriculum development for training public enterprise managers to assist management training institutions and training departments to orient the content of training programmes for managers of public enterprises in the Latin American region. ^{66/}

142. Advisory services were provided to Governments, regional and inter-regional organizations on matters relating to policies; strategies; manpower planning for industry; training needs assessment; the interface between education training and industry; importance of information systems; in-service training for the public and private sectors, including the need to establish and strengthen training departments; incidence of advanced technologies on manpower development and training; training for small-scale industry, financing institutions and development of experts and consultancy.

143. Technical assistance to individual countries in the field of training was delivered mostly in Africa. Following the

^{65/} IDB.3/10, chap. II, para. 109.

^{66/} IDB.2/10, chap. III, para. 176.

identification of manpower and training needs of the food processing industry, assistance was provided to the Tanzanian Bureau of Standards to assess their training capacity and capabilities in the field of testing and quality control. Also in the United Republic of Tanzania, the design and formulation of an industrial training and consultancy project was carried out. This preparatory assistance was a follow-up to an earlier project under which a management development committee, representing parastatal enterprises was established within the Ministry of Industry and Trade. The new project aims at strengthening the Industrial Training and Consultancy Unit of the Ministry of Industry and Trade in the formulation of an industrial manpower training and development plan. Extensive work and efforts were deployed for the Portuguese-speaking African countries. In Mozambique, 52 high-level industrial managers were trained on the spot in specific areas of management and the management of training, and 12 were trained as trainers/instructors under TCDC arrangements in Brazil. In Sao Tome and Principe, under preparatory assistance, a modular curriculum for the training of industrial managers was designed. In Sri Lanka, assistance was provided to the Sri Lanka Tyre Corporation in the design and establishment of a training department that will be capable to identify the training needs of the Corporation at all levels.

144. In activities addressing the advancement of women UNIDO, jointly with the United Nations International Research and Training Institute for the Advancement of Women (INSTRAW), sponsored a consultative meeting at Santo Domingo, Dominican Republic, to foster the participation of Dominican women in industry at the managerial and entrepreneurial level.

145. Research activities undertaken included new technologies in industrial training for the development of methods and techniques for computer-aided decision support and systems to make optimal use of assistance in planning manpower for industry. In addition, groundwork was laid for computer-aided training programmes in the field of spare parts production. Moreover, a UNIDO-UNESCO research project was prepared on the development of software for engineering education and training. As part of its research activities, the Training branch also took an active role in the preparation and implementation of the technical meetings and subsequent consultation on manpower development in the field of maintenance. The branch was closely involved in surveys carried out in co-operation with the OECD Development

Centre on in-service training in Burundi, Cameroon, Côte d'Ivoire and Zimbabwe. High priority was given to the production of training materials such as manuals, guides and case studies for individual countries. The sixteenth issue of the UNIDO Guide to Training Opportunities for Industrial Development (PI/101) as well as the UNIDO Industrial Training Offer Programme, 1988 (PI/102) were published and received worldwide distribution.

FEASIBILITY STUDIES

146. In 1987, technical co-operation expenditures under the heading of feasibility studies amounted to \$5.5 million. Some 77 per cent of the total implementation was financed from UNDP. A total of 101 projects were implemented or under implementation.

147. UNIDO continued to maintain its leading position in the development of a standardized methodology for the preparation and evaluation of pre-investment studies, in particular through the well-known Manual for the Preparation of Industrial Feasibility Studies (ID/206), of which over 120,000 copies have been printed in 16 languages. A revised edition was under preparation, which takes into consideration the suggestions and comments received from users of the Manual in developing and industrialized countries and the wide experience gained in several hundred pre-investment studies prepared by UNIDO. The second edition will put more emphasis on strategic marketing, market research, acquisition and transfer of technology, environmental planning and computer supported financial analysis. ^{67/} Work continued on the preparation of a similar manual for small industrial enterprises.

148. Some 40 investment studies were implemented, many of them with promising results. Achievements are particularly noticeable in the energy sector, where a number of countries face bottlenecks owing to lack of foreign currency to import oil and other fuels. To promote power generation from locally available renewable resources, two pre-feasibility studies were carried out for the establishment of mini-hydro power plants in Guinea and in Guinea-Bissau. Both projects are technically and economically viable. A complementary study was recommended for Guinea-Bissau to investigate the feasibility of constructing a dam that will

^{67/} IDB.3/10, chap. II, para. 120.

increase the area under irrigation and thus stimulate the development of agriculture and of small-scale industries. A feasibility study was carried out for Indonesia on the establishment of a modern wooden boat-building and repair industry at Irian Jaya that will lead to a long-term investment, thereby generating considerable socio-economic benefits. ^{68/} The project is also expected to assist in strengthening the regional infrastructure required to improve sea transportation and the fisheries industry in the region. Interest was expressed by local sponsors in a pre-feasibility study carried out for the processing of citrus fruit in the West Bank and Gaza Strip and a request for a full-fledged feasibility study was proposed for financing by a bilateral donor. A feasibility study for a plastic appliances extrusion demonstration plant was successfully completed for Burma ^{69/} and financing of the total investment costs of \$3.7 million has been secured from Japanese sources.

149. The Computer Model for Feasibility Analysis and Reporting (COMFAR) continues to be of great interest to users engaged in the identification, preparation and evaluation of feasibility studies. By the end of 1987 the total number of COMFAR licensees reached 215 in 96 countries. Software development for COMFAR has been further advanced with the release of the Economic Cost-Benefit Analysis Module (ECBA) and the initiation of the translation of the COMFAR GRAFIX ^{70/} and ECBA modules into Arabic, Chinese, French, Russian and Spanish. An expert group meeting of COMFAR lecturers was organized in October in Vienna to discuss the trends in hardware and software development for personal computers, to exchange experiences gained in using COMFAR and to define the main characteristics and functions of the next COMFAR software generation for the 1990s.

150. The scope and quality of training activities on project preparation, evaluation and financing and on the application of COMFAR were further expanded. In 1987 UNIDO reached an agreement with the Hamburger Weltwirtschaft Archiv of the Institut für Wirtschaftsforschung, Hamburg, Federal Republic of Germany, under which two joint interregional training seminars, financed by a special-purpose contribution from the

Federal Republic of Germany, were organized with positive results. In China, training activities in industrial project preparation and evaluation gained momentum. The UNIDO manuals and guidelines for project preparation and evaluation have been translated into Chinese and are being used in the elaboration of a standard national methodology, based on the success of a seminar held at Shenzhen and financed from a special-purpose contribution of the Federal Republic of Germany to the Industrial Development Fund, requests have been received for further training activities in China.

151. A total of 800 participants were trained in 1987 in the UNIDO methodology for the preparation and evaluation of pre-investment studies. Seminars were held at the Advanced Institute of Planning and Management, Algiers, where a permanent centre in project preparation, evaluation and implementation is being established, as well as in Madagascar, Nepal, Rwanda and the Sudan (the latter for the Arab region). In Poland the Sixth Annual Training Course was held in co-operation with the Central School of Planning and Statistics. Training workshops on financial analysis and the use of COMFAR were held in Bangladesh, Benin, Iraq (for the Arab region), Mongolia, Pakistan, and in Saint Lucia (for the Caribbean region). A seminar was also held in the Federal Republic of Germany for participants from member countries of the Development Bank for Central African States.

152. Support to institution-building projects continued throughout the year with the aim of strengthening national capacities and activities required for pre-investment work. Technical co-operation, through the services of experts and consulting firms and through the organization of fellowships and study tours, was provided to 25 institutions in 19 countries, mainly in the African and Asian regions.

153. An increasing number of industrial enterprises in developing countries operate well below installed capacity. The Feasibility Studies Branch was increasingly involved in the UNIDO programme of rehabilitation of industrial enterprises and therefore developed a multi-disciplinary approach for preliminary assessment that covers elements such as financial analysis, marketing, product design, management and labour skills, engineering and technology, equipment, maintenance and quality control, and the socio-economic and environmental impact of the enterprises under review. This preliminary assessment provides a basis for further in-depth assistance. An example of this phased

^{68/} IDB.2/10, chap. III, para. 181.

^{69/} *Ibid.*, para. 194.

^{70/} IDB.3/10, chap. II, para. 124.

approach is given by the case of the "La Béninoise" brewery at Cotonou, Benin, where, after a boiler explosion disrupted production in 1986, the Government called on UNIDO to prepare a study for reconstruction of the damaged plant. The results of the first study made it possible to restart production at reduced scale in 1987. The Government then requested UNIDO to

continue the study with a view not only to reach the pre-explosion production level, but to expand the production capacity. The work done by UNIDO included the preparation of the bidding documents for the machinery to be replaced and for the civil engineering construction. Eventually, UNIDO may also have to be involved in supervising the actual plant rehabilitation.

CHAPTER III. INDUSTRIAL PROMOTION

Introduction

1. In the Department for Industrial Promotion, Consultations and Technology, the process of reinforcing the links between activities relating to industrial investment, Consultations and development and transfer of technology continued. There was particular emphasis on an integrated programme approach as well as on complementarity of activities to enhance their effectiveness. For example, staff and consultants of the Division for Development and Transfer of Technology participated in investment forums and Consultation meetings, the information activities of that Division were also used as inputs to the System of Consultations in the preparation of a directory of non-ferrous metals institutes for the First Consultation on the Non-ferrous Metals Industry. Such co-operation and co-ordination contributes to an integrated promotion approach which can provide a coherent strategy when assisting developing countries in their industrial development.

SYSTEM OF CONSULTATIONS

2. Even though the financial resources made available were insufficient to carry out the programme activities mandated by the Industrial Development Board, it was possible, through the securing of extra-budgetary resources, to meet the objective of convening four Consultations during 1987. Efforts were intensified to increase the participation of industry at Consultation meetings and at preparatory expert group meetings. Thus, the representation of industry at the 1987 Consultations reached 57 per cent for training of industrial manpower, 56 per cent for the pharmaceutical industry, 40 per cent for the non-ferrous metals industry and 31 per cent for the fisheries industry. Furthermore, emphasis was placed on follow-up activities that included the identification of technical co-operation projects.

Consultations convened during 1987

3. The First Consultation on the Fisheries Industry was held at Gdansk, Poland, from 1 to 5 June 1987, and was

co-sponsored by the Food and Agriculture Organization of the United Nations (FAO). The discussions focused on improving and modernizing boats and fishing equipment to increase productivity and efficiency, improving fish production chains and increasing value added.

4. The Second Consultation on the Training of Industrial Manpower was held in Paris, France, from 14 to 19 September 1987. The Consultation, which was organized in association with the International Labour Organisation (ILO), focused on human resources development in particular in relation to industrial maintenance.

5. The Third Consultation on the Pharmaceutical Industry was held at Madrid, Spain, from 5 to 9 October 1987. The Consultation was enhanced by the participation and contribution of the World Health Organization (WHO). The main outcome of the Consultation was the general recognition of the importance of herbal medicine and drugs derived from medicinal plants, and of the need therefore for technological development in the area of genetic improvement and development of polyvalent pilot processing facilities. These facilities would enable developing countries to assimilate and generate process technology for medicinal plants.

6. The First Consultation on the Non-ferrous Metals Industry took place at Budapest, Hungary from 30 November to 4 December 1987. The primary issues discussed were industrial development strategies and their financial implications on the development of the sector and the technological alternatives available for developing countries to develop this industry.

Follow-up to the activities of earlier Consultations

7. The Third (1986) Consultation on the Agricultural Machinery Industry yielded a variety of follow-up activities. Thus a regional meeting was held at Santiago, Chile, from 2 to 6 November 1987 under the sponsorship of the Government of Chile. The focus of the meeting was on specific agricultural mechanization strategies in the countries of the Latin American region. Attention was drawn to the necessity for consolidating the existing

research and testing centres that deal with agricultural machinery and to promote the establishment of new centres. Also as a follow-up to the Third Consultation, a workshop, held in Algiers from 5 to 7 October, was organized in conjunction with the Section for Economic Co-operation among Developing Countries and sponsored by the United Nations Development Programme (UNDP), UNIDO and the Government of Algeria. The theme of the workshop dealt with co-operative arrangements in the development of agricultural machinery between Algeria and selected developing countries from Africa, Asia and Latin America. Another follow-up was a paper on the contribution of the UNIDO System of Consultations to North-South co-operation that was presented to the 1987 International "Deutsche Landwirtschaftsmaschinengesellschaft" (DLG) Symposium on Mechanization held at Frankfurt, Federal Republic of Germany, from 19 to 23 November 1987.

8. The Third Consultation on the Agricultural Machinery Industry also generated a useful relationship with the Yugoslav enterprise Industrija Masina i Traktora (IMI) that resulted in the preparation and finalization of an agreement on the transfer, free of charge, to the African Regional Centre for Engineering Design and Manufacturing (ARCEDEM) of a technological package designed by IMI for the development of six agricultural implements and steel pipe scaffoldings. The Centre will use the package for the benefit of its member States and other developing countries. The agreement between UNIDO and IMI was signed in July 1987 and the technical documentation was handed over to ARCEDEM in the following month.

9. Discussions were also held with representatives of the Government of the Netherlands in connection with a feasibility study for the creation of a plant to produce spare parts for agricultural machinery in a selected African country. Additional efforts for Africa included the discussion and review of a project document on the setting-up of an African regional network for agricultural tools and equipment, submitted by ILO and designed for joint execution by FAO, ILO and UNIDO.

10. Recommendations that emerged from the Second (1985) Consultation on the Capital Goods Industry led to the organization of an expert group meeting and study tour on standardized small hydropower plants. The event, at which 23 countries were represented, was held at the Hangzhou Regional Centre for Small Hydropower in China in May 1987.

11. A regional meeting on the leather and leather products industry sector in Africa was held at Alexandria, Egypt, from 12 to 15 January 1987. Fifty participants from 25 countries and five international organizations attended the meeting. A plan of action was agreed upon that was designed to rehabilitate and improve the situation in the hides, skins, leather, footwear and leather products sector in Africa (see chap. II, C, para. 64). Preparatory work started in 1987 on the next Leather Panel meeting, which will be held in 1988. The Panel will deal with the progress made in the leather and leather products industry in developing countries and with the formulation of ideas for further development projects, especially in Africa.

12. The First (1987) Consultation on the Fisheries Industry has spawned several activities, including the planning of regional meetings. One will be for the Caribbean region and the other will involve the countries of the Andean Pact. The System of Consultations continued to co-ordinate its activities with the Latin American Organization for the Fisheries Development (OLDEPESCA) and a representative of UNIDO attended the third session of the Executive Council and the Fourth Conference of Ministers of that organization, both held at Caracas, Venezuela, during the period 23 to 27 November 1987.

13. As a follow up to the Third (1985) Consultation on the Petrochemical Industry, work continued on updating the data base for this sector and the coverage was increased to 25 petrochemical products. In addition, three papers on safety and environmental protection in the petrochemical industry were prepared for presentation at international forums.

Preparations for Consultations scheduled for 1988-1989

14. Preparations focused on the two Consultations to be convened during 1988, namely the interregional Consultation on the food-processing industry with emphasis on sugar-cane processing and the regional Consultation on the phosphatic fertilizers and pesticides industries in Africa.

15. In preparation for the interregional Consultation on the food-processing industry, an expert group meeting for the Latin American and Caribbean region was held in Vienna from 8 to 10 December 1987. The meeting was organized in close

collaboration with the secretariats of the Group of Latin American and Caribbean Sugar Exporting Countries (GEPLACEA) and the International Trade Centre UNCTAD/GATT (ITC). The meeting discussed the present situation of the sugar-cane processing industry (with special emphasis on diversification), identified common and specific constraints hampering the development of the industry and selected issues for further elaboration at the Consultation. The meeting was attended by 14 experts from 13 countries and also by representatives of GEPLACEA and ITC.

16. In anticipation of the regional Consultation on phosphatic fertilizers and pesticides, which is to take place in December 1988 in Côte d'Ivoire, arrangements were made in 1987 for a regional preparatory meeting to be held at Lomé, Togo, from 3 to 6 February 1988. The meeting was financed from a special-purpose contribution. Ground work was also laid in 1987 for another regional preparatory meeting scheduled for 1988 at Lahore, Pakistan. In addition, a number of successful joint venture arrangements in the fertilizer industry that had earlier been concluded between developing countries, were presented in case study form. The case studies identify the conditions necessary for advantageous approaches to markets, raw materials, production, technological options and managerial skills; they will serve as background documents for the 1988 Consultation.

17. Preparations were also under way for the Consultation on small- and medium-scale enterprises including co-operatives, scheduled to be held in May 1989, in Africa. In preparation for that Consultation, an expert group meeting for the Caribbean and Latin American region was held at San Juan, Puerto Rico, from 8 to 11 December 1987. The meeting was organized in close co-operation with the Economic Development Administration of Puerto Rico (FOMENTO). The focus of the discussion dwelt on the institutional requirements for the promotion of small- and medium-scale enterprises and on the experience gained by Puerto Rico in this field. The meeting was attended by 14 experts from five countries and also by regional organizations representing governmental and non-governmental associations of small-scale enterprises.

DEVELOPMENT AND TRANSFER OF TECHNOLOGY

18. The activities of the Division of Development and Transfer of Technology were brought further into focus in 1987 with

a clear delineation of the programme approach.^{1/} The structure and content of the programme were endorsed by the Industrial Development Board.^{2/} The continuing primary objectives of the programme are to assist developing countries in the selection, acquisition and development of technology, consistent with their particular conditions and capabilities, and to prepare those countries for changes in global technology by strengthening their capabilities in appropriate areas. The work of the Division was adjusted to bring it in line with the components of the programme approach and, in spite of constraints of staff and financial resources, the primary objectives of the programme were met.

19. Among the most successful activities carried out in 1987 were: the ongoing assessment of technology trends with a view to supplementing the efforts of developing countries in the policy area; the start-up of operations by the International Centre for Genetic Engineering and biotechnology (ICGEs); the acceptance by the Arab Fund for Economic and Social Development of the plan of setting-up a silicon foundry in Iraq; the intensification of activities relating to Technology Advisory Services (TAS); and the donation of a small hydropower unit by Peru to Morocco. Highlights among Industrial and Technological Information bank (INTIB) activities included initiation of a network to establish INTIB focal points, development of training programmes for data base users and the experimental operation of a technology suppliers' data base.

Development of technology policies and programmes

20. Following country requests, country-level investigations focused in 1987 on policy responses to emerging technological advances. Reviews of the application of microelectronics in Trinidad and Tobago concluded with suggestions on policy issues for the Government, a proposal for a co-ordinating mechanism and a possible programme of software development. A biotechnology seminar held in Saudi Arabia in December focused on applications with regard to agriculture, enhanced oil recovery and pollution clean-up as the basis of a national programme in these fields. Preparations were made for a study

^{1/} IDB.3/26.

^{2/} Decision IDB.3/Dec.6.

on the technology policy and infrastructure in Tunisia and for activities to support technology policy formulation in the United Republic of Tanzania.

21. The Consultative Group on Informatics Technology for Development (COGIT) met in Vienna in December. It provided advice on programme proposals and identified applications specific to the needs of developing countries. An expert group meeting was also held in December at which the latest trends on the development and use of new materials were examined and recommendations made for activities by UNIDO in this field. Reviews of technological developments were prepared on the key issues in the establishment of software houses; materials developed in the course of space research suitable for application in developing countries; the status and direction of research on polycrystalline thin film devices for solar energy, and on amorphous silicon solar cells. Evaluations were also made of industry-university interactions and the relevance of the science parks approach.

22. Assessments of global technology trends in selected fields and countries were prepared and published under the "Technology Trends Series". Subjects covered in the series were micro-electronics and information technology, genetic engineering and biotechnology, new materials, advanced manufacturing technology, telecommunications, solar photovoltaics, as well as a review of the changes occurring on the international technology market structure.

Identification and development of alternative technologies

23. The results of co-operative research in genetic engineering and biotechnology between Trinity College, Dublin, Ireland, and the Kuwait Institute of Scientific Research ^{3/} were reviewed in a training workshop held in Kuwait in November. The co-operative R and D programme between Massachusetts Institute of Technology (USA) and the Department of Food Technology of Korea University (Republic of Korea), ^{4/} reached the end of the first phase with the determination of the fundamental conditions for a process to develop high-protein beverages from vegetables. Preparations were made in 1987 for a second phase of

this programme. Other work in genetic engineering and biotechnology included an assessment of the technical feasibility of bioreagent production in developing countries, using Thailand as an example; and a meeting of the UNIDO/WHO/UNEP Working Group on Biotechnology Safety ^{5/} held in Paris, France in December to review issues relating to biosafety and identify ways to promote good microbiological laboratory and industrial practice in developing countries.

24. The programme on marine industrial technology and its implication for developing countries continued in an expanded form. A study identified the priority areas in marine technology for developing countries. Work also began on a review of the technological capabilities required for the construction of offshore structures in developing countries. Preparations were initiated for the possible establishment of a Mediterranean regional centre for marine industrial technology and a report was prepared on the subject.

25. In regard to the establishment of a Consultative Group on Solar Energy Research and Applications (COSERA), ^{6/} expert missions were undertaken to selected countries in Asia and Latin America to identify institutions working in solar energy R and D and project proposals of potential interest to donor countries. Some 12 project proposals emerged from the efforts.

Development of technological capabilities

26. The work to help strengthen the technological capabilities of developing countries focused in particular on biotechnology and microelectronics. In Kuwait, an expert team assisted in the preparation of a draft national programme on biotechnology now under consideration by the Kuwaiti National Committee for Biotechnology and Genetic Engineering. Proposals were developed, in consultation with the Arab Gulf University (AGU), for co-operation in biotechnology among AGU member countries. Preparations were also made for a regional workshop in Cuba.

27. The number of States that had ratified the Statutes of ICGEB had reached 12 by the end of 1987. The first annual work plan was elaborated and approved by the ICGEB Preparatory Committee while UNIDO started

^{3/} Cf. IDB.3/10, chap. III, para. 22.

^{4/} Ibid.

^{5/} Ibid., para. 24.

^{6/} Ibid., para. 19.

implementation of the interim programme of ICGEs. In April, the head of the Trieste Component and selected research and support staff began work. The initial R and D programme is on selected viral diseases, molecular aspects of DNA replication in human cells and micro-biological degradation of lignocellulose. Work at the New Delhi Component is expected to begin by April 1988. Its first programmes will cover agrbiology and parasitology. Advice was provided to the architects and construction engineers in both Trieste and New Delhi with a view to accelerating the construction of the remaining buildings that are to be in line with the latest laboratory design practices. Missions were undertaken by the Director of ICGEs to ICGEs-affiliated centres in Argentina, Brazil, Chile, China, Egypt and Venezuela. Arrangements were made for missions to other affiliated centres. Preparations were also in hand for a workshop on protein engineering, an ICGEs scientists forum and training programmes, all scheduled for 1988.

28. In the microelectronics and informatics sector, advice was provided for upgrading the Fundacion Instituto de Ingenieria, Caracas, Venezuela, to strengthen its ability to serve the Venezuelan electronics industry. Preparatory assistance, funded by UNDP, has begun on a regional project particularly aimed at countries that are members of the Regional Network for Microelectronics in Latin America and the Caribbean (REMLAC). Expert missions to several countries in Latin America, led to the design of a large-scale project now under consideration by UNDP. The promotion of a silicon foundry/design centre in the Arab region to design and manufacture customized computer chips for applications in developing countries resulted in a decision by the Arab Fund for Economic and Social Development to finance, for the Government of Iraq, a feasibility study for the project. A proposal was being developed for an interregional project on microprocessor applications and software. Discussions were under way on the development of a joint project with ESCWA for the promotion of investment and transfer of technology in the electronics industries in the Arab region. A meeting on the subject is foreseen in Algeria.

29. The programme on plant-level co-operation for the transfer of technology to small- and medium-scale enterprises saw the completion and evaluation of a project financed by Sweden on light engineering industries; general conclusions will be drawn on how to improve promotion of enterprise-level co-operation between North and South and facilitate a smoother flow of technology. A Netherlands-financed project on food processing led to the designing of

joint investment ventures in China and Thailand. Missions to Nigeria and Ghana assisted in the selection of national counterpart agencies and the launch of a project on metalworking financed by Poland: some 70 company profiles were prepared for matching with potential partners.

30. The preparation of technical memoranda on alternative technologies for small- and medium-sized industries (SMI) continued with publications on mini foundries and small-scale manufacture of stabilized soil blocks.

31. The project in Nigeria on the development and introduction of small-scale gari processing technology, ^{7/} was completed in 1987 although the testing and evaluation will be in 1988. Depending on the results of this project, a follow-up programme will be decided upon.

32. The three-year programme, providing support for the Regional Network for Small Hydropower Asia/Pacific (RN-SHP) implemented jointly by the Department of Industrial Operations and the Division of Development and Transfer of Technology, was the subject of a UNDP tripartite review in 1987. As a result of a positive evaluation by member countries, RN-SHP activities were continued at an expanded rate with activities on co-operative R and D, training workshops, regional consultancy and information exchange. Interregional co-operation in the field of small hydropower was promoted with RN-SHP, and its Regional Centre in China played a pivotal role. As a follow up to the Consultation on Capital Goods a global meeting was held in China in May on standardized equipment for small hydropower. As a result of a study tour for Arab participants on small hydropower in Latin America, a pilot plant donated by a consortium of private Peruvian companies is being installed in Morocco. Technical manuals for design and fabrication of equipment and machinery for small hydropower stations were prepared in co-operation with the Latin American Energy Organization (OLADE). Discussions for further joint projects in the field of small hydropower and other energy areas were initiated.

Short-term technological advisory services

33. The Technological Advisory Services (TAS) covered selection and assessment of technical options, and advice on drafts of

^{7/} Ibid., para. 30.

agreements and evaluation of offers, many of these in connection with major projects. Among the countries benefiting from TAS were Algeria, Bolivia, Rwanda and Venezuela. In the case of Algeria and Venezuela, after initial advice, requests for further services were received, the latter country offering payment in advance. In addition, some 30 requests for "desk" advice were fulfilled from Headquarters. As an experiment, the TAS programme supplemented other UNIDO activities such as the Investment Promotion Forums in Mauritius and Egypt. Other advisory services included assistance in the negotiation of collaboration agreements between Swedish and Indian enterprises and between Dutch and Thai enterprises based on the respective UNIDO plant-level co-operation projects.

34. To strengthen the negotiation capacity of developing countries, UNIDO organized or contributed to seminars and workshops on technology acquisition and contract negotiation. An important example is the workshop on negotiation of technology organized by UNIDO in Rwanda. Furthermore, in a continuing dialogue with the Licensing Executives Society (LES) International, material of interest to policy-makers and negotiators of technology was exchanged. A training manual for negotiators is under preparation which will serve as a basis for the developing countries to build up self-sustained capabilities for the training of negotiators. Two studies to enhance the efficiency and effectiveness of technology transfer agencies in developing countries contributed to the setting up of the Computerized Registry Information System (CORIS) and to the follow up of the technology transfer agreements and the selection of alternative technologies. CORIS is designed to handle information related to the transfer of technology and as a tool for effective policy-making, strategic planning, evaluation and monitoring of contract implementation. A new version of CORIS has been finalized and has been adopted or is being considered for adoption in a number of countries.

35. The co-operation among developing countries in the field of acquisition of technology has been continued, particularly under the Technological Information Exchange System (TIES). Technical information on technology transfer agreements was provided through TIES via clearing-house services. The second annual meeting of TIES member countries was held at Dakar, Senegal in October. The Third Meeting of Co-ordinators of the Association of South-East Asian Nations (ASEAN) Technological Information Exchange System (ASTIS), held at Kuala Lumpur, Malaysia, in

November, agreed to submit proposals to the ASEAN Committee on Industry, Minerals and Energy for the creation of a regional support centre for ASTIS and a programme for training in the negotiation of technology transfer contracts.

Industrial and Technological Information Bank networking systems

36. Following the recommendations of the Industrial and Technological Information Bank (INTIB) Advisory Group meetings and decision IDB.2/Dec.14 of the Industrial Development Board, activities were reoriented to facilitate the effective functioning of INTIB in the context of changing information needs and trends in technology of information processing. Also part of the efforts to further improve the INTIB networking system, the scheme for establishing INTIB National Focal Points (NFP) and specialized nodes was given precise shape. By the end of 1987, 40 Member States of UNIDO had nominated NFPs. Information networks were established for the purpose of linking further individual and institutional contributors with INTIB, thereby enlarging the INTIB information base. Training in the use of INTIB and other UNIDO information systems and data bases was organized for staff from a number of NFPs. Projects were initiated to use commercial networks to provide better communication between INTIB and its NFPs by means of electronic mail. Africa, Europe and Latin America and the Caribbean were covered with such a network, and the Asia and Pacific region was covered with the Republic of Korea DATACOM network and the satellite facilities of the Democratic People's Republic of Korea and Mongolia.

37. Integral parts of UNIDO technical co-operation projects implemented by the Department of Industrial Operations included assistance to national information systems and centres, exchange of industrial technological information, training and linkage of NFPs with INTIB. Projects to strengthen national information organizations and their linkages with INTIB were under implementation in Algeria, Cameroon, Mongolia and Nigeria. A meeting of the INTIB-African network in Senegal recommended that ARCT and UNIDO co-operate with other international organizations to expand the information flow between UNIDO and developing countries and among African developing countries themselves. It also recommended that UNIDO should develop software for data bases of R and D and science and technology institutions, consulting organizations, experts, new and renewable energy and the food industry projects in Africa.

38. The Industrial Inquiry Service supplied assessed technological information in response to over 1,500 inquiries. In addition to regular replies to inquiries, supplementary replies were provided through the networking system of INTIB nodes (NFPs). A directory on research and technological institutions dealing with non-ferrous metals was completed and provided to the First Consultation Meeting on Non-ferrous Metals Industry held at Budapest in December. Quarterly monitors for awareness on technology developments in microelectronics, genetic engineering and biotechnology, and materials continued to be issued, but in a bulletin format. As an experimental measure, advertisements were solicited for the materials monitor. A Technology Supplies Data base has been further developed on an experimental basis with 500 entries and arrangements have been made with 50 institutions from 28 countries to provide inputs.

39. A UNIDO Energy Information System was established, utilizing some existing computerized data bases and creating a new major data base entitled Industrial Energy Conservation Abstracts (INECA). This new data base derives from a UNIDO project on industrial energy conservation in Europe. It will provide information for dissemination on energy conservation in selected industrial sectors and related activities. A UNIDO/UNESCO workshop on information networks for new and renewable sources of energy and energy conservation in small- and medium-scale industries of Asia and the Pacific Region, organized at the Korean Institute of Energy and Resources at Daejeon, Republic of Korea, made a number of recommendations for further action by UNIDO.

40. A UNIDO workshop on formulation of industrial and technological information service systems for small- and medium-scale industries of China, organized at the Institute of Scientific and Technical Information Centre at Beijing, China, recommended that Chinese industrial and technological information systems utilize the existing national institutional infrastructure for the benefit of SMIs. The workshop further recommended that agencies in China participate to a greater extent in INTIB activities.

41. The Industrial Technological Publications Unit, which generates its own publications in addition to carrying out publication support services for all of the Development and Transfer of Technology Division, published 12 issues of the UNIDO Newsletter in five languages and four volumes of the Industrial Development

Abstracts series, as well as numerous technical publications for the Division. In the area of computer systems analysis, preparatory work was carried out on computerized formatting that will accelerate the production of UNIDO documents and allow the inclusion of the latest data on technological information, particularly in directories and guides. A new venture in the unit was the production of a video film - The Women of Kurasine - which was filmed in the United Republic of Tanzania, for a project entitled "Small-scale enterprise for women entrepreneurs: textiles and garments". The preparation of the script and the filming in the United Republic of Tanzania, were carried out by a staff member of the unit.

42. Co-operation continued with other United Nations specialized agencies and with international, governmental and non-governmental organizations in order to enlarge the INTIB information data base. Representatives of the Secretariat participated in the work of the ACC Task Force on Science and Technology, intergovernmental and expert group meetings of United Nations Educational, Scientific and Cultural Organization (UNESCO), International Organization for Standardization (ISO), International Federation for Information and Documentation Committee on Information for Industry and of the United Nations Fund for Science and Technology for Development (UNFSTD)/UNDP/Devnet - Technological Information Pilot System project. Participation of regional technology transfer and information centres (Asian and Pacific Centre for Technology Transfer (APCCT), ARCT, International Centre for Science and Technical Information (ICSTI)) in the INTIB network was further increased.

INDUSTRIAL INVESTMENT PROGRAMME

43. The Industrial Investment Division continued to fulfil its mandate to assist developing countries in expanding their industrial output through international business co-operation. The approach of the Division entails identifying private and public sector investment project proposals and serious local sponsors in developing countries, and technical and financial partners in other countries willing to share the entrepreneurial risks of a joint business venture. Such proposals may include rehabilitation, modernization and expansion of existing facilities, and the setting up of new facilities.

44. The contributions from the foreign partners usually include: marketing skills

and knowledge of specific markets, plant and equipment, technical know-how and licences, management skills, training of local staff and finance. The resources at the disposal of the Division to bring local sponsors and potential foreign partners into direct contact are:

- The Investment Promotion Service (IPS) network established by agreement with, and financially supported by a number of countries, 8/ most of them in the industrialized world;
- Co-operation arrangements with contact organizations and focal points 9/ or direct links with industry associations and chambers of commerce in countries where there is as yet no IPS;
- The Investment Promotion Information System (INPRIS), which currently contains some 9,000 entries, including 2,500 industrial investment projects registered for promotion both by Headquarters and by IPS. These entries formed the basis of two booklets published in 1987 with details of some 460 new investment project proposals.

45. In addition, to help entrepreneurs in developing countries identify viable business opportunities, UNIDO publishes a series of descriptions of manufacturing processes and plants entitled "How to start manufacturing industries - technological and investment perspectives". In 1987, volume III, containing profiles of 89 industrial processes, was published. This brought to 377 the number of profiles in the three-volume series.

46. Foreign partners and local sponsors are put in touch either on an individual basis or during UNIDO investment project promotion meetings at which a number of local sponsors and potential foreign investors discuss a portfolio of investment projects previously prepared and promoted by the Industrial Investment Division and its IPS offices. The meetings concentrate on one or several sectors of industry,

8/ Austria, France, Germany, Federal Republic of, Italy, Japan, Republic of Korea, Poland, Switzerland, United States of America.

9/ E.g. Kopint - Institute for Economic and Market Research - in Hungary.

depending on the size and resource endowment of the target country, and on the priorities set by its Government.

47. businessmen and government officials from developing countries met executives of industrial and commercial firms and financial institutions in industrialized countries at 24 country presentation meetings organized by the Division's IPS offices. The aim was to provide up-to-date information on investment conditions and opportunities for joint ventures and other forms of business co-operation in the developing countries presented.

48. In 1987, the IPS offices were instrumental in successfully concluding the promotion of 43 industrial investment projects that represented a total investment of \$106 million. (The promotion of a project is considered to be concluded when the foreign partners and local sponsors have reached written agreement to co-operate in implementing it.) In addition to the projects, a significant number of letters of intent were signed, as indicated in the following paragraphs. The number of IPS offices increased from seven to nine after the signing of an agreement with the Republic of Korea for an IPS in Seoul and the opening of an IPS in Milan, Italy. Discussions have been initiated concerning possible IPS offices in Brazil, Canada, China, the Union of Soviet Socialist Republics and the United Kingdom.

49. Developing countries continued to benefit from the on-the-job orientation programmes organized by the IPS offices for investment promotion officials from developing countries on secondment for one to three years. The programme has three main goals: to improve the participants' investment promotion skills; to enable them to promote priority industrial investment projects for implementation in their home countries; and to help them arrange visits to their home countries by potential investors from the IPS host countries. In 1987, 26 delegates from 16 countries were seconded to the programmes. After returning home, orientation programme alumni often play a leading role in national investment promotion activities; for example, a recent participant has been appointed Director of International Affairs in the Angolan Ministry of Industry.

50. In spite of the financial constraints experienced by UNIDO in 1987, the Division was able to maintain, and in some cases even to increase, the scope of services provided. This was achieved by mobilizing outside funding for investment project identification and promotion programmes

through contributions to the Industrial Development Fund (IDF) from France, Federal Republic of Germany and Japan. Discussions have begun with the Governments of Italy and the Netherlands with a view to initiating further investment project identification and promotion programmes to be implemented in selected developing countries and industrial subsectors. Generous financial support has also been received from the United Nations Development Programme (UNDP) for programmes of investment project identification and promotion in a number of developing countries. In Africa, regular budget funds allocated for the Industrial Development Decade for Africa (IDDA) have been used to finance subregional programmes. All these resources have been accompanied by more intensive efforts on the part of the Secretariat to attract serious local project sponsors and to improve the quality of the projects identified. As part of these efforts, the Division intends to expand its use of the UNIDO Project Profile Screening and Pre-Appraisal Information System (PROSPIN) software package.

51. As of July 1987 the UNIDO/World Bank Co-operative Programme was succeeded by a broader and more flexible type of co-operation with the World Bank aiming at a wide range of issues in the industrial sector, such as the promotion of foreign direct investment, development of small industry and industrial infrastructure (e.g. training), with particular focus on Sub-Saharan Africa. Thus, a joint business promotion programme with the International Finance Corporation was negotiated. At the same time, the Division made progress in improving operational links with other international, regional and bilateral development institutions.

52. As regards the African region, 144 industrial investment projects in the Comoros, Kenya, Madagascar, Mauritius, Seychelles and the United Republic of Tanzania (Zanzibar Island) were identified, promoted and subsequently discussed by 100 local sponsors and 62 prospective foreign partners at an investment project promotion meeting held in Mauritius, from 25 to 29 May. At the same meeting, which was made possible through IDDA funds and a contribution from UNDP, 27 projects in the Maldives and Sri Lanka were also identified and promoted. Five finance institutions attended the meeting and led a discussion on the financing of investment projects in the participating countries. Eighteen letters of intent were signed, seven of which concern project proposals whose marketing, technical and financial aspects are being analysed with a view to determining what further project preparation is required.

53. Four African countries (Ethiopia, Somalia, Sudan, Zimbabwe) as well as Thailand participated in the New and Renewable Energy Equipment Project Identification and Promotion Programme that was financed by the Government of Italy. During the programme, teams of national experts, assisted by a UNIDO expert, completed their country papers and prepared 26 investment project profiles. These projects are being promoted and the last phase of the programme is expected to take place in the second quarter of 1988. At the request of the Governments of Mozambique and Kenya, investors' guides to those countries were prepared with financial assistance from UNDP. In Egypt, 108 projects and project ideas were identified and promoted in preparation for the Cairo investment promotion meeting that was held from 2 to 5 November. Participants included 180 foreign companies, 129 local sponsors and 24 finance institutions; 20 letters of intent were signed on that occasion.

54. In co-operation with the Economic and Social Commission for Western Asia (ESCWA), a programme for the identification and promotion of projects in the electronics industry of Arab countries was discussed and prepared for implementation. An industrial investment programme for Kenya, that will be implemented over a five-year period using UNDP funds, became operational in 1987.

55. In the Asia and Pacific region, programmes were implemented in Bangladesh, China, Indonesia, the Philippines and Thailand. In China, a programme of project identification, formulation and promotion supported by the Federal Republic of Germany, introduced 70 Chinese officials to the UNIDO approach to preparing industrial investment project profiles during a three-week seminar organized by UNIDO in Beijing. Following the seminar, the officials were invited to attend the 1987 Hanover Trade Fair for Engineering Goods, where the Cologne IPS arranged meetings with potential foreign technical and financial partners.

56. Measures were adopted to focus the Thailand industrial investment programme on the country's agro-based industries, and by devoting more resources to the preparation of projects and the selection of serious local project sponsors. Sixty projects in agro-based and related industries (\$100 million) were identified. Investment possibilities were discussed between 45 Thai project sponsors and 60 prospective foreign partners, including a number of finance institutions, at the Thailand Investor's Forum held at Bangkok, 10 to 12 November.

57. Under a technical co-operation programme for Indonesia for which UNDP provided \$380,000, 78 investment projects were identified, covering 13 industrial subsectors. These projects were promoted and subsequently discussed by local and foreign sponsors at the Jakarta Investor's Forum for Indonesia, 23 to 27 November. The meeting was attended by 119 participants representing 90 companies from 25 countries and 11 financial institutions as well as by 140 project sponsors from 69 Indonesian companies. In addition, 18 observers from 14 countries attended. During the preparatory phase, the Indonesian Institute for Industrial Entrepreneurship (LKI), a recipient of UNIDO technical assistance in the field of feasibility studies, helped in identifying 11 investment project proposals for promotion by UNIDO. Forty-five letters of intent were signed, five of them for projects whose marketing, technical and financial aspects are being analysed with a view to determining what further project preparation is required.

58. The second UNIDO investment project promotion meeting for Bangladesh was held at Dhaka in January as part of a technical co-operation project in Bangladesh for which UNDP provided funding of \$215,000. At the meeting 135 industrial investment projects were identified, promoted and discussed among 450 local sponsors, 160 prospective foreign partners and five finance institutions, and letters of intent were signed for 97 projects. Negotiations on 37 of these have been completed, and their implementation is expected in the near future. Preparations were made in 1987 for an industrial investment programme for the Philippines to be implemented in 1988 using funds from UNDP, IDB and bilateral donors. By the end of 1987 the project had reached the final stages of negotiation and approval. The Industrial Investment Division also contributed to the

Agri-Energy Roundtable conference on agro-industrial opportunities in the Philippines held at Manila from 24 to 27 May and attended by 50 local and foreign entrepreneurs. At the request of the Government of Viet Nam, an exploratory mission was undertaken to Hanoi to discuss a possible investment project identification and promotion programme for implementation in 1990.

59. In the Latin American and Caribbean region industrial investment promotion programmes in Argentina, Bolivia, and Ecuador (\$1.3 million) entered the implementation phase. Discussions between local sponsors and European entrepreneurs on some 40 investment opportunities in Argentina took place at Rotterdam, the Netherlands, in December. A programme for the identification and formulation of investment projects in Argentina, Colombia, Ecuador and Venezuela, (\$240,000) was initiated in co-operation with the Inter-American Development Bank, and with the full involvement of the Cologne IPS. The resulting projects will be discussed with potential partners during the April 1988 Hanover Fair.

60. With a mission by French industrialists to Brazil, work commenced on the implementation of a joint programme with the Government of France designed for the benefit of selected countries of Latin America and the Caribbean. The programme was developed with the support of the Paris IPS and is intended to stimulate new industrial ventures in the subject countries.

61. In Europe, a project identification and promotion programme led to 167 investment projects being identified, promoted and subsequently discussed at a meeting at Warsaw from 12 to 16 October, attended by 160 potential foreign partners from 20 countries.

CHAPTER IV. SPECIAL THEMES

INDUSTRIAL DEVELOPMENT DECADE FOR AFRICA

1. The year 1987 was a very difficult one in respect of the implementation of the programme for the Industrial Development Decade for Africa (IDDA). The impact of the financial crisis which beset the Organization during 1986 and 1987 had an extremely negative effect on the programme for IDDA in 1987. Many of the activities initiated in 1986 had either to be curtailed or suspended completely. The activities most affected were those related to the provision of technical advisory services, the establishment of pilot demonstration plants, industrial training and the promotion of intra-African industrial co-operation.
2. The Secretariat made every effort to minimize that effect and took special measures to mobilize additional financial resources from special-purpose donors. Those efforts yielded pledges amounting to \$3.24 million for IDDA-related projects for the period 1987 to 1989. An additional amount of \$4.64 million has also been pledged for other projects in Africa. Important factors in the mobilization of these additional resources were the particular care accorded by the Secretariat to the identification and preparation of sound project proposals as well as the increasing involvement of special-purpose donor countries in project formulation. The full impact of the efforts made by the Organization to raise additional funds for IDDA-related activities will only be felt in future years as a number of project proposals are still under consideration by prospective donor countries.
3. Other efforts by the Secretariat included the new approach adopted in the preparation of the programme for IDDA for financing from the 1988-1989 regular budget. That approach, which entailed extensive consultations not only with all concerned Departments in UNIDO but also with Member States, resulted in a consensus approval of the programme by the General Conference at its second session within the framework of the 1988-1989 programme and budgets for the entire Organization. This consensus has facilitated the implementation of the programme and the mobilization of additional resources mentioned above.
4. Since IDDA-related activities carried out during 1987 are being reported under each of the major programmes of UNIDO, only some of those activities are highlighted below. In view of the importance of industrial restructuring and policy reforms, an IDDA-funded evaluation workshop was held in Vienna in March 1987 as a follow-up to the national workshops that had been organized by UNIDO in 1986 in Africa on industrial strategies and policies. The results of the evaluation have encouraged some donor countries to make special-purpose contributions for financing similar national and regional workshops in Africa. Activities related to the preparation of industrial master plans initiated in a number of African countries were expanded to cover more countries. As a result of this type of assistance, a Sectoral Meeting of Donor Countries for Senegal was held in Vienna in December 1987.
5. Industrial maintenance and rehabilitation featured highly among the activities carried out by UNIDO in Africa. These activities covered diagnoses of problems of and direct assistance to individual plants with emphasis on repair and maintenance, including provision of spare and replacement parts; plant management; production, process and quality control; marketing; and training of management and technical personnel. Notable was the assistance provided to Burkina Faso in reinforcing its capacity for the maintenance and repair of agricultural tractors and heavy and mobile equipment as well as that provided to the Preferential Trade Area for Eastern and Southern African States (PTA) in the rehabilitation of their iron and steel plants. A regional project on industrial maintenance and rehabilitation and the promotion of Multinational Production Enterprises was formulated for financing by the United Nations Development Programme (UNDP).
6. Special attention was also accorded to programmes related to the development and utilization of human resources, including technological capabilities, for industrial development. A number of seminars were conducted covering such topics as project identification, preparation and evaluation, including the use of the Computer Model for Feasibility Analysis and Reporting

(COMFAR); technology negotiations and acquisition; and management of industrial enterprises. A number of group training programmes that were of direct benefit to African countries were organized, some of them in subregional institutions in Africa. In that connection, several of those institutions received direct assistance in reinforcing their training capabilities, including equipment for training and demonstration.

7. In connection with the mobilization of financial resources for investment projects in Africa, two investment project promotion forums were organized: one was held in Egypt and the other in Mauritius for African Indian Ocean Island countries. Investment guides were prepared for a number of countries and, as in the past, continued use was made of the UNIDO Investment Promotion Services for promoting African investment projects as well as training nationals from some African countries in investment promotion. Within the framework of activities for economic co-operation among developing countries (ECDC), UNIDO organized a meeting for the promotion of co-operation among Islamic developing countries.

8. Every effort was made to maintain in the programme for IDDA the momentum initiated during previous years in the promotion of intra-African industrial co-operation and integration. Assistance was provided to the West African Development Bank in the identification and promotion of industrial projects and to the Economic Community for Central African States in the formulation of its programme for the industrial sector as well as in promoting and monitoring the implementation of subregional programmes and projects, thus contributing to the harmonization of the industrial policies of its Member States. The assistance initiated with the African Regional Centre for Technology in the promotion of technological information exchange among African countries, including the establishment of a regional technological information exchange service was continued. In Nigeria, positive results were achieved by the Federal Institute of Industrial Research, Oshodi, in the development of a small-scale gari-processing technology, ^{1/} under sub-contract by UNIDO, for application in other African countries. A workshop on industrial public enterprises and their environment was held at Algiers, Algeria, in June where a number of African countries were given the opportunity to exchange experience in the management of public enterprises.

^{1/} IDB.3/10, chap. III, para. 30.

9. Co-operation among the Secretariats of the Organization of African Unity (OAU), the Economic Commission for Africa (ECA) and UNIDO was intensified. In addition to several informal discussions, two formal meetings were held of the Joint Committee of the OAU, ECA and UNIDO Secretariats on the Implementation of the Programme for the Industrial Development Decade for Africa within the Framework of the Lagos Plan of Action. Issues discussed included preparations for African participation in the second session of the General Conference; follow-up to the decisions of the Eighth Conference of African Ministers of Industry relating, in particular, to the proclamation of an African Industrialization Day; a mid-term independent evaluation of IDDA; preparation of future progress reports on the implementation of the programme for IDDA; and a second industrial development decade for Africa. In connection with the mid-term independent evaluation of IDDA, the OAU, ECA and UNIDO Secretariats prepared and submitted to UNDP a project proposal for the financing of that evaluation, along with its terms of reference.

10. The assistance extended by the OAU, ECA and UNIDO Secretariats to African Governments in preparing their participation in the second session of the General Conference culminated in the adoption of the African Memorandum on Industrial Development in Africa, which was presented by those countries to the Conference. In addition to resolution GC.2/Res.3 adopted on that Memorandum, two other resolutions were adopted at the Conference, one on IDDA (GC.2/Res.2) and one on institutional arrangements (GC.2/Res.5), the latter calling, inter alia, on the Director-General to study the feasibility of establishing a UNIDO regional office for Africa.

11. The consultations among the OAU, ECA and UNIDO Secretariats and the active participation of UNIDO at meetings of the OAU and ECA legislative organs led to the adoption of resolution 1987/70 by the United Nations Economic and Social Council. That resolution, inter alia, recommended the consideration, after appropriate evaluation of the first Decade, of the proclamation of a second industrial development decade for Africa in order to accelerate further the industrialization of Africa and requested the ECA, OAU and UNIDO Secretariats to undertake, in consultation with member States, African organizations and the competent United Nations organizations, the preparation of a programme for that decade to be submitted to the Conference of African Ministers of Industry.

12. In the implementation of the programme for IDDA, special attention continued to be paid to the priorities established 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. In the follow-up to the implementation of that Programme of Action co-ordination was maintained with other organizations of the United Nations system through the Inter-Agency Task Force established for that purpose in which UNIDO serves as one of the core members. ^{2/}

ASSISTANCE TO THE LEAST DEVELOPED COUNTRIES

13. The least developed countries (LDCs) continued to face severe difficulties. In some of these countries, the problems have not merely been the debt crisis, low commodity prices and rapid population growth as in most developing countries, but rather the very basic issue of trying to avoid famine. Severe climatic conditions have led to repeated crop failures so that food production and food security have become the dominant concern. Most of the technical co-operation provided by the UNDP to these countries has therefore been channelled to the agricultural sector. Only in a few of the LDCs has as much as ten per cent of the indicative planning figures in the UNDP country programmes been devoted to industry. In fact in several cases the share of an individual LDC in its IPF is less than one per cent. Yet industrialization could and should play an important role in meeting the needs of the LDCs concerning food security and food production through measures such as food processing, preservation, mechanization, provision of irrigation facilities, etc. Consequently UNIDO had to make every effort to obtain funds elsewhere to fulfill its mandate to promote the industrial development of these countries. One alternative source of financing has been the Industrial Development Fund (IDF) under which approvals for projects in the LDCs increased by 51 per cent in 1987 as compared to 1986. Another source of finance has been the Special Industrial Services (SIS) programme under which approvals for LDCs doubled between 1986 and 1987. Some progress has also been made in tapping various trust funds.

14. Despite UNIDO efforts, project approvals for 1987 totalled \$15.8 million as compared to \$18.6 million in 1986. A major factor contributing to the slowing down in the rate of approvals has been the introduction of new procedures for appraisal introduced by UNDP that has resulted in several million dollars worth of project proposals still awaiting approval at the end of 1987. Another significant factor has been the severe budgetary constraints faced by UNIDO because of which project funding for LDCs from the regular budget dwindled from \$2.5 million in 1986 to less than \$100,000 in 1987.

15. UNDP country programmes for some 16 LDCs were approved in 1987 with UNIDO contributing in various degrees to several of them. Thus 14 project formulation missions were fielded from UNIDO Headquarters. In addition, field staff, particularly Senior Industrial Development Field Advisers, and in some cases chief technical advisers, contributed significantly to the development and formulation of projects.

16. During 1987, UNIDO activities in the LDCs focused on creation of employment through the development of small industries, processing of local raw materials, industrial infrastructure, feasibility studies and manpower development and training. Many of the industries in these countries are in the public sector with no foreign exchange available to import inputs and spares and many of the factories operate at a fraction of their capacity. Great emphasis has thus been put on industrial rehabilitation. UNIDO has been involved in programmes to assist in privatization and in the reorganization of those industries remaining in the public sector to ensure that they contribute to the growth of the economy rather than facilitate its decline. Parallel with the second session of the General Conference a workshop on industrialization of the least developed countries was held at Bangkok in November. Positive reaction from participants warrants that such a workshop should be repeated, focusing on project formulation.

17. Given the severe debt problems that many of the developing countries face, and the tendency of almost all commodity prices to decline, it is hardly surprising that the number of LDCs is increasing. In 1978 there were 30, ten years later there are 41 (see Appendix G). To put the emphasis solely on agriculture in these countries in

^{2/} A/42/560, para. 122.

the face of constantly declining commodity prices is almost the counsel of despair. Efforts have to be made, therefore, to develop their industrial sector, and UNIDO is fully aware of its responsibilities in this regard. However, the industrial sector will not grow unless additional resources, in line with the recommendations of the Substantial New Programme of Action for the 1980s for the Least Developed Countries are made available to the LDCs.

INDUSTRIAL CO-OPERATION AMONG DEVELOPING COUNTRIES

18. The Secretariat continued to give attention to activities aimed at the promotion of economic and technical co-operation among developing countries (ECDC/TCDC) in the field of industrial development. Within the programme of solidarity ministerial meetings in favour of least developed countries, one such meeting was substantively prepared during the year for implementation in Cape Verde in the second quarter of 1988. Substantive preparations were also finalized for another solidarity ministerial meeting, which is scheduled for the second half of 1988 in Democratic Yemen. Co-operation agreements reached at previous solidarity ministerial meetings have resulted in numerous technical co-operation projects. Some of them received UNIDO assistance, e.g.: Yugoslav experts started practical field work for the establishment of a tannery in Burkina Faso; an Algerian expert is to assist Mali in the setting up of a standardization and quality control system; Rwandese experts are to undertake a study visit to Sri Lanka to examine the possibility of bilateral co-operation in the field of hides and skins; preparations were finalized for a feasibility study on the development of mini-plants for hydropower production in Burkina Faso, to be implemented in co-operation with Pakistan; the visit of a Nepalese government official to Malaysia, Philippines, Sri Lanka and Thailand was organized and resulted in the identification of concrete proposals for co-operation (mainly training and study programmes) and modalities for their implementation.

19. Early in 1987, the positive results of the Afro-Asian Industrial Co-operation Meeting within the Framework of IDDA and ECDC (New Delhi, India, November 1986) were made widely known to participating countries, international and regional financial institutions, chambers of commerce, public and private enterprises, and associations, with a view to ensuring a

speedy implementation of projects identified at the meeting. UNIDO also assisted in the implementation of follow-up activities to that meeting, which led to a number of technical co-operation projects in African countries: for example, Chinese experts installed in Madagascar two biogas digesters, demonstrated the use of this technology and trained cadres in this field; Indian experts evaluated in Somalia the potential for using windmills for water pumping and defined a programme of bilateral co-operation in this field between India and Somalia; substantive preparations were finalized for both an expert group meeting on technologies available in developing countries and a workshop on co-operation between Yugoslavia and African countries in agricultural machinery and food-processing industries to be held in Ljubljana and Novi Sad, Yugoslavia, respectively, in 1988. In addition, action was initiated for developing projects of co-operation between: Burundi and India in essential oils; Côte d'Ivoire and India in small-scale industries; China and Somalia in farm implements; and China and Guinea in hydro-power mini-stations.

20. Co-operation among developing countries received a special boost in 1987 through the organization, jointly with the Islamic Chamber of Commerce, Industry and Commodity Exchange (ICCICE) and the Union of Chambers of Commerce, Industry, Maritime Commerce and Commodity Exchanges of Turkey (UC CET), of the Meeting for the Promotion of Joint Ventures among Islamic countries held in Istanbul, Turkey, from 15 to 18 June 1987. The meeting, which was attended by more than 200 representatives of Governments, private industry and financial institutions from 23 member countries of the Organization of the Islamic Conference (OIC), examined some 110 industrial projects and identified 80 co-operative projects valued at over \$700 million. The projects cover such areas as project design, rehabilitation of existing plants, equipment supply, training and provision of expert services, equity participation, provision of soft loans, etc. The meeting also discussed modalities and financial arrangements for implementing these projects for the benefit of eight Islamic countries: Bangladesh, Cameroon, Gambia, Guinea, Mali, Niger, Somalia and Yemen. Following this meeting, UNIDO established a project development facility to ensure the speedy realization of the co-operative projects identified.

21. Other ECDC/TCDC activities carried out during the year included: a workshop on co-operation among developing countries in the field of cement, lime and related

industry, organized in Bangkok, Thailand, from 23 to 27 February in co-operation with the Thailand Institute of Scientific and Technological Research, for senior officials from 15 developing countries in the African, Asian and Arab regions; a workshop-cum-study tour for interregional co-operation between Pacific and Caribbean island countries in the development of small- and medium-scale agro-industries, with particular emphasis on live marine resources and tropical fruits, which took place from 23 September to 7 October and included visits by senior officials from seven Pacific island countries to Barbados, Jamaica, St. Lucia and Trinidad and Tobago; a prefeasibility study undertaken by three Chinese experts in Nicaragua for the establishment of mini-plants for the production of basic nitrogen fertilizers; a visit by an Argentinian official to Yugoslavia to study this country's experience in the establishment and management of agro-industrial complexes; a study tour by two Ecuadorian specialists to Brazil to acquire experience in the conversion of sugar into alcohol for use as a fuel.

22. The Meeting on Co-operative Arrangements among Developing Countries on Agricultural Machinery was held at Algiers, Algeria, from 5 to 7 October, at which 47 public and private sector entrepreneurs from 20 developing countries participated. The 26 co-operative arrangements initiated at that meeting included tripartite co-operation in the production of mini-tractors, production of motorized cultivators, a farm tools joint venture, training, expert visits, commercial deals and exchanges of information in a variety of fields.

23. UNIDO contributed to and participated in the High-level Meeting on Economic Co-operation among Developing Countries convened at Havana, Cuba, by the Group of 77; the Intergovernmental TCDC Programming Exercise organized by UNDP and the Government of Turkey in Ankara; the inter-agencies meeting and subregional and interregional meetings on food and agriculture within the framework of technical co-operation among African countries and South-South co-operation organized by UNDP and the World Food Council. A contribution was also provided to the Fifth Session of the High-level Committee on the Review of TCDC held in New York in May 1987, which had the purpose to review the progress made in implementing the Buenos Aires Plan of Action for Promoting and Implementing Technical Co-operation among Developing Countries.

24. The General Conference at its second session emphasized again the increasing

relevance of ECLC/ICDC as an instrument for promoting the rational and efficient use of human, material, financial and technological resources available in developing countries and reiterated the need for UNIDO to intensify and further strengthen its activities in this area (resolution GC.2/Res.1).

INTEGRATION OF WOMEN IN INDUSTRIAL DEVELOPMENT

25. Throughout 1987 efforts continued to develop projects that will upgrade technologies traditionally used by women and thus increase their productivity. For example, an exploratory mission was undertaken by a staff member and a consultant to four Sahelian countries - Burkina Faso, Mali, Niger and Senegal - to look into ways of improving fruit and vegetable processing that is done by women. As a result, a large-scale project has been elaborated which aims at developing an improved technology for solar drying of fruit and vegetables in marketable quantities by institutionalizing co-operation between national women's organizations, food research centres and national energy research centres. In order to assist training institutions in developing countries to provide training for women in managerial and entrepreneurial skills, UNIDO, in co-operation with the Pan African Institute for Development - East and Southern Africa (PAID-ESA), is designing a curriculum to develop managerial and entrepreneurial skills among prospective and practising women entrepreneurs in the region of the countries of the Southern African Development Co-ordination Conference (SADCC). During 1987 a needs assessment was conducted in four countries (Botswana, Malawi, Zambia and Zimbabwe) and local women with experience as trainers, extension workers, practising entrepreneurs or researchers were identified to serve as resource persons in the curriculum design. PAID-ESA hosted a curriculum design workshop in December 1987. Detailed curriculum elaboration, preparation of training manuals and training aids and subsequent field testing will take place in the first half of 1988. Following field-testing and adaptation, it is anticipated that the training programme will be further implemented throughout the region and the materials made available for broader dissemination to institutions interested in promoting manufacturing ventures by women. Both the exploratory mission to the Sahelian countries and the training activities in the SADCC region were funded by seed money provided by the Government of Norway. Also under financing

by the Government of Norway, a programme to sensitize Headquarters and field staff to the role and contribution of women in technical co-operation projects was elaborated, with the intention of holding pilot courses in 1988.

26. In 1987 the Studies and Research Division developed an analytical approach to examining the actual and potential role of women in industry through sectoral analyses and country case studies. A sectoral analysis developed for the fisheries industry in conjunction with a survey of the fisheries industrial system led to recommendations of specific strategies and actions to enhance and promote productive options for women. These include both specific actions directly related to the industry sector and indirect supportive measures in areas such as education and social infrastructure. The sectoral analysis was supported by country case studies carried out in Indonesia, Mexico and Senegal and financed by the Government of Norway. Country case studies were also undertaken on the current and prospective contribution of women to human resource development in three countries (Nepal, Sri Lanka, Zimbabwe) representing the range of lower and lower-middle income countries with different levels of industrial development and of human resource development. These studies not only led to the identification of a number of priority areas requiring attention if the participation of women in the industrial development of developing countries is to increase but also to the identification of technical co-operation projects at the country level. These country case studies on human resource development were funded by the Government of the Netherlands.

27. A report was submitted to the General Conference at its second session that gives the quantitative and qualitative background to the current participation of women in industry in developing countries, assesses prospects and challenges emerging in the near future and suggests action for the consideration of policy makers at the national level. The General Conference subsequently adopted decision GC.2/Dec.16 which, inter alia, requested the Director-General to ensure that specific attention be paid to women in all technical co-operation and promotion activities, especially with regard to training, small-scale industry and agro-industry activities through the guidelines issued for that purpose and that the current and prospective role of women in industry be more extensively covered in the statistical data collection of UNIDO. The Conference also invited Member States, in the context

of their voluntary contributions to the Organization, to include funding for activities promoting the integration of women in industrial development. In resolution GC.2/Res.4 on the development of human resources and technological capabilities for industrial development, the Conference also requested the Director-General to continue efforts to develop training programmes specifically designed to facilitate the acquisition by women of skills at all levels (such as technological, managerial and entrepreneurial skills) in order to ensure their full integration in the industrial development process.

CO-OPERATION WITH INDUSTRIAL ENTERPRISES AND NON-GOVERNMENTAL ORGANIZATIONS

28. Since the conversion of UNIDO into a specialized agency, the Organization has made a clear mandate to act as a catalyst in developing co-operation between the entrepreneurial sectors of developing countries and those of industrialized countries. The activities of the Section for Co-operation with Non-governmental Organizations and Industrial Enterprises were accordingly reoriented during 1987. New initiatives resulted indeed in increased interaction and co-operation activities between enterprises from the North and the South. The developing countries benefited from these activities in areas such as transfer of technology, marketing, financing and management. Government officials and industrialists from these countries were given access to human, financial and managerial resources from industrial enterprises in the industrialized countries, which would otherwise not have become available to them or only at much higher costs.

29. The increased co-operation with the industrial sector was very much enhanced by soliciting third-party trust fund arrangements, negotiating stand-by agreements and organizing company presentations at UNIDO Headquarters. Under the so-called third-party trust fund arrangements a company or a group of companies or a non-governmental organization provides the funds necessary to implement a project. Trust-fund projects are a main vehicle for the active integration of industrial enterprises and non-governmental organizations in UNIDO programmes. Trust funds provide a legal framework for the parties to agree on a mutually beneficial project for joint implementation, whereby the expertise of the trust-fund donor and the logistical support of UNIDO complement each other.

Developing countries are benefiting from this scheme, because additional projects can be financed besides those financed by traditional sources of funds for industrial development activities. In 1987, companies and/or their related associations made increased use of these trust-fund arrangements to organize with UNIDO studies, missions or workshops for participants from developing countries. The direct co-operation with UNIDO in these joint projects provided companies from industrialized countries a unique opportunity to establish viable contacts with key industrialists and government officials from developing countries. During some of the projects, such as the joint workshops, the companies introduced their available technologies and expertise to the developing countries, often resulting in the identification of opportunities for co-operation.

30. In 1987, the Section for Co-operation with Non-governmental Organizations and Industrial Enterprises played a vital role in the promotion of increased direct co-operation between UNIDO and the industrial sector, both public and private. It actively solicited contacts with industrial enterprises and related non-governmental organizations and started new co-operation initiatives in areas of interest to UNIDO within its mandate. The Section received representatives of enterprises and industrial organizations to familiarize them with UNIDO programmes and activities, and to explore and elaborate possible joint projects. In addition, several presentations by companies and industrial associations or federations were organized for UNIDO staff to explore and elaborate opportunities for co-operation.

31. In the framework of enterprise-to-enterprise co-operation, the Section organized a number of workshops at company sites, whereby the costs were either borne by the host companies or shared with UNIDO, e.g. the workshop on the production of essential and non-essential drugs for African countries, which paved the way for developing industrial co-operation activities, such as joint ventures; the workshop on appropriate technologies and equipment for the metallurgical and metal-

processing industries that concluded with offers to implement various technical co-operation projects with inputs in kind and in cash from the host organization; the workshop on railway transportation equipment organized with a leading group of companies in this field from a developed country. These activities among others helped the matching of partners and the initiation of bilateral co-operation.

32. The Section was also instrumental in the organization of individual and group visits for entrepreneurs from industrialized countries to developing countries. In this context, a seminar was held in Beijing, China, in co-operation with the International Chamber of Commerce, to initiate direct co-operation between enterprises from industrialized countries and China.

33. Seven joint missions and studies were carried out in co-operation with the enterprise sector. Examples of those are the advisory missions to Zaire and Togo on mineral water production and studies on industrial priorities for the production of pharmaceuticals in developing countries. In another co-operation project, a leading industrial company seconded a high-level expert to UNIDO for the period of one year to advise and assist in initiating new forms of co-operation with industrial enterprises.

34. National and international non-governmental organizations (NGOs), such as federations of manufacturers, industrial co-operatives, professional associations, trade unions, etc. and the numerous NGOs concerned with the manifold aspects of development aid play an important role in UNIDO activities. The 73 international NGOs at present in consultative status with UNIDO allow for a continuous fruitful exchange of experience and co-operation opportunities. National NGOs have provided UNIDO with resources such as technology and low-cost expertise, as well as the possibility of drawing upon the experience and technical expertise of retired executives. UNIDO officials participated in selected international NGO congresses, symposia and seminars of significance to the work of the Organization.

CHAPTER V. APPRAISAL AND EVALUATION

1. The Project Appraisal Section became fully functional in 1987 when its mode of operation was defined by the "Internal guidelines for project development" (UNIDO/DG/b.40 of 15 January 1987). The projects appraised mandatorily by the Section during the year fell into two categories: all those financed by UNIDO-administered funds irrespective of their size (460 projects) and those financed by the United Nations Development Programme (UNDP) over \$800,000 in value (63 projects). In addition, the Section was requested to advise informally on the design of 35 UNDP projects below \$800,000 in value - a fact which indicates the increased acceptance of the work of the Section within the Secretariat. Thus a total of 558 project proposals were reviewed in 1987. The average time required to appraise each project was just over six days - a fact that dispelled fears that the introduction of appraisal would unduly delay project development and approval. Nearly all projects were discussed with the staff responsible for their development before being submitted for approval by the appropriate authority within UNIDO. The impact of the appraisal function on the quality of project proposals is noticeable in the gradual increase of proposals requiring no modification to their design. However, some 70 per cent of all proposals appraised required various degrees of reformulation before meeting established design standards.

2. The experience gained so far shows that, while some small projects will result in the solution of specific problems, the potential impact of many small and isolated project proposals is still questionable (67 per cent of projects appraised were below \$50,000 in value). On the basis of a methodology developed by the Sectoral Studies Branch, ^{1/} the Project Appraisal Section encouraged the adoption of a sectoral approach to the programming of technical co-operation aimed at the design of larger integrated technical co-operation programmes including the identification of required industrial investments. Seven such programmes, developed in 1987, are likely to have a great impact on the overall development of given industrial

subsectors and, simultaneously, to attract larger contributions than at present from donor countries.

3. The evaluation activities of UNIDO underwent a period of consolidation during 1987 following the reorganization of the Secretariat in 1986. Evaluation plans in respect of technical co-operation activities were extended to cover all types and sizes of projects. Furthermore, plans and methodology to carry out the evaluation of internal programmes and other activities at Headquarters were completed. At the end of 1987 it was decided to evaluate, during the biennium 1988-1989, the activities related to Consultations, sectoral studies, solidarity meetings in favour of the least developed countries and the project identification segment of investment promotion.

4. In August, the revised UNDP Progress/Internal Evaluation System ^{2/} was introduced. Its main instrument is the Project Performance Evaluation Report (PPER) which incorporates features of the previous UNDP progress reports and UNIDO project self-evaluation reports (PER). Thus, progress reporting and self-evaluation of technical co-operation requirements of UNIDO and UNDP were made uniform and considerably simpler.

5. During the year under review, 160 PPERs and PERs were processed, 21 of which related to group training programmes. Compliance with the timely preparation of PPERs/PERs improved in relation to 1986. The PPER document, with its feedback from UNIDO Headquarters, is increasingly used as the main background paper for tripartite reviews. An analysis, carried out in 1987, of PERs among other results revealed that inadequate design was still the single most frequent cause of problems in the implementation of the UNIDO technical co-operation programme. This situation is expected to continue to improve with the separation of responsibilities for project design and implementation and the establishment of the independent appraisal function at UNIDO which took place in 1986.

6. Evaluation staff participated directly in five of the 22 tripartite in-depth

^{1/} IDB.2/10, chap. IV, para. 17.

^{2/} IDB.3/10, chap. V, para. 5.

evaluations carried out during the year, two of which related to group training programmes. Another analysis also carried out in 1987 of the experience with tripartite in-depth evaluations confirmed the results of the analysis of PERs. Lessons learned on specific sectoral issues and on frequent types of projects were communicated to the Departments dealing with project design and implementation. The report of both analyses was shared with the permanent missions to UNIDO in Vienna, UNDP and other United Nations agencies.

7. Six workshops (one in the Philippines and five at Headquarters) on design and evaluation of technical co-operation projects were conducted in 1987. Participants in these workshops included 54 Headquarters staff, 23 field officers (Industrial Development Field Advisers, Junior Professional Officers, project personnel and UNDP field personnel), five from other United Nations agencies and 21 government officials. The Project Appraisal Section contributed to the workshops by discussing projects in the form as submitted for appraisal and after modification. These workshops have become an important instrument in ensuring that the practice gained from evaluation and appraisal is fed back to project design and implementation.

8. Evaluation of group training programmes received particular attention during 1987. An end-of-programme evaluation was conducted in respect of the Workshop on Industrial Project Preparation, Evaluation and Financing, organized by UNIDO in co-operation with the Hamburg Institute for Economic Research, Federal Republic of Germany, and held at Hamburg from 2 to 27 November. The outcome was a recommendation for the repetition of the workshop. Furthermore, work began on a tripartite in-depth evaluation of group training programmes held by UNIDO in the Union of Soviet Socialist Republics and financed by a UNDP trust fund. The evaluation which was based on a methodology agreed upon with the Soviet authorities covered four group training programmes - one on metalworking industries, one on mineral fertilizer production and two on electric welding. It will be completed in 1988 after an ex-post interview with selected former participants in their duty stations to identify how the skills learned

are put to use in their day-to-day work. Evaluation plans in respect of other group training programmes were developed and tested as a result of the evaluation carried out at different levels of group training programmes. They will concentrate on the project evaluation report specially designed for group training programmes, at the self-evaluation level, on the analysis of ex-post questionnaires sent to participants and, when circumstances so warrant, on an in-depth evaluation.

9. Since project evaluation and design are closely related, the Evaluation staff, in co-operation with the Project Appraisal Section, developed user-friendly guidelines for project design. These guidelines are intended for UNDP-financed projects, UNIDO-financed projects (large- and small-scale), group training programmes and workshops.

10. The thematic evaluation of rural small industrial enterprises, carried out jointly by UNIDO with UNDP, the International Labour Organisation and the Government of the Netherlands, moved from the desk to the field and final phase in 1987. Nine countries were visited during the field phase, two of them by the UNIDO Evaluation staff. Nine country reports and the final report, which contains important lessons learned on the design and implementation of technical co-operation projects on the subject, were completed in 1987. All the reports will be formally issued in 1988 and followed by a UNDP Programme Advisory Note.

11. Concerning the evaluation of UNDP-financed technical co-operation activities of UNIDO in the field of manufactures (E/AC.51/1984/7) in compliance with a request by the Committee for Programme and Co-ordination at its twenty-fourth session, UNIDO reported to the Committee at its twenty-seventh session through the Secretary-General of the United Nations, on the triennial review of that exercise. The Committee endorsed the recommendations contained in paragraphs 80 to 86 of the report of the Secretary-General (E/AC.51/1987/3) and the General Assembly, at its forty-second session in its resolution 42/215, section III, paragraph 1, invited, inter alia, the Industrial Development Board to consider the recommendations contained in the triennial review together with the conclusions of the CPC at its twenty-seventh session.

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

INTER-AGENCY PROGRAMME CO-ORDINATION

1. Negotiations continued with specialized agencies and other organizations of the United Nations system on either new relationship agreements or working arrangements. Relationship agreements were signed with the International Labour Organisation (ILO) and the International Atomic Energy Agency (IAEA) (see also appendix J); agreements with the Food and Agriculture Organization of the United Nations (FAO), the International Fund for Agricultural Development (IFAD), the World Health Organization (WHO) and United Nations Educational, Scientific and Cultural Organization (UNESCO) were finalized at the Secretariat level at the end of 1987 and were awaiting approval by the respective governing bodies. A working arrangement with the United Nations Volunteers was signed in June 1987, arrangements with the regional economic commissions were under active negotiation during the year under review, and preparations began on detailed working arrangements with ILO and FAO.

2. Collaboration and consultations with the organizations of the United Nations system continued through various activities. Reciprocal headquarters' visits to discuss joint activities and other technical matters were undertaken with UNESCO and WHO that resulted in the development of several joint project ideas. UNIDO was represented at meetings organized by the United Nations system, including inter-agency meetings on topics such as follow-up to the implementation of the United Nations Programme of Action for African Economic Recovery and Development, environmental matters, the World Decade for Cultural Development, seismic risk reduction, narcotic drugs, human settlements, and population activities. Major inputs were provided to documents for United Nations meetings, e.g. the tenth (commemorative) session of the Commission on Human Settlements, the Economic Commission for Europe (ECE) Steel Committee, the ILO Chemical Industries Committee, and to other reports and publications of the United Nations system, including the forthcoming anthology of international policies and programmes on industrial process safety and hazards being prepared by the United Nations Centre on Transnational Corporations.

3. UNIDO contributed to the United Nations cross-organizational programme analysis (COPA) on the environment and provided the United Nations Environment Programme (UNEP) with inputs to the system-wide medium-term environment programme, 1990-1995. Conversely, the environmental activities of the United Nations system were brought to the attention of UNIDO staff to avoid duplication of efforts and to provide a basis for discussions on co-operation.

4. Within its System of Consultations, UNIDO enjoyed during 1987 the active co-operation of FAO and ILO in the preparation and holding of the First Consultation on the Fisheries Industry (June 1987) and the Second Consultation on Training of Industrial Manpower (September 1987), respectively. WHO participated in and contributed to the Third Consultation on the Pharmaceutical Industry (October 1987) and agreement was reached with WHO on their participation in future UNIDO meetings related to Consultations on the pharmaceutical industry. Close co-operation was also maintained with the International Trade Centre UNCTAD/GATT (ITC) on subjects of common interest (such as the sugar industry, textile, packaging).

5. Co-ordination with United Nations organizations at the working level was supplemented by the exchange of information on study programmes and operational projects, the exchange of comments on medium-term plans and programme budgets, joint programming and project formulation missions, reciprocal briefing and debriefing of project personnel.

6. At the multilateral policy-making level, co-ordination 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).

7. As in the past, the Inter-agency Co-ordination Unit provided the Geneva Liaison Office with appropriate information and with detailed briefings for discussions with, or representation at, meetings of organizations of the United Nations in Geneva. Likewise, throughout the year, departments concerned were informed of the current activities of the system in the

economic and industrial fields. In that effort, some 3,000 documents received from organizations of the United Nations system were screened and distributed as appropriate within the house by the Inter-agency Co-ordination Unit.

RELATIONS WITH GOVERNMENTS AND INTERGOVERNMENTAL ORGANIZATIONS

8. During 1987, three more States became Members of UNIDO, thus bringing the total number of Member States to 149 as of 31 December. One Member State deposited an instrument of denunciation of the UNIDO Constitution with the Depositary, which will become effective at the end of 1988.

9. The Secretariat continued its efforts to obtain support from Member States for the Industrial Development Fund (IDF). As a result, 38 countries pledged \$25.4 million for 1988 before and during the second session of the General Conference. For the first time since the establishment of the Fund pledges amounted to more than half of the amount of the originally agreed desirable funding level of \$50 million a year. (See also chapter VIII, paras. 18-26)

10. The Secretariat continued to pursue the activities relating to joint programmes or similar co-operation arrangements established between UNIDO and a number of Member States. These activities are carried out under the supervision of joint committees, which meet annually to review the progress achieved and decide on future activities. The Committee for the Joint UNIDO/Hungary Programmes for International Co-operation in the aluminium industry, investments, electronics and telecommunication industries, the pharmaceutical industry, and the building materials and construction industries met at Budapest in January 1987. At the meeting, new fields of possible co-operation were discussed that included agro-industry and food processing, power generation, standardization, wood processing and textiles while an agreement was reached to extend the existing joint programme in the aluminium industry to cover other branches of metallurgical industries. It was also agreed to consider the possibilities of expanding co-operation with Hungarian enterprises not only in traditional types of projects but also under trust-fund and self-financing arrangements. During the official visit of the Director-General to Czechoslovakia in April 1987, a decision was made to extend the Joint UNIDO/CSSR Programme for International Co-operation in the Field of Ceramics, Building Materials and

non-metallic Minerals-based Industries to cover the metallic industry. The eighth session of the Committee of the Joint UNIDO/Yugoslavia Centre for Industrial Co-operation in the Development of Agro-industries in the Developing Countries was held at Belgrade and Novi Sad in May 1987. The Committee reviewed the activities undertaken since the previous meeting and adopted the Joint Programme for the period 1987-1989. The Joint UNIDO/USSR Committee held its first session in Vienna in July 1987. That Committee reviewed the status of co-operation between UNIDO and the Union of Soviet Socialist Republics and adopted the Joint Co-operation Programme for the period 1989-1992 in three programme areas, namely manpower development and training, industrial planning and industrial and technological information. The Joint UNIDO/Turkey Committee for Co-operation held its fourth session in Vienna (June), the Joint UNIDO/Poland Committee met at Warsaw (October), and the Joint UNIDO/Romania Committee met in Vienna (December).

11. Agreements, including memoranda of understanding, were concluded with a number of Governments or governmental agencies (see also appendix J). These agreements cover specific areas of co-operation for the benefit of developing countries. The Secretariat also pursued its efforts to enhance the role of National Committees for UNIDO which have so far been established by 72 Member States.

12. In accordance with the decision of the Industrial Development Board to conclude relationship agreements with inter-governmental organizations (IDB.2/Dec.28), such agreements were concluded in 1987 with a number of intergovernmental organizations (see also appendix J). Negotiations for concluding further relationship agreements continued during the year and, as a result, it is expected that agreements will be signed with a number of other intergovernmental organizations during 1988.

13. As in the past, external relations activities included protocol matters and 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 official visits of the Director-General to Member States.

FIELD ADVISER AND JUNIOR PROFESSIONAL OFFICER PROGRAMMES

14. In June 1987, in its decision 87/48 on sectoral support, the Governing Council of the United Nations Development Programme

(UNDP), recalling its understanding that the financing of the Senior Industrial Development Field Adviser (SIDFA) programme during the fourth programming cycle is a shared responsibility of UNIDO and UNDP, agreed that the allocation of the amount of \$6.4 million - that had been withheld by the Governing Council in its earlier decision 86/50 pending the submission of a further report on the SIDFA programme - be used for 1990 and 1991 to cover the services of a maximum number of SIDFA posts. Together with the amount of \$9.6 million approved by the Governing Council in 1986, a total of \$16 million will be available under UNDP sectoral support for the SIDFA programme during the present cycle (1987-1991). At the same session, the Governing Council decided that all SIDFA posts financed by UNDP should be classified only up to the P-5 level, while the incumbents at D-1 level at the time of the adoption of decision 87/48 would retain that level. In the decision, the Administrator was requested to provide in his report on the annual review of the financial situation details on the implementation of the SIDFA programme, including the status of financial contributions from UNDP, UNIDO and any other sources. The Administrator was further requested to undertake a review of the whole sectoral support programme and to report to the Council in 1990 on the nature and scope of UNDP support to the sectoral programmes of relevant specialized agencies of the United Nations system during the fifth programming cycle (1992-1996).

15. The question of SIDFAs was on the agenda of the Industrial Development Board at its third session in July and October 1987. The Board, which then had before it a draft decision on the subject (IDB.3/L.4), decided to establish an open-ended inter-sessional working group under the guidance of the bureau to review that draft decision and report to the board at its fourth session (IDB.3/Dec.48).

16. The decision of the UNDP Governing Council to classify SIDFA posts up to the P-5 level only has already created difficulties in recruitment as that salary level is not attractive enough for highly qualified candidates. At the end of 1987, 27 SIDFAs were on board and 8 were under recruitment. The recruitment of new SIDFAs has been done in consultation with UNDP. During the year, six SIDFAs were re-assigned to different duty stations and six SIDFAs were newly recruited. Two of the latter were UNIDO Headquarters staff.

17. The distribution of SIDFA posts by region and source of funds is shown in the table at the end of the chapter.

18. The increase of two posts in 1987 was possible because of savings incurred during previous years. No new voluntary contributions to the SIDFA programme were received in 1987. Three posts (Thailand, Turkey and United Republic of Tanzania) continue to be financed from voluntary contributions received in previous years from Austria, the Federal Republic of Germany and Japan. Furthermore, when a new SIDFA post is established, most countries - with the exception of the least developed countries - are asked to contribute in local currency or in kind to the local cost of the SIDFA offices. Agreements in that respect were reached with the Governments of Argentina, Ecuador and Turkey, while negotiations are under way with the Governments of Algeria, Chile, Philippines, Zaire and Zimbabwe.

19. The Junior Professional Officers (JPOs) have continued to provide valuable support to the UNIDO technical co-operation programme and have fulfilled their main role as assistants to the SIDFAs. The donor Governments to the UNIDO JPO programme (Belgium, Denmark, Finland, Germany, Federal Republic of Italy, Japan, Netherlands, Norway, Sweden and Switzerland) continued their generous support in 1987. Two new donors, Austria and France, joined the programme. The Government of the Netherlands continued to finance JPOs from developing countries.

20. During the year, 29 new JPOs were recruited, including three from developing countries. A total of 87 JPOs were on board for varying lengths of time: 43 in countries with resident SIDFAs, 36 in countries covered by a SIDFA, 6 in countries without SIDFA coverage and 2 at UNIDO Headquarters.

21. The JPOs undertook missions to consult with their non-resident SIDFAs and travelled within their countries of assignment to monitor projects outside the capitals. The JPOs contributed to various meetings organized by UNIDO and attended seminars, workshops, regional and national meetings - covering areas such as engineering, small-scale industry, investment promotion - as observers on behalf of UNIDO when Headquarters staff or SIDFAs could not participate. A total of 50 JPOs received intensive training in special courses and review meetings organized at UNIDO Headquarters.

22. During the year, UNIDO continued to have close dialogues with UNDP senior officials from its headquarters and the field. Headquarters officials received at UNIDO included the Associate Administrator, the Deputy Assistant Administrator,

Director of Personnel, the Deputy Assistant Administrators for the Regional Bureaux for Africa, the Arab States and European Programmes, and the Director, Planning and Co-ordination Office. In addition, 38 Resident Representatives/Co-ordinators from the field visited UNIDO.

PUBLIC RELATIONS AND INFORMATION

23. Building on the increasing importance of publicizing the work of UNIDO, particularly in a time of financial constraint, the Public Relations and Information Section continued its thrust to make the Organization better known to a wider audience.

24. As the main event for UNIDO in 1987, the second session of the General Conference, held at Bangkok in November, represented a major opportunity to bring the attention of the international news media to bear on the key role of the Organization in promoting industrial development and North-South co-operation. Briefings and interviews were held in Vienna and Bangkok prior to the Conference to give the press an in-depth insight into the issues on the agenda. During the Conference itself, journalists were briefed and press releases issued every day. At the site of the Conference, arrangements were made for international telephone, telex and electronic facsimile transmission services and radio and video facilities for the use of journalists. Following the Conference, two major press conferences with the Director-General were held in Bangkok and Vienna respectively, to publicize the results. For the first time a video film was prepared that was designed specifically for showing at a general conference. The 25-minute film, entitled UNIDO In Action, was shown on television monitors during the Conference in Bangkok. In addition, a 30-minute video presentation entitled Thailand Welcomes UNIDO Delegates was produced during the session for distribution immediately following its closure.

25. Despite a more than 50 per cent reduction in staff in 1987, the Public Relations and Information Section continued to increase its output and to introduce innovations in its work programme. Production of media material - releases, features, flyers and information notes - more than doubled compared to 1986. The use of a new, succinct style was emphasized in the preparation of press communiqués that was aimed at providing information tailored for immediate consumption by the news media.

26. While continuing to produce the popular UNIDO Press Review, despite staffing cuts the Section also launched a monthly illustrated newsletter, UNIDO Update, which gives a round-up of major events at Headquarters and in the field. This current-awareness publication met with widespread enthusiasm by journalists, representatives of Member States, non-governmental organizations and UNIDO staff.

27. Innovation and productivity also characterized the Section's audio-visual activities in 1987. One of the innovations, UNIDO Forum, is a television programme about the current issues behind industrial development. It presents interviews with members of the press and leading personalities concerned with the work of the Organization. The aim of the programme is twofold: to create more interest in UNIDO on the part of the press by involving journalists actively in press encounters and to open up a wider international audience for the Organization by offering broadcasting stations a lively discussion programme. Each programme is produced in video- and audio-cassette formats and is available to United Nations Information Centres, broadcasting companies and other interested groups.

28. Production began on a number of films covering some of the activities of the Organization. By the end of the year, work was nearly complete on a film about the potential of genetic engineering and biotechnology for developing countries. At the same time, shooting began for a new film on UNIDO technical co-operation in the Association of South-East Asian Nations region and preparations were made for a film on the work of UNIDO with the Andean Pact countries. To give UNIDO activities additional visual impact, mobile photo exhibitions were introduced that could be easily transported and adapted to subjects discussed at international gatherings at Headquarters and abroad.

29. All major UNIDO meetings held in 1987 were given written press coverage, including the sessions of the Industrial Development Board and the Programme and Budget Committee (Vienna); the First Consultation on the Fisheries Industry (Gdansk); the Second Consultation on the Training of Industrial Manpower (Paris); the Third Consultation on the Pharmaceutical Industry (Madrid); the First Consultation on the Non-ferrous Metals Industry (Budapest); and the Investment Project Promotion Forum (Cairo). Public relations coverage of the Director-General's official visits to Member States was also arranged.

NEW YORK LIAISON

30. The Liaison Office in New York continued to act as the main link between UNIDO Headquarters and United Nations Headquarters. During the forty-second session of the General Assembly it provided representation and services, particularly with regard to the section of agenda item 115 that dealt with renegotiating repayment of the loan made by the United Nations to UNIDO; to agenda item 83 on operational activities for development; to agenda item 41 on the review of the efficiency of the administrative and financial functioning of the United Nations and on the In-depth Study of the United Nations Intergovernmental Structure and Functions in the Economic and Social Fields; and to other items of interest to UNIDO that had been allocated to the Second and Fifth Committees such as special programmes of technical assistance, least developed countries, economic and technical co-operation among developing countries, critical economic situation in Africa, the seventh session of the United Nations Conference on Trade and Development, science and technology for development, women in development, environment and personnel and financial questions related to the United Nations common system.

31. The Liaison Office also provided representation at, coverage of, and reporting on some 120 intergovernmental and inter-agency meetings which took place in New York or elsewhere, including those of the Economic and Social Council and of the Governing Council of UNDP, the fifth session of the High-Level Committee on the Review of Technical Co-operation Among Developing Countries, ACC and its subsidiary bodies, the twenty-seventh session of CPC, the ninth session of the Committee on Science and Technology for Development, the twenty-third session of the Committee for Development Planning, the tenth session of the Committee on Natural Resources, the Meeting of the Latin American Economic System (SELA), the nineteenth session of the Committee of the Whole of the Economic Commission for Latin America and the Caribbean and the tenth session of the Organization for African Unity Permanent Steering Committee.

32. Special efforts were made to strengthen further the relationship between UNDP and UNIDO. The Office continued to assist UNIDO Headquarters in the development formulation, approval and implementation of technical co-operation projects, including recruitment and

briefing of experts, placement of fellowship holders, procurement of equipment and organization of study tours. In particular, it was actively involved in efforts to facilitate early approval by UNDP of a large number of projects.

33. In pursuance of the UNIDO approach for strengthening its relationship with the private sector, the Liaison Office organized a programme for the Director-General that engendered contacts with major manufacturing firms and small- and medium-scale industrial companies in the United States of America and Canada, aiming at transfer of technology to and investment promotion in developing countries. As one of the results of these contacts, UNIDO will assist motor car suppliers in the United States in the identification of suitable partners in China and advise on possible forms of international co-operative partnerships which could range from technical agreements to joint ventures.

34. In continuing its collaboration with the National Science Foundation (NSF) of the United States, the Liaison Office started a project for the Latin American region - to be jointly financed by NSF, UNDP and UNIDO - in the form of a workshop/seminar on low-rise building technologies, scheduled to be held in Puerto Rico in November 1988.

35. For the promotion of better understanding by the international academic community of the activities of UNIDO as a specialized agency, the Office participated in the 1987 National Model United Nations for 1,500 students from the United States of America, Canada and Japan. The Office assisted the organizers and the students in the simulation of a three-day session of the Industrial Development Board of UNIDO. With the collaboration of the United Nations Department of Public Information, two graduate students from the Université Catholique de Louvain (Belgium), the University of Indiana (USA) and a journalist from Senegal profited from a training programme on the activities of UNIDO arranged at the Liaison Office.

36. The Office continued to be the focal point for industrial development-related inquiries from North and South America. The Office also maintains an extensive collection of documentation and information on UNIDO that is used by Permanent Missions to the United Nations in New York, industries, research organizations, government agencies, technical experts, academic institutions and libraries.

GENEVA LIAISON

37. Despite the general constraints affecting the United Nations system during 1987, the UNIDO Liaison Office at Geneva was able to increase the range and scope of its activities. Thus the Liaison Office played an active role to stimulate interest in, and increase participation at, UNIDO Consultation meetings. It was particularly involved in the negotiations with ILO and WHO for their collaboration in the preparation, holding and follow-up of the Second Consultation on the Training of Industrial Manpower and the Third Consultation on the Pharmaceutical Industry respectively. Contacts were also initiated, maintained and expanded with national and international non-governmental organizations and industrial and management enterprises that have their main offices in Switzerland. The main objective of these contacts was to strengthen programmes with existing partners and to develop new areas of collaboration with them and with other potential partners.

38. Among the traditional functions, representing UNIDO at international conferences, meetings and workshops, and undertaking inter-agency consultations consumed a large part of the time and effort of the Liaison Office, particularly because Geneva was the venue of major meetings in 1987, e.g. the United Nations Conference for the Promotion of International Co-operation in the Peaceful Uses of Nuclear Energy, the World Health Assembly, the International Labour Conference, the Administrative Committee on Co-ordination, the Economic and Social Council, the seventh session of the United Nations Conference on Trade and Development (UNCTAD), the annual session of General Agreement on Tariffs and Trade (GATT) Contracting Parties, the ILO Meeting on Structural Adjustment and Employment, the Joint Meeting between International Organizations and Representatives of the National Organizing Committees of the North-South Campaign of the Council of Europe.

39. During the year under review, the Liaison Office also attended, serviced or participated in 57 major meetings of various bodies that dealt with matters of direct concern to UNIDO. These included, for instance, the Designated Officials on Environmental Matters, the WHO Executive Board (two sessions), the ILO Governing

body (two sessions) and its Committees, the Consultative Committee on Substantive Questions' Subcommittee on Programme Matters, the Inter-Agency Group on New and Renewable Sources of Energy, the UNCTAD Trade and Development Board (two sessions), the Economic Commission for Europe (ECE), the Joint Advisory Group of the International Trade Centre UNCTAD/GATT (ITC), the UNCTAD Working Party on the Medium-Term Plan and Programme Budget, the Senior Advisers to ECE Governments on Science and Technology, the board of the ILO Turin Centre for Training.

40. Negotiations undertaken at the working level with other organizations within the United Nations system to formulate and implement specific programmes and projects of a multi-disciplinary nature grew in importance. These involved the ILO, UNCTAD, the International Telecommunications Union (ITU) and WHO. In particular, the Liaison Office was involved in the preparation and follow-up of the visit of the Director-General to WHO. The exchange of views between the executive heads of the two organizations helped to cement existing relations and pave the way for a number of other collaborative efforts.

41. In an attempt to provide a fuller range of services, the closest possible relations were maintained with the 20 permanent missions whose countries are accredited to UNIDO from Geneva and Bern. This varied and far-ranging activity is a vital function of the Geneva Office and its need was particularly accentuated in 1987 during the intense involvement of Member States in the preparations for and participation in the second session of the General Conference.

42. The flow of requests for information on UNIDO policies, programmes and activities and for documents continued to increase. The requests originated from other international organizations and permanent missions, non-governmental organizations, private enterprises, educational institutions and individuals.

43. The Liaison Office continued, as in the past, to extend substantive and logistic support to colleagues both at Headquarters and during missions at Geneva. When necessary, briefing and other assistance was also provided to experts and consultants on their way to or returning from field assignments.

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

Source of funds												
Region	UNDP			Regular budget			Voluntary contributions			Total		
	1985	86	87	1985	86	87	1985	86	87	1985	86	87
Africa	7	6	5	5	5	5	-	1	1	12	12	11
Asia and the Pacific	6	6	6	2	2	2	2	1	1	10	9	9
Latin America	5	5	7	2	2	2	-	-	-	7	7	9
Arab States	1	1	1	-	-	-	-	-	-	1	1	1
Europe	-	-	-	-	-	-	-	-	1	-	-	1
TOTAL	19	18	19	9	9	9	2	2	3	30	29	31

CHAPTER VII. GENERAL ADMINISTRATION

STAFFING

1. The Personnel Services Division continued to recruit and manage the Secretariat staff of the Organization and to administer its internationally- and locally-recruited project personnel. On 31 December 1987 the total number of persons being administered was 2,134 (1986: 2,368), comprising 1,286 (1986: 1,402) at UNIDO Headquarters and 848 (1986: 966) in the field.

2. In the course of the year, the Division administered 2,102 (1986: 2,222) internationally-recruited technical co-operation personnel. They included 10 Senior Industrial Development Field Advisers (SIDFAs) financed by UNIDO, four Regional Advisers, 57 (1986: 48) associate experts, 21 (1986: 17) staff members of nine Investment Promotion Services and 9 (1986: 1) staff members at the International Centre for Genetic Engineering and Biotechnology (ICGEB). In all, staff of 86 (1986: 82) different nationalities were assigned in 133 (1986: 147) countries. Personnel Services also administered 367 (1986: 259) national experts serving in 52 countries and, further, recruited and administered 312 (1986: 214) ^{1/} local support staff assigned to technical co-operation projects, SIDFA offices and ICGEB. A particular feature of the year was the decrease in the average duration of technical personnel assignments (see para. 17, below).

3. At a time when the human resources of UNIDO were decreasing, it was essential to make the optimal use of staff and ensure that the priority programmes and activities of the Organization were not disrupted. Accordingly, a continuing review of available human resources was pursued and any necessary redeployment was carried out. As in the past, consultations continued with the staff at all levels on matters concerning changes introduced to maintain harmonious staff/management relations. During the second half of the year, following an option made available by the Director-General (UNIDO/DG/S.51) seven

Professional and 24 General Service staff members were granted agreed separation or deferred retirement in accordance with the staff regulations. Furthermore, staff members in substantive areas were encouraged to undertake technical co-operation assignments as short-term consultants or experts, with the result that Headquarters staff spent a total of 40 work-months in the field. In addition, during 1987 two staff members were assigned to Senior Industrial Development Field Adviser posts and another two had been accepted to take up such an assignment in 1988. These efforts were also seen as a way of providing a useful exchange of experience between field and Headquarters staff.

4. During the year, growing concern arose at the inability of the Organization to implement an increase of the salaries of the General Service categories at an average of 7.8 per cent, which had been recommended by the International Civil Service Commission (ICSC) to take effect on 1 March 1987. The other VIC-based international organizations took varied action: the International Atomic Energy Agency (IAEA) implemented the ICSC recommendation in full on 1 October 1987 and the United Nations Office at Vienna (UNOV) implemented it in stages, consisting of a partial increase effective 1 March 1987 and full implementation effective 1 December 1987. However, during the period in question UNIDO faced particularly stringent financial constraints, caused mainly by the fall in the value of the dollar and the impact that the fall had on the operational budget, which finances approximately 40 per cent of General Service posts. As part of the United Nations common system, UNIDO recognized the ICSC recommendation, but it was apparent that the obligation to implement it had to be viewed in the light of financial reality and the availability of resources, particularly in the operational budget.

5. A major task of Personnel Services during the year was its participation in the informal open-ended working group originally set up by the Industrial Development Board in its decision IDB.2/Dec.22 to draft the new staff regulations. The regulations, as recommended by the Board to the General Conference, were approved by the Conference in its decision GC.2/Dec.29 and will come into effect on 1 July 1988 with the

^{1/} This reflects a corrected figure as compared with the amount given in the 1986 Annual Report (IDB.3/10, chap. VII, para. 11).

exception of some texts currently in brackets. As reflected in the decision, certain articles of the Staff Regulations of the United Nations will thus continue to apply to UNIDO on a provisional basis, and the Board is expected to continue consideration of the texts in brackets and the provisional articles and to report to the General Conference at its third session on the matter.

6. Personnel Services continued to contribute to the formulation and harmonization of personnel policies affecting the United Nations common system through its participation in inter-agency meetings related to the common system such as ICSC and its technical bodies, the ACC Consultative Committee on Administrative Questions (CCAQ) and the United Nations Joint Staff Pension Board. A continuing review of service and living conditions in field duty stations, particularly of those that had been negatively affected by the fluctuation in the value of the dollar, was carried out with a view to submitting suggestions for improvements to ICSC.

7. An analysis of the existing performance evaluation report system was carried out with a view to developing a system more closely related to UNIDO requirements as well as to the career aspirations of the staff. The classification of posts in the General Service and Manual Worker categories was completed on the basis of the common job classification standards laid down by ICSC in July 1986 and consequently implemented by all the Vienna-based organizations.

8. Although the extensive redeployment of staff increased the need for additional training programmes, due to the lack of a staff training officer and a scarcity of resources for the programme it was only possible to continue the courses already established in correspondence layout and information processing and to introduce a self-instruction course in basic word processing. A total of 173 staff members were trained in-house and 4 staff members undertook external studies. Under the Ad-Hoc Internship Programme, UNIDO accepts a limited number of university graduates who wish to obtain practical experience in the work of UNIDO or to do research on items of direct relevance to UNIDO's programme of work. In 1987 the number of interns rose to 33 as compared to 16 in 1986. The Joint Language Training Unit continued to provide training in the six official languages of the United Nations and in German to staff of the Vienna-based organizations, adult dependants of staff, and Permanent Mission members. In the autumn 1987 semester 893 persons were enrolled in 70 classes. The Unit continued to administer the biannual language proficiency examinations for an average of 140 candidates per session.

9. Personnel Services continued to provide advice, information and administrative services on all matters concerned with pensions, health and life insurance, compensation claims and staff welfare. As in previous years, a pre-retirement seminar was organized in collaboration with IAEA and UNOV.

Table 1

Composition of the UNIDO Secretariat -/

Category	As at 31 December 1986		As at 31 December 1987	
	Male	Female	Male	Female
P-5 and above	137)	5)	123)	3)
P-1 to P-4	244)	77)	231)	73)
General Service	186	633	172	567
Manual Worker	108	5	106	4
Language teachers	2	5	2	5
Subtotal	677	725	634	652
TOTAL	1,402		1,286	

a/ Figures include 12 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).

10. Table 1 above gives the composition of the staff of the UNIDO Secretariat as at 31 December 1987 according to category and sex, and with comparable figures for 1986.

11. As a result of the serious financial situation of UNIDO, recruitment for all categories of staff was carried out on a very selective basis and mainly in areas where it was essential to maintain the level of implementation of technical co-operation programmes and services, or to service United Nations and UNIDO conferences. On 31 December 1987 there were 80 vacancies in the Professional category with 10 of those posts earmarked for abolition in accordance with measures taken to balance the operational budget. Of the 70 remaining vacancies only 16 (including two language posts) were under active recruitment at the end of the year. In the Professional and higher categories 28 staff members were recruited on fixed-term appointments (1986: 66) of which 14 were language staff including two conversions from short-term. In addition, 27 Professional staff were redeployed. During the same period, 61 (1986: 55) Professional category staff members (of which seven separated under the terms of the agreement described in para. 3, above), including 17 staff members of the Languages and Documentation Division, left the Organization. In the General Service and Manual Worker categories the number of staff members recruited on fixed-term appointments or converted from short-term appointments dropped from 61 in 1986 to 21 in 1987. Of these, 16 appointments were in the language areas. The economy measures mentioned above led to the redeployment of 71 (1986: 37) General Service and Manual Worker staff (of which 24 separated under the terms of the agreement described in para. 3, above) and, as a result, 104 left the Organization (1986: 118).

12. The number of contracts issued to translators, pool typists and other clerical support staff for conferences during 1987 was 587 (1986: 880). During the same period, six short-term contracts were issued for Secretariat staff (1986: 148). In addition, contracts were issued for 259 consultants and individual contractors who provided outside expertise and Professional services within the Secretariat (1986: 300). During the year, two outside candidates were recruited for SIDFA posts, in addition to the three staff members who were assigned to such posts (see para. 3 above).

13. Despite the restrictive recruitment policy introduced as a result of financial

constraints, it was possible to recruit nine women during the year (including two conversions from monthly short-term appointments). This to some extent alleviated the negative impact of the number of women who separated from UNIDO so that although their total number in the Professional category decreased from 82 to 76 during the year, there was no change in their relative representation, which remained at 17.7 per cent of all posts in that category. In posts subject to geographical distribution, representation by women increased slightly from 16.4 per cent to 17 per cent. Despite continued efforts, however, it was not possible to make a noticeable increase in the women's share of candidates on the roster, which rose from 5.8 per cent in 1986 to only 6 per cent in 1987. There is, therefore, a need to intensify efforts to enlist greater co-operation and support of the Member States in the increase of the number of women in the roster, the main source of recruitment. Of the 2,611 applications received in 1987 for general review and for advertised vacancies, only 348 were from female candidates.

PROJECT PERSONNEL RECRUITMENT

14. During the reporting period, 1,904 experts appointments and 879 extensions of experts appointments were processed by the Project Personnel Recruitment branch (1,992 appointments and 760 extensions in 1986). Of all experts appointed, 617 (32.4 per cent) served under regular staff member appointments (including 30 associate experts), 1,024 (53.8 per cent) under special service agreements and 263 (13.8 per cent) were appointed as national professional project personnel.

15. The appointments included 79 female experts or 4.1 per cent (1986: 105 or 5.3 per cent) and the extension of contracts 47 or 5.3 per cent.

16. The total of expert services comprising new appointments, extensions of contracts and periods of appointments carried over from 1986 amounted to 8,301 work months (1986: 8,156) representing in financial terms 42.8 per cent of the implementation of UNIDO technical co-operation (1986: 43.1 per cent).

17. The trend towards shorter missions of highly specialized experts continued in 1987. The average duration of initial appointments (excluding extensions) dropped to 2.73 months (3.2 months in 1986). Approximately 50 per cent (945) were for

a duration of one month or less, averaging 0.66 months each. This led to an increase of the average costs for each international expert mission concerning travel, administration, recruitment, substantive briefing, backstopping and debriefing, as well as fees which, calculated on a daily basis, are often higher than those for longer appointments.

18. Recruitment of national professional project personnel has become an important feature of the technical co-operation activities of UNIDO. In 1987 their share in recruitment rose to a total of 263 national experts or 13.8 per cent of all appointments (194 or 9.7 per cent in 1986), representing 43 different nationalities. The national experts appointed in 1987 included 16 chief technical advisers, project managers or project co-ordinators.

Their professional expertise, combined with intimate knowledge of local requirements and conditions, enhanced project delivery. Some of the senior national experts received briefing and debriefing similar to that of international experts, a procedure foreseen to be applied in the future to all national project managers serving for extended periods.

19. As in previous years, two Professional and two General Service posts were outposted to the United Nations Technical Assistance Recruitment and Fellowships Office in Geneva, where more than 350 interviews were conducted for UNIDO technical co-operation projects. The Geneva activities contributed to strengthening the co-operation with national recruitment services in Europe and increasing the number of qualified expert

Table 2
Distribution of experts by regional groups of countries
(1 January to 31 December 1987)

	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>c/</u>	Percentage appointments
Developing countries <u>d/</u>	3 745	29	361	633	538	28
List B countries <u>e/</u>	7 143	55	961	1 258	932	49
List D countries <u>f/</u>	2 054	16	240	435	434	23
	12 942	100	1 562	2 326	1 904	100

a/ As of 31 December 1987, excluding roster candidates for Secretariat posts only (3,280).

b/ Including government nominees.

c/ Including appointment of 263 national professional experts.

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

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.

candidates in the UNIDO roster. UNIDO also continued to finance one Professional and one General Service post in Cairo for recruitment activities in Africa, thus enhancing co-operation with national development and recruitment authorities of the region in identifying, interviewing and providing candidates for UNIDO projects.

20. Of the 1,641 international experts appointed in 1987, some 220 or 13.4 per cent were recruited for posts involving expertise in either new technologies (e.g. genetic engineering and biotechnology, micro-electronics and information technology, new materials, marine industrial technology and computer assisted manufacturing technologies), or the latest trends in advanced manufacturing in conventional branches of industry. In order to keep pace with the increasing demand for UNIDO assistance in the transfer of new and advanced technologies, particular efforts were made to develop the roster of candidates of rare expertise in modern technical fields, through national recruitment services, contacts with firms and institutions and interview missions. A comparison of 30 areas of advanced technology provided for in the roster shows that within the year under review the number of candidates in these fields increased by over 15 per cent.

21. The nationalities of experts appointed in 1987 and the cumulative list of experts by country of origin appointed since 1971 are shown in tables 1 and 2 of appendix D. Table 2 above indicates the composition of the UNIDO roster and the pattern of recruitment by regional groups.

GENERAL SERVICES

22. The year under review saw the merger of the General Services Division and Purchase and Contract Service. The merger resulted in the realization of economies (e.g. the reduction of a considerable number of posts, in particular in the Office of the Director) and the attainment of greater efficiency. At present, the Division consists of: Purchase Section, Contracts Section, Buildings Management Section, Inventory Control and Property Management Unit, Archives and Records Management Unit and Travel, Transportation, Shipment and Insurance Unit. Some of these sections and units service also the United Nations Office at Vienna and other United Nations organizations located in the Vienna International Centre (VIC) as provided for in the Memorandum of Understanding on Common Services signed by the Secretary-General of the United Nations,

the Director-General of the International Atomic Energy Agency and the Executive Director of the former UNIDO in 1977.

23. In 1987, the total delivery of project equipment and supplies for which the Purchase Section was responsible was close to \$24.5 million. This amount includes equipment and supplies that were subject of orders placed direct by field staff. The actual value of the equipment ordered by Headquarters in 1987 was \$20.5 million for 1,659 individual orders, of which 196 (11.8 per cent) were placed with manufacturers and vendors from developing countries to a total value of \$2.4 million (11.7 per cent). The Purchase Section was also responsible, and in a substantially larger capacity than in previous years, for the acquisition of equipment, materials, spare parts and supplies for the operation, maintenance and repair of the VIC complex and in that respect continued to provide services to UNIDO and the various United Nations organizations at Vienna. These activities involved the placing of 684 orders totalling more than \$6 million.

24. The Contracts Section participated actively in the implementation of the UNIDO technical co-operation programmes by providing, under corporate contracts, the services of consulting engineering organizations and institutions. In 1987, 164 contracts were executed to a value of \$17.7 million. Expenditure in connection with those contracts, and contracts awarded in previous years, reached \$14.4 million. Of the 1987 contracts, 66 or 40 per cent (totalling more than \$2.5 million) were awarded to enterprises from developing countries. As a result of the merger mentioned above, the Contracts Section increased its contribution to the work of the Buildings Management Section by concluding 122 contracts to a total value of some \$5.5 million for the operation, maintenance and repair of the VIC complex under the Common Services and the Major Repair Fund.

25. In spite of measures to reduce costs and certain staff losses, the Buildings Management Section was able to maintain an excellent record of performance. It carried out all of its day-to-day cost-shared activities as well as those projects falling under the Major Repair Fund. In particular, the Section installed a gas chromatograph for the United Nations Division of Narcotic Drugs, constructed a pipeline and pumping station to bring water from the Danube to the fountain and lawn sprinkler system in the VIC, improved the perimeter fencing, renovated the kitchen and other sections of the catering

facilities and modified and expanded, at no cost to UNIDO, the offices of the travel agencies operating at the VIC.

26. Pursuant to the merger, the Control Unit of the former Purchase and Contract Service was integrated into the Inventory Control and Property Management Unit. This Unit made substantial progress in the computerization of its records which now include all components, spare and replacement parts for the Buildings Management Section accounting for some 11,000 items. The new Unit was also able to finalize transfer-of-title documents for equipment for 194 technical co-operation projects. The total value of the equipment so transferred to developing countries exceeded \$30.5 million. The Unit was also responsible for the submission of 75 cases, such as transfer and sale of equipment write-offs and assessment, to the UNIDO Property Survey board for review.

27. Notwithstanding the substantial reduction in staff, the Archives and Records Management Unit continued to perform at a satisfactory level by providing day-to-day services to all the Departments within UNIDO and UNOV. This Unit has some 390 linear metres of permanent UNIDO records after disposing of some 120 metres of obsolete records. It has also maintained close to 30 linear metres of permanent records for UNOV after disposing of approximately the same amount of obsolete records.

28. Also pursuant to the merger, the Insurance Unit of the former Purchase and Contract Service was integrated into the Travel, Transportation, Shipment and Insurance Unit. In 1987 the latter was responsible for a total of 2,225 shipments of UNIDO property and staff members' household goods and personal effects and, in connection with these shipments, filed 27 insurance claims of which 24 were settled. In connection with shipments of technical co-operation equipment and supplies dealt with by the Purchase Section, 61 insurance claims for a total value of \$176,410 were filed with the underwriters. The premia paid for shipments for technical co-operation projects came to approximately \$125,000. Conversely, in 1987, the underwriters settled 81 claims; of these, 43 had been filed in 1987 and 38 in previous years. The total amount received from those underwriters was close to \$250,000. With regard to staff travel, both project-related and other categories (e.g. home leave, repatriation, installation), the Unit processed 9,630 cases which involved a total cost of more than \$9.2 million. Some 2,200 official visas were obtained in connection with staff travel.

CONFERENCE SERVICES

29. During 1987 UNIDO continued providing language and documentation services to United Nations entities established in Vienna under the same administrative and financial arrangements that have been in force since 1986 (see IDB.3/10, chap. VII, paras. 30-31). A report (A/C.5/42/22) of the Secretary-General of the United Nations on unified conference services for the United Nations organizations at the Vienna International Centre that was based on the conclusions and recommendations of the Advisory Committee for Conference Services at the Vienna International Centre, was presented to the Fifth Committee of the General Assembly during its forty-second session. In that report it was noted that, in view of the conclusions and recommendations of the Advisory Committee the existing joint services of the United Nations and UNIDO should be continued for the time being.

30. The joint United Nations and UNIDO Meetings Planning and Interpretation Service, operated by the United Nations, continued to service all meetings of those United Nations bodies and offices located at the VIC, any other United Nations meetings convened in Vienna and all UNIDO meetings held in Vienna and elsewhere. Of the approved 16 additional permanent posts designed to form a nucleus of regular interpretation services to service meetings at the VIC, four posts were filled during 1987.

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

32. During 1987, a total of 1,521 half-day meetings with and without interpretation were serviced by the joint Meetings Planning and Interpretation Service. A detailed breakdown is shown in table 5 below.

33. The distribution of work in the Editorial Control Section in 1987, with comparable figures for 1986, is shown in table 6 below.

34. The Printing Unit of the Division prepares camera-ready pages of publications produced by UNIDO and the United Nations units in Vienna. In 1987, 6,605 camera-ready pages were produced. Some 60 per cent of the work-load emanated from the United Nations. During the year under review, the Unit began testing desk-top publishing equipment in an effort to increase output without raising staff levels. The ongoing tests employ equipment loaned to the Unit free of charge.

Table 3

Translation services provided by the
UNIDO Languages and Documentation
Division in 1986 and 1987
(in thousands of words translated)

Organizations served	1986	1987
UNIDO	8 485 <u>a/</u>	8 592 <u>b/</u>
United Nations	10 811 <u>c/</u>	12 958 <u>d/</u>

a/ Includes 2,670,000 words for the policy-making organs of UNIDO.

b/ Includes 3,930,000 words for the policy-making organs of UNIDO.

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

d/ Includes 1,307,000 words for the International Conference on Drug Abuse and Illicit Trafficking (ICDAIT).

Table 4

Interpretation services provided by the
Meetings Planning and Interpretation
Service (UNOV) in 1986 and 1987
(in interpreter-days)

Organizations served	1986	1987
UNIDO	649	1 265 <u>a/</u>
United Nations	3 193	2 902 <u>b/</u>

a/ Includes 245 interpreter-days for the second session of the General Conference of UNIDO, 170 interpreter-days for the third session of the Industrial Development Board and 221 for the third session of the Programme and Budget Committee.

b/ Includes 528 interpreter-days for ICDAIT and 198 interpreter-days for the Interregional Consultation on Developmental Social Welfare Policies and Programmes.

Table 5

Conferences and meetings with and without interpretation, serviced by the
Meetings Planning and Interpretation Service (UNOV) in 1987

Conferences/ meetings held	Number of half-day meetings					
	UNIDO			United Nations		
	With interpretation	Without interpretation	Total	With interpretation	Without interpretation	Total
In Vienna	80	356	436	291	374	665
Elsewhere	158	249	407	13	-	13
Total	238	605	843 <u>a/</u>	304	374	678 <u>b/</u>

a/ UNIDO meetings include 62 meetings with interpretation, 40 meetings without interpretation held in connection with the third session of the Programme and Budget Committee, Vienna (9-18 March, 29 June and 12 October), the third session of the Industrial Development Board, Vienna (30 June - 3 July and 12 October) and the second session of the General Conference, Bangkok, Thailand (9-13 November).

b/ United Nations meetings include 71 meetings with interpretation, 48 meetings without interpretation held in connection with ICDAIT, Vienna (17-26 June), the Global Meeting of Experts to Review the Implementation of the World Programme of Action Concerning Disabled Persons at the Mid-Point of the United Nations Decade of Disabled Persons, Stockholm (17-22 August) and the Interregional Consultation on Developmental Social Welfare Policies and Programmes, Vienna (7-15 September).

Table 6

Editing of manuscripts and servicing of meetings provided by the
UNIDO Editorial Control Section in 1986 and 1987

Year	Editing of manuscripts <u>a/</u> (in 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					
1986	2 604	430	3 034 (57%)	2 298 (43%)	5 332 (100%)	10 (23%)	33 (77%)	43 (100%)
1987	2 310	472	2 782 (56%)	2 120 (44%)	4 902 (100%)	20 (22%)	71 (78%)	91 (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. Technical co-operation for the benefit of the developing countries continues to be the main activity of UNIDO. The Area Programmes Division again played a central role in developing programmes of technical co-operation irrespective of sources of finance. The major emphasis of the work of the Division was on planning, developing and monitoring programmes and projects of a country, regional, interregional and global nature. For UNIDO as a whole the year under review witnessed a substantial increase in overall figures of net approval of projects which rose from \$93.3 million (1986) to \$117.8 million (1987).

2. As in the past, the main source of finance for UNIDO technical co-operation activities in 1987 were the indicative planning figures (IPFs) of the United Nations Development Programme (UNDP). 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 (reflected in tables and figures as XP and XA respectively), trust funds (TF) and self-financing arrangements by developing countries and a number of United Nations funds.

UNDP INDICATIVE PLANNING FIGURE AND COST SHARING

3. The largest source for financing the technical co-operation activities of UNIDO continued to be the UNDP indicative planning figure (IPF). The pledges for 1987 voluntary contributions to UNDP amounted to \$860 million. The programming level (authorized budget level) was set at \$823.3 million with an expenditure target of \$590.0 million for 1987.

4. A remarkable increase was recorded for projects funded under UNDP/IPF and cost sharing. Approvals of new projects increased in number and value as compared with 1986, from 126 to 180 projects with total amount of \$46.9 million and \$54.3 million respectively. The overall

net approvals (i.e. including revisions of ongoing projects) under this fund reached \$83.3 million in 1987, \$24.4 million higher than in 1986 or an increase of 41 per cent. The expenditures amounted to \$66.5 million, approximately 11.3 per cent of the UNDP overall expenditure target.

5. By the end of 1987, 123 country programmes had been approved by the Governing Council of UNDP for the fourth UNDP programming cycle (1987-1991). Within these country programmes, UNIDO was designated executing agency for 523 projects (146 ongoing and 377 new) amounting to \$379.3 million (see appendix E). The UNIDO share thus amounted to 13.0 per cent of the total programmed resources although the allocations for the industry sector had originally been estimated at 11.7 per cent.

SPECIAL INDUSTRIAL SERVICES PROGRAMME

6. 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 of US dollars) have been allocated: 17.4 (1966-1971), 14.3 (1972-1976), 17.2 (1977-1981), 13.95 (1982-1986) and 15 (1987-1991). The allocation for 1982-1986 was limited to \$13.95 million because of the restriction imposed on all UNDP programmes. On the basis of the positive results of the programme evaluation conducted by UNDP at the end of 1985, the Governing Council of UNDP decided to continue financing the SIS 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. The average annual allocation, therefore, is \$3 million.

7. The number of requests for SIS assistance continued to increase. However, as explained in previous Annual Reports,

shortage of resources forces the Organization 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 the requirements of those countries which were the most in need of such assistance. Approvals during the first year (1987) of the present cycle (1987-1991) are shown in table 1.

8. Assistance under the SIS programme in 1987 covered a wide variety of activities with a total of 71 projects related mainly to agro-industries, chemical industries, metallurgical and engineering industries.

9. Due to the existence of 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 programme can be used where and when it is most needed, since the allocations are not tied to regions or countries. As in the past, the SIS programme was also found to be particularly important to the industrial sector insofar as it provided assistance to the enterprise sector to a larger extent than the country programmes.

TECHNICAL CO-OPERATION - REGULAR BUDGET ALLOCATIONS

Regular programme of technical co-operation

10. In December 1985, the General Conference approved an appropriation for the regular programme of technical co-operation of \$6,258,600 (adjusted at the rate of \$1 = AS 17.70) for the 1986-1987 biennium. ^{1/} Owing to budgetary constraints, ^{2/} the original appropriation of \$6,258,600 (excluding IDDA), after some adjustments, was reduced to \$3,215,600.

11. 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

^{1/} General Conference decision GC.1/Dec.26.

^{2/} See IDB.2/CRP.5 and board decision IDB.2/Dec.5.

countries. As in 1986, further emphasis was put on special needs of the least developed countries, on co-operation among developing countries and on consultation with Governments. In programming the available resources under the regular programme, every effort was made to achieve an equitable geographical distribution, especially taking into consideration the needs of African and least developed countries.

12. In November 1987, the General Conference, by approving the programme and budgets 1988-1989, as contained in document GC.2/10, also approved the regular programme of technical co-operation (excluding IDDA) for that biennium with the following breakdown envisaged by type of activity: ^{3/}

<u>Activity</u>	<u>(\$)</u>
Co-operation among developing countries	383,300
Consultations with Governments	100,600
Special needs of the least developed countries	1,111,300
Training:	
Individual fellowships	376,500
Group training	537,600
Establishment and strengthening training facilities in developing countries	<u>430,000</u>
TOTAL	<u>2,939,300</u> ^{a/}

^{a/} 100 per cent dollar-based.

Allocation for the Industrial Development Decade for Africa (IDDA)

13. In December 1985, the General Conference appropriated \$8.6 million (not subject to revaluation) under the regular budget 1986-1987 for the implementation of IDDA, established by the General Assembly of the United Nations in its resolution 35/66 B of 5 December 1980. Owing to budgetary constraints the appropriation of \$8.6 million was reduced by 68.6 per cent to \$2.7 million. ^{3/}

^{3/} See General Conference decisions GC.2/Dec.22 and GC.2/10, table 10 (p. 168 of English version).

14. As a result of the reduction, projects that had already been approved but for which no binding commitments had been made were suspended or cancelled. Efforts have been made to secure voluntary contributions which would ensure the implementation of the programme of the Decade.

15. In November 1987, the General Conference approved \$4,054,500 for IDDA under the regular programme of technical co-operation for the biennium 1988-1989. ^{3/} In addition \$4.75 million was allocated under the regular budget for supplementary IDDA activities. ^{4/}

OPERATIONAL BUDGET

16. In accordance with Financial Regulation 3.4(b), the operational budget consists of expected income and expenditures in respect of voluntary contributions to the Industrial Development Fund, in respect of such trust funds, reserve and special accounts as have been or may be established by the Director-General and in respect of support costs of technical co-operation activities.

17. The General Conference in its decision GC.1/Dec.26 adopted estimates totalling \$23,492,700 for the purpose of the operational budget for the biennium 1986-1987 to be financed from voluntary contributions and such other income as may be provided for in the financial regulations. For the biennium 1988-1989, the Conference, in decision GC.2/Dec.22, approved estimates of expenditure totalling \$34,200,000 for the purpose of the operational budget.

INDUSTRIAL DEVELOPMENT FUND

18. Pledges to the Industrial Development Fund (IDF) increased in 1987 to a total of \$23.3 million, as compared to \$17.7 million in 1986 ^{5/} and \$14.5 million in 1985. This upward trend promises to continue into 1988 for which year a total of \$30 million of pledges might be expected. This compares favourably with the desirable funding target of \$50 million established by the

former Industrial Development Board in 1977. The breakdown of 1987 pledges by the segments of the Fund is: general-purpose convertible \$1.7 million, general-purpose non-convertible dollar equivalent \$2.1, special-purpose convertible \$17.9 million, and special-purpose non-convertible dollar equivalent \$1.6 million. There was also a significant growth in the number and value of projects approved for IDF financing: the number of new projects rose from 201 in 1986 to 231 in 1987, while the net value of approvals (i.e. including revisions of on-going projects) rose from \$10 million in 1986 to \$21.3 million in 1987.

19. Despite the limited programming flexibility owing to the fact that an increasing part of the Fund consists of special-purpose contributions, the Organization continued in 1987 its efforts to ensure a fair geographical distribution of funds. Special attention continued to be given to Africa. Furthermore, specific pledges for IDDA totalling some \$3.2 million were announced during the year, which partially counterbalanced the reduction of the IDDA apportionment within the regular programme for 1987.

20. An example of activities carried out in an effort to mobilize additional resources for the African region and to ensure an optimum impact of UNIDO technical assistance is the preparatory assistance for a major regional programme in the leather and leather products sector for the benefit of African countries. The positive preliminary reaction by several donors to this pilot undertaking stimulated the Organization to plan other major sectoral programmes of a similar nature.

21. The encouraging 1987 figures on project approvals and expenditures are the result of organizational and procedural steps taken by UNIDO with the aim of improving the preparation, design, and subsequently the implementation of technical co-operation projects. These included for instance the extensive use of preparatory field activities - as a result of which more complete information for detailed project design was available for analysis and proper presentation - and improved monitoring and evaluation of projects.

TRUST FUNDS AND SELF-FINANCING ARRANGEMENTS

22. In 1987, pursuant to Article 2(n) of the Constitution, UNIDO continued to develop special mechanisms for promoting industrial co-operation, particularly at

^{4/} See GC.2/10, introduction, para. 13.

^{5/} before adjustment of the value of projects actually approved and delivered in 1986.

the enterprise level. ^{6/} Special efforts were made to bring out the resources and capabilities of industrial enterprises and institutions in the developed countries in order to match the needs and overcome the constraints of the enterprise sector in the developing countries. In this effort, self-financed and third-party financed trust fund schemes proved to be effective mechanisms for providing direct support to industrial enterprises and institutions in the developing countries, particularly for optimization, rehabilitation and expansion programmes. These trust fund projects involved the use of technical and financial contributions from governmental and non-governmental sources and were all designed for execution by UNIDO. In this respect, the promotional work done by the Section for Co-operation with Non-Governmental Organizations and Industrial Enterprises (see chap. VI) was followed up by the Special Trust Fund Projects Section with project development and formulation work under the above-mentioned trust fund schemes. ^{7/}

23. In addition to the on-going projects of technical co-operation and training at cement plants in the Libyan Arab Jamhiriya, similar projects of the self-financed type were started in Nigeria and Yemen. These projects aimed at improved efficiency, better capacity utilization, lower production costs and manpower development. Enterprises in other sectors, development financing institutions and industry associations in developing countries have also come to recognize the advantages of co-operation with UNIDO under self-financed trust fund schemes. For example, an engineering company in Egypt in the petroleum sector, a development bank in Nigeria, and the Arab Union for Cement and Building Materials have opened revolving trust fund accounts with UNIDO in order to obtain short-term experts, emergency equipment items, and advisory services through UNIDO at short notice. Provision of technical services to development financing institutions and industry associations is expected to lead to increased involvement of UNIDO in industrial plant rehabilitation and expansion programmes.

24. Speedy negotiation, approval and action have been the aims of UNIDO in responding to requests for assistance under

^{6/} IDb.3/10, chap. I, paras. 3-7.

^{7/} Ibid., chap. VIII, paras. 9-11.

trust fund arrangements. For example, the Gulf Cooperation Council's request for a lubrication oil pricing expert was met by the despatch, within a fortnight, of a high-level expert from a well-reputed company which had entered into a stand-by agreement with UNIDO for the supply of expertise.

25. Notable examples of third-party financed trust fund projects are the projects for agro-industry development in Africa funded by the Japanese Government and the project for development of supporting industries in countries of the Association of South-East Asian Nations (ASEAN). The latter, financed by the Engineering Consulting Firms Association (ECFA) of Japan, was designed to study complementarity of industrial development in the region and to enhance export opportunities from these countries to developed economies, e.g. Japan. During the year, a UNIDO/ECFA team visited Indonesia and the Philippines, and three other ASEAN countries will be visited in 1988. These activities are expected to lead to further development work under trust fund arrangements, to strengthen the supporting industries in the region.

26. As anticipated in last year's Annual Report, ^{8/} the number of new projects approved rose from 32 in 1986 to 56 in 1987. The net value of new approvals shown in table 3A of the statistical annex is only \$3.9 million as compared to \$25.9 million in 1986. This is partly explained by the fact that the 1986 figure included \$17.3 million for activities related to the International Centre for Genetic Engineering and Biotechnology. Another reason for the apparent decrease was the change in the method of counting the value of approvals: since 1987 approvals are counted as cash contributions received by UNIDO and not as the total project budget agreed upon by the self-financing or third-party donor.

PROGRAMME SUPPORT COSTS

27. As mentioned above, the operational budget is also funded from the income earned in the delivery of technical co-operation projects. This income is calculated as a fixed percentage (generally 13 per cent) of the value in United States dollars of the technical co-operation projects delivered and is to cover the support costs of the Organization

^{8/} IDb.3/10, chap. VIII, para. 11.

in implementing these projects. On the other hand, most of the expenditure on support costs (mainly staff costs) is incurred in Austrian schillings. As a result, operational budget programmes are vulnerable to fluctuations in the dollar/schilling exchange rate. In 1987, for instance, the exchange rate fluctuated from \$1 = AS 13.90 in January to \$1 = AS 11.50 in December.

28. In 1987, 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 (ACC). At its April session, the CCAQ (Fb) decided to propose to ACC that it raise with the Administrator of UNDP the possibility of extending for a further five-year period (1987-1991) the minimum level of reimbursement of support costs provided for in sub-paragraph 2(c) of UNDP Governing Council decision 80/44, i.e. that no executing agency shall receive for each of the years 1982 to 1986, less reimbursement in United States dollars than the amount received for 1981 unless 14 per cent of the amount of actual programme expenditures itself would produce a lower amount. In the view of the CCAQ (Fb), such an arrangement would, in some measure, help many of the agencies in their severe financial difficulties in providing back-up services for UNDP-financed projects. ^{9/} At its September session, the CCAQ (Fb) made available the details on the response of the Governing Council of UNDP to this proposal, which had been negative. UNDP also drew the attention of the Committee to the guidelines and procedures set out in Governing Council decision 81/40, concerning currency exchange fluctuations. ^{10/} In 1987, the Governing Council in decision 87/49 considered a request for compensation to UNIDO for losses sustained in 1986 in respect of support cost reimbursements as a result of currency fluctuations under the provisions of paragraph 5(a) of Governing Council decision 81/40. The Administrator of UNDP was authorized to reimburse to UNIDO an additional amount of \$667,000 for support costs in the year 1986. This amount was calculated on the basis of 14 per cent of UNIDO's project delivery of UNDP-financed projects in that year.

^{9/} ACC/1987/6.

^{10/} ACC/1987/12.

29. In accordance with decision 86/49 of the Governing Council of UNDP, UNIDO submitted an ex post facto report on agency support costs for the 1986-1987 biennium. Based on a methodology developed by UNIDO for identifying support costs, the distribution of direct and indirect costs of the substantive activities as well as the percentage relationship of these costs to technical assistance delivery for the last three biennia are shown in table 2.

30. In 1987, the Director-General established a Task Force on Overhead Charges. The terms of reference of the Task Force included the formulation of recommendations on the Organization's policies with respect to overhead charges for IPF and non-IPF projects including self-financed and special trust fund projects and the examination of a policy to consider exceptions to the norm of applying 13 per cent for support costs for certain projects. As part of its work, the Task Force reviewed the methodology developed by UNIDO for identifying support costs. The presentation in table 2 takes into account the impact of the exchange rate fluctuations on the support cost calculation. In the calculation, information is also presented on a biennial basis, assuming that the ratio of 23 per cent dollar-based and 77 per cent schilling-based is applied to support cost expenditures. The average 1982 exchange rate of \$1 = AS 15.80 is used as a base for comparison purposes.

31. Strenuous efforts were made to reduce costs in the operational budget. Reductions were achieved through drastic cuts in non-staff costs, such as travel, communications and computer services, as well as major reductions in staff through natural attrition, agreed termination and transfer of appropriately qualified staff to vacant posts in the regular budget. There were 324 staff (60 Professionals and 264 General Service staff) on board in the operational budget in December 1987 compared with 436 in December 1986 (115 Professional and 321 General Service staff). Despite these economy measures, a deficit of \$2.4 million was experienced in 1987 (\$3.0 million in 1986). Technical co-operation delivery in 1987 reached \$97.7 million, slightly below the 1986 level of \$99.6 million.

32. During the 1986-1987 biennium, the level of technical assistance delivery increased by 8.6 per cent over the 1984-1985 level, while support costs as a percentage of delivery decreased by 0.1 per cent. That notwithstanding, 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 2.

B. REGULAR BUDGET

33. Activities other than technical co-operation projects were financed from appropriations from the regular budget for UNIDO. 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 an initial net appropriation of \$112,706,804 for the regular budget for the biennium 1986-1987. On the basis of revised estimates resulting from the updated budget performance report for the biennium 1986-1987 submitted by the Director-General to the Conference in November 1987 (GC.2/23), the Conference, in its decision GC.2/Dec.20, approved a supplementary estimate of \$3.1 million for the regular budget for the fiscal period 1986-1987 so as to cover the net shortfall in the resources of UNIDO resulting from the depreciation of the dollar. In this amount, account was taken, *inter alia*, of (a) adjustments of the exchange rate from AS 17.70 per \$1 for the biennium to AS 15.32 per \$1 in 1986 and an estimated AS 12.66 per \$1 in 1987 amounting to \$18.3 million and (b) estimated economies of \$15.2 million. The adjusted appropriations of \$160,193,600 less estimated income of \$44,386,796 resulted in a final net appropriation for the 1986-1987 biennium of \$115,806,804.

34. In addition to the shortfall resulting from the depreciation of the dollar, UNIDO experienced serious cash flow problems during the biennium as a result of delayed receipt and withholding of contributions from Member States. As at 31 December 1987, unpaid contributions represented 44 per cent of the 1987 assessments.

35. In order to assure the financial viability of UNIDO as a specialized agency in the first years of its operation, the General Assembly of the United Nations financed a loan of \$16 million to UNIDO. In its decision IDB.3/Dec.22, the Industrial Development Board requested the Director-General, *inter alia*, to submit to the Programme and Budget Committee for approval at its fourth session a programme for repayment of the United Nations loan, taking into account the financial situation of UNIDO and the need to ensure its continued viability and the requirement to repay the loan in 1988 under the terms of United Nations General Assembly resolution 41/209. The General Assembly at its forty-second session, by adopting resolution 42/226 C on financing of appropriations for the year 1988, took into account the observations of the United Nations Advisory Committee on Administrative and Budgetary Questions (ACABQ) that a pragmatic and realistic modality for repayment of the loan, including a specific schedule of payments, should be negotiated and submitted to the ACABQ no later than its fall 1988 session and that, once approved, the schedule of payments should be strictly adhered to (A/42/7/Add.5).

36. In November 1987 the Conference in decision GC.2/Dec.22 adopted and approved, *inter alia*, the programme and budgets 1988-1989 as contained in document GC.2/10. At the same time, the Conference in decision GC.2/Dec.21, decided to adopt for the fiscal period 1988-1989 a system of assessment of contributions to the regular budget under which each assessment of a Member State would be established in United States dollars and in Austrian schillings. In accordance with that decision and with computations based on an exchange rate of \$1 = AS 12.20, the Conference approved the net appropriations for the biennium 1988-1989 of \$32,895,100 plus AS 1,480,937,770 (total equivalent of \$154,283,442).

Table 1

SIS approvals by region
(new projects only)

(1 January to 31 December 1987)

Geographical area	\$000	Percentage of all approvals
Africa <u>a/</u>	872	34
Arab States <u>a/</u>	402	15
(African Arab States) <u>b/</u>	(205)	(8)
The Americas	493	19
Asia and the Pacific	768	30
Europe	<u>251</u>	<u>10</u>
TOTAL	<u>2,581</u>	<u>100</u>

a/ Includes African Arab States.

b/ Deducted since included both under Africa and under Arab States.

Table 2

Programme support costs, 1982 to 1987
(in thousands of US dollars)

A. At actual dollar expenditure per year a/

	1982	1983	1984	1985	1986	1987
Technical assistance delivery	91,900	78,000	87,200	94,500	99,600	97,700
Support costs						
Indirect	6,294	5,855	6,029	6,695	6,191	9,234
Direct	<u>17,322</u>	<u>18,478</u>	<u>17,824</u>	<u>18,928</u>	<u>25,128</u>	<u>31,365</u>
TOTAL	23,516	24,333	23,853	25,623	31,319	40,599
Exchange rate in AS	16.80	17.70	19.80	20.70	15.30	12.70

a/ Part B of present table 2 does not compare with table 5 in chap. VIII of the 1986 Annual Report (IDB.3/10) since, in the latter, support costs as a percentage of delivery were calculated from actual dollar expenditure per year.

Table 2 (continued)

b. At a constant exchange rate of \$1 = AS 16.80

	1982	1983	1984	1985	1986	1987
Total support costs						
Dollar-based (23%)	5,432	5,597	5,486	5,893	7,203	9,538
Schilling-based (77%)	<u>18,184</u>	<u>19,740</u>	<u>21,647</u>	<u>24,310</u>	<u>21,963</u>	<u>23,632</u>
TOTAL	23,616	25,337	27,133	30,203	29,166	32,970
		1982-1983	1984-1985	1986-1987		
Total support costs		<u>48,953</u>	<u>57,336</u>	<u>62,136</u>		
Technical assistance delivery		169,900	181,700	197,300		
Support costs as a percentage of technical assistance		28.8	31.6	31.5		

Note: Prior to 1 January 1986, UNIDO accounts were structured as part of the United Nations. The information reported for the 1986-1987 biennium reflects the accounts following the conversion of UNIDO to a specialized agency. In future biennia, support costs for 1986-1987 will therefore be used as the basis for comparison.

STATISTICAL ANNEX

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

	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	99.8	97.7
United Nations regular programme / UNIDO regular budget	8.7	15.2	3.1	4.0	3.7	9.0	3.8	2.1 a)
UNDP/IPF and cash counterpart	98.7	229.9	64.2	48.2	54.4	58.8	67.9	66.5
UNDP/SIS	14.3	17.2	3.1	3.0	1.8	2.7	3.8	2.8
UNDP/Special programme resources and special measures	3.1	5.3	0.9	1.0	0.5	0.3	0.4	0.3
UNDP-administered trust funds	-	3.4	3.1	2.7	3.8	1.9	1.8	1.1
Other trust funds	6.2	17.9	5.3	6.5	7.9	8.3	6.7	6.1
UNIDF/IDF	10.8	41.9	11.6	13.1	14.8	10.9	13.2	16.6
United Nations Fund for Drug Abuse Control (UNFDAC)	-	-	-	-	0.1	1.5	0.8	0.6
Non-UNIDO funds	-	3.8	0.8	1.5	0.8	1.3	1.8	1.8
Headquarters	100.5	202.4	45.4	50.3	47.7	49.3	65.5	76.1
Regular budget	85.2	180.7	35.6	39.8	37.4	38.1	48.9	60.7
Overheads	15.3	41.7	9.8	10.5	10.3	11.2	16.6	15.4
Total expenditure	242.3	536.8	137.3	128.3	134.9	143.8	165.1	173.8
Technical co-operation programmes as percentage of total expenditure	58.5%	62.3%	68.9%	60.8%	64.8%	65.7%	60.3%	56.2%

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

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

	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	184.8	181.0	182.2	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	117.8 a)
3 Total of approved projects under implementation	214.8	470.8	245.6	242.8	288.2	256.6	255.5	273.7
4 Expenditures in the year	141.8	334.4	91.9	78.0	87.2	84.4	99.8	97.7
5 Residual value of projects carried forward	72.8	136.4	153.7	184.8	181.0	182.2	155.9	178.0
B United Nations regular programme (b) / 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	1.5
3 Total of approved projects under implementation	8.7	15.2	5.8	4.0	7.2	9.0	5.0	2.7
4 Expenditures in the year	8.7	15.2	3.1	4.0	3.7	9.0	3.8	2.1
5 Residual value of projects carried forward	-	-	2.7	-	3.5	-	1.2	0.8
C UNDP/IPF and cash counterpart								
1 Residual value of projects brought forward	29.7	59.8	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	78.8	43.5	63.8	52.1	58.8	83.2
3 Total of approved projects under implementation	158.5	335.7	182.4	161.7	189.3	167.0	167.2	182.5
4 Expenditures in the year	98.7	229.9	84.2	48.2	54.4	58.8	67.9	86.5
5 Residual value of projects carried forward	59.8	105.8	118.2	115.5	114.9	108.4	99.3	118.0
D UNDP/SIS (c)								
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	1.8
3 Total of approved projects under implementation	20.1	20.0	8.1	5.4	4.6	7.6	6.9	4.9
4 Expenditures in the year	14.3	17.2	3.1	3.0	1.8	2.7	3.8	2.8
5 Residual value of projects carried forward	5.8	2.8	5.0	2.4	2.8	4.9	3.1	2.1

	1972-76	1977-81	1982	1983	1984	1985	1986	1987
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	0.3
5. Residual value of projects carried forward	1.7	0.9	0.7	1.0	0.6	0.6	0.3	-
F. UNDP-administered trust funds (d)								
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	(0.1)
3. Total of approved projects under implementation	-	8.1	6.0	5.4	9.9	4.3	3.1	1.4
4. Expenditures in the year	-	3.4	3.1	2.7	3.6	1.9	1.6	1.1
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 (e)								
1. Residual value of projects brought forward	0.4	1.3	5.7	5.4	21.9	34.2	24.2	26.7
2. Value of project budgets approved in the year (net)	7.1	22.3	5.0	23.0	20.2	(1.7)	11.2	3.6
3. Total of approved projects under implementation	7.5	23.6	10.7	28.4	42.1	32.5	35.4	32.3
4. Expenditures in the year	6.2	17.9	5.3	6.5	7.9	8.3	6.7	6.1
5. Residual value of projects carried forward	1.3	3.7	5.4	21.9	34.2	24.2	26.7	26.2
H. UNDP (f) / IDP								
1. Residual value of projects brought forward	2.0	4.2	14.6	17.1	19.4	16.0	17.6	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	21.3
3. Total of approved projects under implementation	15.0	56.5	28.7	32.5	30.6	28.7	30.6	38.9
4. Expenditures in the year	10.8	41.9	11.6	13.1	14.6	10.9	13.2	16.6
5. Residual value of projects carried forward	4.2	14.6	17.1	19.4	16.0	17.6	17.6	22.3

	1972-76	1977-81	1982	1983	1984	1985	1986	1987
I UNFDAC								
1 Residual value of projects brought forward	-	-	-	-	-	0.8	0.1	0.3
2 Value of project budgets approved in the year (net)	-	-	-	-	0.7	1.0	0.8	0.5
3 Total of approved projects under implementation	-	-	-	-	0.7	1.8	0.9	0.8
4 Expenditures in the year	-	-	-	-	0.1	1.5	0.6	0.8
5 Residual value of projects carried forward	-	-	-	-	0.6	0.1	0.3	0.2
J Non-UNIDO funds (g)								
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	6.0
3 Total of approved projects under implementation	-	5.5	2.3	3.4	2.7	5.0	5.5	9.9
4 Expenditures in the year	-	3.8	0.8	1.5	0.8	1.2	1.8	1.8
5 Residual value of projects carried forward	-	1.9	1.7	1.9	2.1	3.8	3.9	8.3

- (a) In the Annual Report of UNIDO, 1986 (IDB 3/10), the amount estimated for the 1987 approvals should read \$ 118.8 million
- (b) Excludes the value of projects approved but not implemented within the year (prior to 1978) or within the biennium (after 1977), as appropriate
- (c) Includes SIS Trust Funds prior to 1973
- (d) 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 United Nations Development Fund for Women; United Nations Capital Development Fund; third-party trust funds
- (e) Include special-purpose trust funds financed by recipient or third parties; government cash counterpart contribution paid to UNIDO; United Nations Fund for Population Activities; projects financed from World Bank loans
- (f) Includes UNIDO General Trust Fund
- (g) 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 1986 AND 1987, 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)	
----- 1986 -----							
UNIDO regular budget	234	5083	22	46	(97)	(2)	4986
UNDP/IPF and cash counterpart	128	46871	372	571	11883	21	58854
UNDP/SIS	77	2453	32	18	(481)	(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	288	(535)	(2)	12889
UNFDAC	1	821	821	1	-	-	821
Non-UNIDO funds	15	1944	130	27	(220)	(8)	1724
TOTAL	689	97193	141	1217	(3889)	(189)	93324
----- 1987 -----							
UNIDO regular budget	50	1382	27	123	124	1	1486
UNDP/IPF and cash counterpart	180	54278	302	621	26980	47	83268
UNDP/SIS	71	2581	36	189	(791)	(4)	1790
UNDP/Special programme resources and special measures	-	-	-	8	(20)	(2)	(20)
UNDP-administered trust funds	10	854	85	22	(949)	(43)	(95)
Other trust funds	58	3945	70	85	(278)	(3)	3667
IDF	231	20792	90	355	493	1	21285
UNFDAC	1	87	87	3	389	130	456
Non-UNIDO funds	17	5886	352	30	(27)	(1)	5959
TOTAL	618	89885	148	1438	27931	19	117796

TABLE 3B TECHNICAL CO-OPERATION ACTIVITIES: COMPARISON OF THE VALUE OF PROJECTS AS AT 31 DECEMBER 1986 AND AS AT 31 DECEMBER 1987, BY SOURCE OF FUNDS

	Number of projects		Total value of projects (\$000)		Average value of projects (\$000)	
	1986	1987	1986	1987	1986	1987
United Nations regular programme/UNIDO regular budget	234	231	4986	6451	21	28
UNDP/IPF and cash counterpart	758	864	440884	490087	582	567
UNDP/SIS	304	295	11180	10755	37	36
UNDP/Special programme resources and special measures	21	14	4317	3595	208	257
UNDP-administered trust funds	28	34	15888	15407	567	453
Other trust funds	143	184	60620	59751	424	364
UNIDF/IDF	669	739	66972	76633	103	104
UNFDAC	3	4	2463	2938	626	736
Non-UNIDO funds	54	69	10258	16217	180	235
	-----	-----	-----	-----	-----	-----
TOTAL	2214	2414	619626	661614	280	282

The following is a breakdown by status of projects

	Number of projects		Total value of projects (\$000)	
	1986	1987	1986	1987
New and ongoing	1400	1452	460052	513294
Operationally completed	280	258	76531	50370
Financially completed	534	704	83045	118150
	-----	-----	-----	-----
TOTAL	2214	2414	619626	661614

TABLE 4 EXPENDITURE ON TECHNICAL CO-OPERATION ACTIVITIES IN 1986 AND 1987,
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	\$000					
----- 1986 -----							
UNIDO regular budget	163 3	1450	643	851	648	163	3753
UNDP/IPF and cash counterpart	4520 0	27086	7776	7866	23569	1555	67842
UNDP/SIS	341 4	2590	373	345	474	108	3888
UNDP/Special programme resources and special measures	37 8	210	0	80	95	8	371
UNDP-administered trust funds	14 2	240	665	199	466	10	1602
Other trust funds:	2377 5	5908	64	292	297	131	6092
IDF	529 3	4284	2413	4402	1646	476	13203
UNFDAC	69 4	266	97	14	178	44	619
Non-UNIDO funds	103 2	848	84	556	133	9	1630
TOTAL	8156 1	42660	12135	14577	27506	2502	96600
----- 1987 -----							
UNIDO regular budget	110 9	868	155	569	262	185	2079
UNDP/IPF and cash counterpart	5343 1	26764	9591	7491	21182	1496	66544
UNDP/SIS	270 5	2018	197	221	332	68	2636
UNDP/Special programme resources and special measures	35 6	214	--	40	8	2	264
UNDP-administered trust funds	7 1	83	90	736	233	7	1149
Other trust funds	1687 8	5392	81	44	600	(66)	6049
IDF	647 8	5219	4196	4766	1704	705	16610
UNFDAC	112 2	366	57	31	114	56	626
Non-UNIDO funds	104 1	908	--	597	15	47	1567
TOTAL	8319 1 a)	41874	14367	14815	24475	2806	97728

a) Categories are as follows

	Work-months
International experts and consultants	6674 2
Operational assistance experts	1444 9
National experts	
TOTAL	8319 1

TABLE 5 EXPENDITURE ON TECHNICAL CO-OPERATION ACTIVITIES IN 1987, BY SOURCE OF FUNDS AND DEPARTMENT/PROGRAMME COMPONENT

(In thousands of US dollars)

Department/Programme component	Regular budget	UNDP/ IPF and east-counterpart	UNDP/SIS	UNDP/ Special programme resources and special measures	UNDP-administered trust funds	Other trust funds	IDF	UNFDAC	Non-UNIDO funds	Total
Executive Direction and Management	25	-	-	-	-	-	-	-	-	82
Programme and Project Development	333	134	113	-	-	1030	482	-	-	2082
Industrial Promotion, Consultations and Technology										
Industrial Investment	72	450	-	-	-	182	3498	-	(8)	4175
System of Consultations	82	-	-	-	-	-	232	-	-	284
Development and Transfer of Technology	127	157	9	-	-	1349	253	-	(22)	1873
Subtotal	251	807	9	-	-	1511	3981	-	(27)	6332
Industrial Operations										
Agro-based Industries	38	4585	750	111	23	98	3024	582	251	8442
Chemical Industries	263	18580	587	-	148	1829	2839	-	403	24609
Metallurgical Industries	44	7812	402	-	(13)	149	328	-	30	8550
Engineering Industries	381	12810	380	8	210	190	354	-	289	14380
Industrial Planning	128	4878	79	32	-	871	24	-	381	6890
Institutional Infrastructure	82	9189	174	(4)	-	420	588	-	158	10585
Industrial Management and Rehabilitation	178	3594	247	87	-	12	(118)	-	14	4011
Industrial Training	213	907	15	-	781	-	4140	-	27	6083
Feasibility Studies	95	4088	120	32	-	179	988	-	81	5541
Subtotal	1417	65803	2714	284	1149	3448	12120	582	1594	89071
External Relations, Public Information, Language and Documentation Services	22	-	-	-	-	-	27	-	-	49
Other	30	-	-	-	-	4	-	88	-	100
TOTAL	2079	68544	2838	284	1149	8049	18810	628	1587	97728

TABLE 6 EXPENDITURE ON TECHNICAL CO-OPERATION ACTIVITIES IN 1987, BY DEPARTMENT/PROGRAMME COMPONENT AND GEOGRAPHICAL AREA
(In thousands of US dollars)

Department/Programme component unit	Africa a)	The Americas	Arab States b)	Asia and the Pacific	Europe	Global and interregional	Total
Executive Direction and Management	82	-	-	-	-	-	82
Programme and Project Development	313	307	85	(81)	489	-	2092
Industrial Promotion, Consultations and Technology							
Industrial investment	178	218	78	(78)	801	73	4175
System of Consultations	111	-	-	-	(14)	-	284
Development and transfer of technology	173	70	45	-	97	64	1873
Subtotal	462	288	123	(78)	884	137	6332
Industrial Operations							
Agro-based industries	1822	2177	583	(439)	4599	48	9442
Chemical Industries	9239	1088	8238	(5977)	11888	934	24809
Metallurgical Industries	2845	1250	1385	(1077)	4134	218	8550
Engineering Industries	2955	801	982	(578)	9787	551	14380
Industrial Planning	3900	1241	350	(129)	481	19	5890
Institutional Infrastructure	5145	1423	1387	(381)	2320	281	10566
Industrial Management and Rehabilitation	1585	418	545	(447)	1898	281	4011
Industrial Training	1595	434	(8)	2	79	154	8083
Feasibility Studies	2725	95	916	(395)	1810	1	5541
Subtotal	31891	8707	12338	(8421)	36774	2487	89071
External Relations, Public Information, Language and Documentation Services	12	-	4	-	4	1	49
Other	10	-	-	-	-	-	100
TOTAL	32570	9302	12550	(8560)	37931	2825	97728

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 column "Total" since they are already included under "Africa"

TABLE 7 EXPENDITURE ON TECHNICAL CO-OPERATION ACTIVITIES, BY GEOGRAPHICAL AREA, 1981 TO 1987
(In thousands of US dollars)

Area		1981	1982	1983	1984	1985	1986	1987
Africa								
Country projects	a)	32756	29137	25683	28300	31431	31674	29102
Regional projects		1569	1828	1773	4713	5791	4069	3468
	Subtotal	34345	30965	27456	30013	37222	35743	32570
The Americas								
Country projects		9477	9801	9188	7987	11082	9402	8483
Regional projects		855	1141	877	1013	936	1148	839
	Subtotal	10332	10742	10045	9000	12018	10550	9302
Arab States								
Country projects		11355	10726	11274	11807	11448	11153	11934
Regional projects		456	997	593	1104	532	731	816
Country projects (African Arab States)	b)	(6803)	(8581)	(7030)	(8806)	(9123)	(8505)	(9580)
	Subtotal	5008	5142	4837	4105	2857	3379	2990
Asia and the Pacific								
Country projects		27185	32658	23599	29795	29313	35419	36820
Regional projects		1539	1034	1052	1437	1088	1854	1311
	Subtotal	28724	33692	24651	31232	30401	37073	37931
Europe								
Country projects		3487	3241	2513	3609	3047	3022	2307
Regional projects		16	410	248	49	39	208	318
	Subtotal	3503	3651	2761	3658	3086	3230	2625
Global and interregional projects		8701	7667	8259	9183	8884	9626	12308
	TOTAL	88843	91879	78019	87191	94488	98600	97728

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

TABLE 8. TECHNICAL CO-OPERATION ACTIVITIES PROJECT EXPENDITURE IN 1987
(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	1078	284	105 (84)	174	55	448	2078
UNDP/IFF and cash counterpart	24820	8840	8888 (7686)	31987	2202	28	88844
UNDP/Sis	842	858	382 (98)	837	214	-	2838
UNDP/Special programme resources and special measures	128	-	-	138	-	-	284
UNDP-administered trust funds	308	27	2 (2)	37	-	780	1148
Other trust funds	2478	518	1855 (1872)	740	21	2011	8048
IDF	2810	828	388 (228)	3828	133	8880	18810
UNPDAC	-	882	-	-	-	88	828
Non-UNIDO funds	408	384	(48)	822	-	-	1887
TOTAL	32870	9302	12880 (9860)	37831	2828	12308	87728
----- B By project component and geographical area -----							
Project personnel	18147	8238	8082 (8888)	10888	771	4888	41874
Subcontracts	8424	872	1844 (1788)	8318	281	1404	14387
Fellowships and training	2728	883	278 (184)	9788	828	4880	14818
Equipment	8203	2280	2170 (1838)	14883	888	1184	24470
Miscellaneous	1070	271	188 (142)	888	88	442	2800
TOTAL	32870	9302	12880 (9860)	37831	2828	12308	87728

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 column "Total" since they are already included under "Africa"

TABLE 9 EXPENDITURE OF REGULAR BUDGET AND OPERATIONAL BUDGET IN 1981, BY DEPARTMENT/PROGRAMME COMPONENT AND OBJECT OF EXPENDITURE a)
(In thousands of US dollars)

Department/ Programme component	Staff costs	Consult- ants	Expert group meetings	Other	Total
Policy-making organs	33	-	-	801	834
Executive Direction and Management	2,121	9	37	140	2,307
Programme and Project Development					
Project review and appraisal	1,017	-	-	8	1,028
Area programmes	4,345	3	-	218	4,566
Industrial policy & perspectives	4,724	182	25	283	5,114
Special Programmes and Activities	1,525	-	-	37	1,562
Office of the Deputy Director-General	1,771	-	-	85	1,856
SIDFA and JPO support services	1,436	-	-	382	1,787
Subtotal	13,877	185	25	972	15,039
Industrial Promotion, Consultations and Technology					
Industrial investment	1,387	40	-	108	1,533
System of Consultations	1,914	97	120	193	2,324
Development and transfer of technology	2,244	180	18	181	2,603
Office of the Deputy Director-General	883	-	-	8	891
Subtotal	6,108	297	138	488	7,031
Industrial Operations					
Industrial operations technology	8,108	81	24	181	8,394
Industrial institutions and services	8,128	37	-	183	8,348
Project personnel recruitment	1,014	-	-	(37)	977
Interregional Advisers	402	-	-	88	470
Central Monitoring	518	-	-	10	528
Office of the Deputy Director-General	2,202	-	-	107	2,309
Subtotal	18,387	98	24	487	18,996
External Relations, Public Information, Language and Documentation Services					
External relations	1,342	-	-	274	1,616
Public relations and information	425	-	-	158	583
Secretariat of Policy-making organs	574	-	-	-	574
Languages and Documentation	8,888	-	-	587	9,475
Office of the Deputy Director-General	807	-	-	25	832
Subtotal	9,814	0	0	1,012	10,826
Administration					
Administrative Management Service	108	-	-	(512)	(404)
Personal services	3,189	-	-	522	3,711
Financial services	3,899	-	-	(8)	3,891
General services	6,853	4	-	13,958	20,815
Purchase and contract service	1,054	-	-	1,088	2,142
Electronic data processing and office automation	1,021	-	-	3,088	4,109
Office of the Deputy Director-General	823	-	-	-	823
Subtotal	18,727	4	0	18,149	34,880
Total expenditures	84,857	573	224	21,824	87,478
Other income	-	-	-	-	11,318
GRAND TOTAL	-	-	-	-	78,162

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

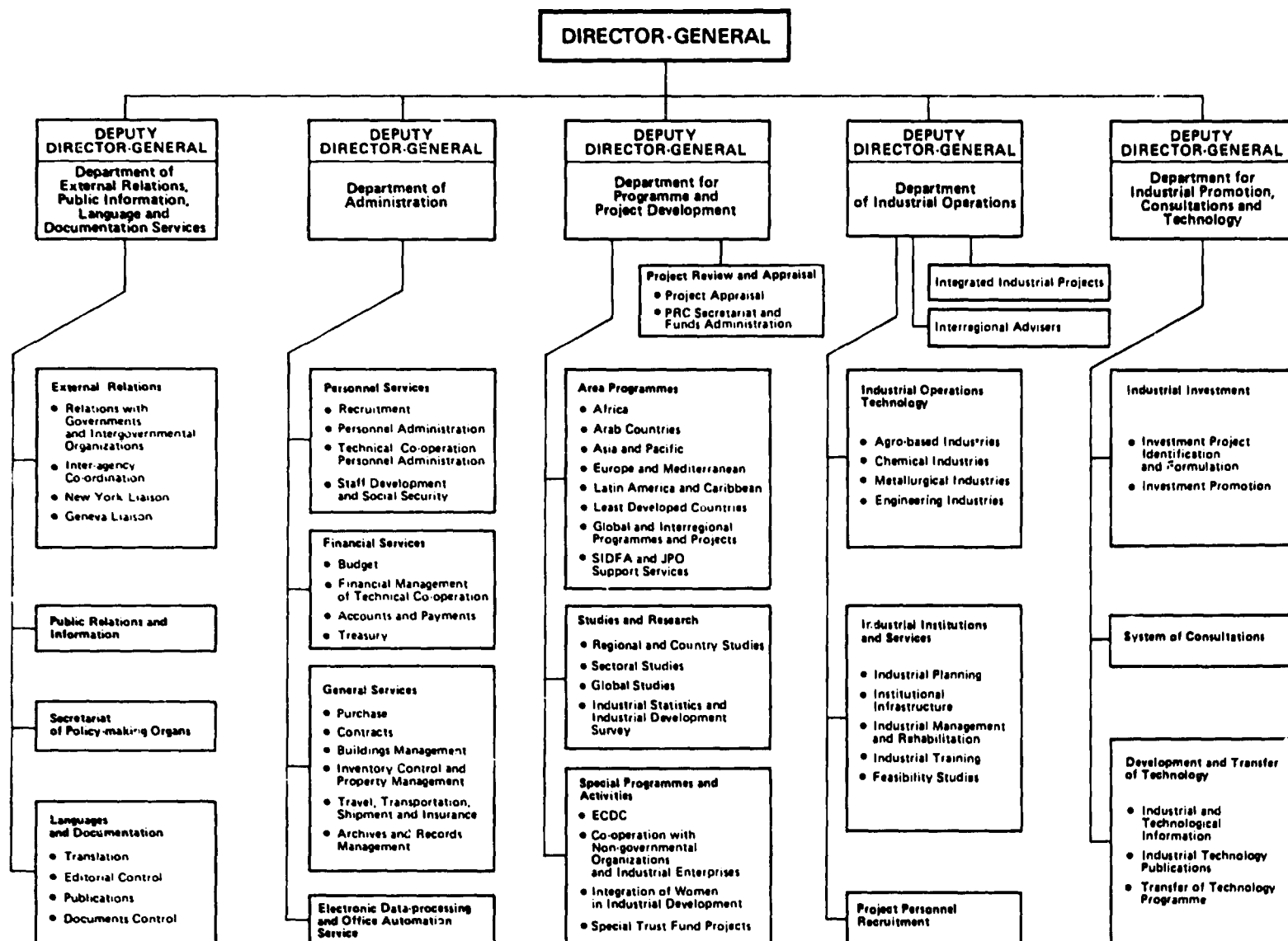
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UNIDO Organization Chart

as at 31 December 1987



APPENDIX B

EXPERT GROUP MEETINGS, SYMPOSIA, SEMINARS, WORKSHOPS, COURSES AND
OTHER MEETINGS OF A NON-TRAINING CHARACTER HELD DURING 1987

Date		Place
OFFICE OF THE DIRECTOR-GENERAL		
9-18 March	Programme and Budget Committee, third session	Vienna Austria
16 March	Industrial Development Board, resumed second session	Vienna Austria
29 June	Programme and Budget Committee, resumed third session	Vienna Austria
30 June - 3 July	Industrial Development Board, third session	Vienna Austria
12 October	Industrial Development Board, resumed third session	Vienna Austria
12 October	Programme and Budget Committee, resumed third session (<u>continued</u>)	Vienna Austria
9-13 November	General Conference, second regular session	Bangkok Thailand
DEPARTMENT FOR PROGRAMME AND PROJECT DEVELOPMENT		
<u>Area Programmes Division</u>		
6-14 November	Workshop on industrialization of the least developed countries	Bangkok Thailand
17-19 November	First regional technical meeting on the regional Europe project RER/87/018: industrial robotics applications	Vienna Austria
<u>Industrial Policy and Perspectives Division</u>		
8-13 March	UNIDO/JUNAC technical group meeting on microelectronics in the capital goods industries of the Andean Group countries	Paipa and Bogotá Colombia
16 June	Human resources in Sri Lanka's industrial development - The current and prospective contribution of women	Colombo Sri Lanka
6-7 July	Workshop on promotion of small- and medium-scale industrial development in the Songkhla Lake basin	Haadyai Thailand
6-8 July	UNIDO/SELA/ECLAC first meeting of Latin American institutions dealing with the capital goods sector	Caracas Venezuela

Date		Place
9-15 September	Seminar on industrial policy and structural adjustment	Seoul Republic of Korea
28-30 September	Seminar on the nursery factory scheme in the development of small-scale enterprises in Malaysia	Kota Bharu Malaysia
14-22 October	UNIDO/Italian Machine Tool Manufacturers Association (UCIMU) seminar on production and use of machine tools in selected developing countries	Milan Italy
16-18 November	ECLAC/UNIDO expert meeting on capital goods industries in Latin America	Santiago de Chile Chile
30 November - 1 December	High-level expert group meeting on policies and strategies for industrial development in Latin America <u>a/</u>	Montevideo Uruguay
<u>Special Programmes and Activities Division</u>		
23-27 February	Workshop on co-operation among developing countries in the field of cement, lime and related industries	Bangkok Thailand
15-18 June	Meeting for the promotion of joint venture among Islamic countries	Istanbul Turkey
31 August - 4 September	Workshop on appropriate technologies and equipment for the metallurgical and metal-processing industries	Katowice Poland
23 September - 7 October	Workshop-cum-study tour on interregional co-operation between Pacific and Caribbean Island countries in the development of small- and medium-scale agro-industries (live marine resources and tropical fruits)	Kingston Jamaica Port-of-Spain Trinidad and Tobago Bridgetown Barbados Cayman Islands St. Lucia
28 September - 4 October	Workshop on co-operation between Bulgarian co-operatives and similar organizations in selected African countries for the promotion of food-processing co-operatives	Sofia Bulgaria
5-7 October	Meeting on co-operative arrangements among developing countries on agricultural machinery <u>b/</u>	Algiers Algeria
12-16 October	Workshop on production of essential and non-essential drugs in African countries	Milan Italy
26-31 October	Seminar on enterprise-to-enterprise co-operation among partners from the People's Republic of China and developed/developing countries	Beijing China
23-27 November	Workshop on railway transportation	Zurich Switzerland

a/ Organized jointly with the Economic Commission for Latin America and the Caribbean.

b/ Organized jointly with Area Programmes Division.

Date		Place
DEPARTMENT OF INDUSTRIAL OPERATIONS		
<u>Industrial Operations Technology Division</u>		
28 September - 1 October	Regional meeting on production and distribution of biologicals for human and veterinary use in Africa	Dakar Senegal
30 November - 5 December	Workshop on small-scale boatbuilding and boat-repair technology for West African countries	Accra Ghana
<u>Industrial Institutions and Services Division</u>		
23-26 March	Evaluation workshop on the national seminars on industrial strategy within the framework of the Industrial Development Decade for Africa	Vienna Austria
28 September - 3 October	Expert group meeting on computer-aided industrial information systems for industrial planning	Riga USSR
6-10 June	Regional African workshop on public industrial enterprises and their environment	Algiers Algeria
DEPARTMENT FOR INDUSTRIAL PROMOTION, CONSULTATIONS AND TECHNOLOGY		
<u>Industrial Investment Division</u>		
19-22 January	Second investors' forum for Bangladesh	Dhaka Bangladesh
17 March	Country presentation meeting - Mauritius	Tokyo Japan
30 March	Country presentation meeting - China	Zurich Switzerland
1-8 April	China/Federal Republic of Germany/UNIDO investment promotion programme	Hanover Federal Republic of Germany
23 April	Country presentation meeting - China	Warsaw Poland
24 April	Country presentation meeting - Sri Lanka	Tokyo Japan
30 April	Country presentation meeting - Sri Lanka	Osaka Japan
8 May	Country presentation meeting - Maldives	Tokyo Japan
25-29 May	Regional forum for identification and promotion of industrial investment projects	Port Louis Mauritius
18 June	Country presentation meeting - China France	Paris

Appendix b

Date		Place
1 July	Country presentation meeting - India	Paris France
7 September	Country presentation meeting - China	Warsaw Poland
9 September	Country presentation meeting - Uganda	Cologne Federal Republic of Germany
15 September	Country presentation meeting - Sri Lanka	Seoul Republic of Korea
20 September	Country presentation meeting - Brazil	Paris France
21 September	Country presentation meeting - Zimbabwe	Warsaw Poland
6 October	Country presentation meeting - Indonesia	Tokyo Japan
7 October	Country presentation meeting - Haiti	Paris France
12 October	Country presentation meeting - Indonesia	Vienna Austria
12-15 October	Forum for promotion of joint ventures with foreign capital participation	Warsaw Poland
14 October	Country presentation meeting - Indonesia	Cologne Federal Republic of Germany
22 October	Country presentation meeting - Indonesia	Toronto Canada
22-23 October	Country presentation meeting - Indonesia	Warsaw Poland
23 October	Country presentation meeting - Indonesia	New York United States of America
2-5 November	Forum for identification and promotion of industrial investment projects for Egypt	Cairo Egypt
4 November	Country presentation meeting - Nepal	Seoul Republic of Korea
16 November	Country presentation meeting - Nepal	Tokyo Japan
16-19 November	Investors' forum on agro-based and related industries in Thailand	Bangkok Thailand
23 November	Country presentation meeting - Costa Rica	Paris France
23-27 November	Investors' forum for Indonesia	Jakarta Indonesia
18 December	Country presentation meeting - Nepal	Lyon France

Date		Place
<u>System of Consultations Division</u>		
12-15 January	Regional meeting on the leather and leather products industry in Africa	Alexandria Egypt
26-29 January	Global preparatory meeting for the first Consultation on the fisheries industry	Mexico City Mexico
23-26 February	UNIDO/SELA regional expert meeting on alternative strategies for non-ferrous metals in Latin America	Caracas Venezuela
18-28 May	Expert group meeting and study tour on standardized small hydropower plants	Hangzhou China
1-5 June	First Consultation on the Fisheries Industry	Gdansk Poland
22-25 June	Global preparatory meeting for the first Consultation on the non-ferrous metals industry	Lisbon Portugal
14-19 September	Second Consultation on the Training of Industrial Manpower, organized in association with the International Labour Organisation	Paris France
5-9 October	Third Consultation on the Pharmaceutical Industry	Madrid Spain
2-6 November	Latin American regional meeting on the agricultural machinery industry	Santiago de Chile Chile
30 November - 4 December	First Consultation on the Non-ferrous Metals Industry	Budapest Hungary
8-10 December	Expert group meeting for the Latin American and Caribbean region, in preparation of the first Consultation on the sugar-cane processing industry	Vienna Austria
8-11 December	Expert group meeting on small- and medium-scale enterprises including co-operatives	San Juan Puerto Rico
<u>Development and Transfer of Technology Division</u>		
7-15 January	Workshop on electromechanical equipment	Hangzhou China
6-10 April	Joint UNIDO/ISTIC workshop on the formulation of an industrial and technological information service system for small- and medium-scale industries of China	Beijing China
19-20 May	Mini technical advisory group meeting of the Asia-Pacific Regional Network for Small Hydropower	Hangzhou China
25-27 June	High-level policy group meeting of the Asia-Pacific regional centre for small hydropower	Hangzhou China

Appendix B

Date		Place
5-7 October	Workshop for heads of Industrial and Technological Information bank (INTIs) sub-network members in Africa on ways and means of co-operation	Dakar Senegal
8-10 October	Second African Technological Information Exchange System (TIES) meeting	Dakar Senegal
26-31 October	Joint UNIDO/UNESCO/KIER (Korean Institute of Energy and Resources) workshop on information network for new and renewable sources of energy and energy conservation in small- and medium-scale industries of Asia and the Pacific region	Daejeon Republic of Korea
26 October - 6 November	Workshop on small hydropower civil works	Hangzhou China
2-5 November	Third meeting of ASEAN network co-ordinators of ASTIS project	Kuala Lumpur Malaysia
21-25 November	Workshop on genetic engineering techniques	Kuwait
5-9 December	Seminar on the role of biotechnology and genetic engineering in Saudi Arabian development	Riyadh Saudi Arabia
7-10 December	Discussion meeting on advanced materials for developing countries	Vienna Austria
8-12 December	Seminar on contract negotiation and consulting services for industrial project promoters	Kigali Rwanda
14-16 December	Meeting of the consultative group on informatics technology for development	Vienna Austria
15-17 December	UNIDO/WHO/UNEP working group on biotechnology safety	Paris France

APPENDIX C

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

(In thousands of US dollars)

Component	Allocation for the biennium 1986-1987 ^{a/}	Deliveries		
		1986	1987	1986- 1987
A. REGULAR PROGRAMME OF TECHNICAL CO-OPERATION (RP)				
Training of developing countries' personnel in various industrial fields				
Individual fellowships	341.4	332.1	(20.9)	311.2
Group training programmes	545.9	211.3	271.0	482.3
Establishment and strengthening of training facilities in developing countries	388.2	60.3	9.6	69.9
Special activities for the least developed among the developing countries	1,503.7	1,017.8	491.1	1,508.9
Co-operation among developing countries	378.4	233.9	413.5	647.4
Consultation with Governments	58.0	36.1	35.2	71.3
TOTAL - RP	3,215.6 =====	1,891.5	1,199.5	3,091.0 =====
B. INDUSTRIAL DEVELOPMENT DECADE FOR AFRICA (IDDA)				
Technical advisory services	760.3	354.6	11.0	365.6
Establishment of pilot and demonstration plants	564.6	402.9	331.5	734.4
Human resources development and related activities	603.6	336.3	119.1	455.4
Industrial institutional infrastructure	363.1	389.3	112.3	501.6
Follow-up to subregional and other programmes	181.4	208.1	220.8	428.9
Preparation of industrial studies	158.8	21.4	58.7	80.1
Promotion of the Decade	68.2	148.6	26.1	174.7
TOTAL - IDDA	2,700.0 =====	1,861.2	879.5	2,740.7 =====

^{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 in October 1986 (see IDB.2/CRP.5 and Industrial Development Board decision IDB.2/Dec.5) and at the end of the biennium.

APPENDIX D

GEOGRAPHICAL DISTRIBUTION OF EXPERTS

(Listed in descending order)

Table 1

1 January to 31 December 1987

Country	Number of appointments	Country	Number of appointments
Poland ^{a/}	293	Algeria	5
United Kingdom	192	Jamaica	5
United States of America	150	Madagascar	5
France	126	Bolivia	4
Germany, Federal Republic of	84	Indonesia	4
India	74	Iran (Islamic Republic of)	4
Hungary	67	Jordan	4
Italy	57	Nepal	4
Austria	48	Tunisia	4
Peru	42	Turkey	4
Czechoslovakia	39	Costa Rica	3
Brazil	37	Morocco	3
Mexico	36	Congo	2
Netherlands	33	Cuba	2
Belgium	32	Guatemala	2
Japan	32	Guinea	2
Canada	29	Guyana	2
Yugoslavia	29	Iraq	2
Spain	27	Lebanon	2
Denmark	24	Malaysia	2
Portugal	20	Mauritius	2
Egypt	19	Nicaragua	2
Argentina	18	Romania	2
Chile	17	Senegal	2
Colombia	17	Stateless	2
Ireland	17	Syrian Arab Republic	2
Sweden	17	Burkina Faso	1
Philippines	16	Cape Verde	1
Cameroon	14	China	1
Finland	14	Democratic People's Republic of Korea	1
Sri Lanka	14	Dominican Republic	1
USSR	14	Ethiopia	1
Venezuela	14	Fiji	1
Australia	13	Ghana	1
Côte d'Ivoire	11	Greece	1
German Democratic Republic	11	Kenya	1
Sudan	11	Liberia	1
New Zealand	10	Mali	1
Norway	10	Montserrat	1
Switzerland	10	Mozambique	1
Togo	9	Niger	1
Bulgaria	8	Nigeria	1
Pakistan	8	Palestine	1
Uganda	8	Rwanda	1
Ecuador	7	Sierra Leone	1
Israel	7	United Republic of Tanzania	1
Somalia	7	Uruguay	1
Republic of Korea	6	Viet Nam	1
Zaire	6	Zambia	1
		TOTAL (98 countries)	1,904

^{a/} The amount of experts includes 148 nationals of Poland, Romania and other States, who were recruited at various levels for large-scale, trust-fund projects in the Libyan Arab Jamahiriya, Nigeria and Yemen. The amount also includes national professional experts.

Table 2
1971 - 1987

Country	Number of appointments	Country	Number of appointments
United Kingdom	1,988	Togo	22
Poland	1,536	Ethiopia	21
United States of America	1,362	Malaysia	20
France	1,223	China	19
India	958	Mali	19
Germany, Federal Republic of	880	Stateless	19
Austria	536	Iran (Islamic Republic of)	18
Belgium	473	Greece	17
Sweden	447	Iraq	15
Italy	436	Jordan	15
Hungary	411	El Salvador	13
Netherlands	351	Mauritius	12
Egypt	343	Nicaragua	12
Yugoslavia	329	Nigeria	11
Spain	262	Cuba	10
Argentina	259	Madagascar	10
Denmark	246	Panama	10
Czechoslovakia	234	Uganda	10
USSR	232	Ghana	9
Canada	226	Lebanon	9
Switzerland	190	Niger	9
Japan	186	Guatemala	8
Chile	175	Haiti	8
Finland	174	Zimbabwe	8
Brazil	168	Somalia	7
Australia	162	Liberia	6
Norway	153	Nepal	6
Mexico	148	Costa Rica	5
Peru	147	Kenya	5
Romania	141	United Republic of Tanzania	5
Israel	124	Benin	4
Ireland	123	Guyana	4
Philippines	113	Rwanda	4
Sri Lanka	109	Thailand	4
Bulgaria	88	Viet Nam	4
Pakistan	87	Guinea	3
Portugal	86	Malta	3
New Zealand	83	Sierra Leone	3
Venezuela	64	Barbados	2
Colombia	55	Burma	2
Algeria	44	Byelorussian SSR	2
German Democratic Republic	44	Congo	2
Côte d'Ivoire	39	Democratic People's Republic of Korea	2
Turkey	38	Honduras	2
Bangladesh	35	Libyan Arab Jamahiriya	2
Tunisia	35	Mauritania	2
Zaire	35	Paraguay	2
Republic of Korea	33	Zambia	2
Indonesia	31	Antigua and Barbuda	1
Syrian Arab Republic	29	Burkina Faso	1
Cameroon	28	Cape Verde	1
Ecuador	25	Cyprus	1
Senegal	25	Dominican Republic	1
Bolivia	24	Fiji	1
Morocco	24	Montserrat	1
Jamaica	23	Mozambique	1
Uruguay	23	Palestine	1
Sudan	22		
		TOTAL (115 countries)	16,281 ^{a/}

^{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 1987

(by geographical area)

Geographical area	Number of countries for which programmes have been approved	Total IPF allocations ----- (in millions of US\$)	Total amount programmed	Allocations for UNIDO projects -----	UNIDO share of amount programmed (percentage)	Number of projects	
						Ongoing	New
Africa	38	879.06	1,333.28	95.87	7.19	39	72
The Americas	41	238.61	496.17	46.78	9.43	26	81
Arab States <u>a/</u>	13	133.95	261.21	27.40	10.49	9	41
(African Arab States) <u>b/</u>	(6)	(97.89)	(200.58)	(16.29)	(8.12)	(3)	(28)
Asia and the Pacific	29	917.52	979.94	213.95	21.83	66	150
Europe	8	34.22	35.39	11.56	32.60	9	41
TOTAL	123	2,105.47	2,905.41	379.27	13.05	146	377

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 1987

(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	1	10	3,560	0.94	3	8	0
Agro-based Industries	15	70	66,970	17.66	17	51	17
Chemical Industries	37	81	86,700	22.86	25	79	14
Metallurgical Industries	9	19	31,820	8.39	9	14	5
Engineering Industries	30	63	73,360	19.34	24	56	13
Industrial Planning	9	19	22,940	6.06	6	14	8
Institutional Infrastructure	23	61	54,060	14.25	12	39	13
Industrial Management and Rehabilitation	6	14	10,630	2.80	7	9	4
Industrial Training	2	16	9,948	2.62	3	13	2
Feasibility Studies	13	19	16,799	4.43	7	21	4
Transfer of Technology	1	1	561	0.15	1	1	0
Industrial and Technological Information	0	2	570	0.15	0	2	0
Others	0	2	1,300	0.34	0	2	0
TOTAL	146	377	379,268	100.00	114	329	80

Table J

Comparison of country programmes approved during June 1985 - June 1987
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 1987)			
	UNIDO projects				UNIDO projects			
	IPF	Amount programmed	Total value	Percentage share of amount programmed	IPF	Amount programmed	Total value	Percentage share of amount programmed
	----(in millions of US\$)----				----(in millions of US\$)----			
Africa (37) b/	720.30	943.58	111.87	11.86	868.86	1,316.41	95.87	7.28
The Americas (37) c/	211.56	333.07	52.19	15.67	235.37	492.00	46.37	9.42
Arab States (13) d/	131.18	282.67	33.63	11.90	133.95	261.21	27.40	10.49
(African Arab States (6) e/	(94.19)	(151.08)	(11.37)	(7.53)	(97.89)	(200.58)	(16.29)	(8.12)
Asia and the Pacific (28) f/	770.56	1,072.89	189.61	17.67	861.96	892.52	200.86	22.50
Europe (8) g/	33.40	56.63	13.31	23.50	34.22	35.39	11.56	32.66
TOTAL (117)	1,772.81	2,537.76	389.24	15.34	2,036.47	2,796.95	365.77	13.08

a/ Excluded from the comparison are the following:

Africa: National liberation movements (first country programme in the fourth cycle).

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

Asia and the Pacific: Indonesia (Due to the time-frame of the second (1979-1983) 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 was 15.31 per cent in the second country programme and 14.97 per cent in the third country programme.)

b/ The 37 countries in Africa comprise: Algeria, Angola, Botswana, Burundi, Cameroon, Central African Republic, Chad, Comoros, Côte d'Ivoire, Djibouti, Egypt, Ethiopia, Gambia, Ghana, Guinea, Guinea-Bissau, Lesotho, Liberia, Madagascar, Malawi, Mali, Mauritania, Mauritius, Morocco, Mozambique, Nigeria, Rwanda, Senegal, Seychelles, Somalia, Swaziland, Togo, Tunisia, United Republic of Tanzania, Zaire, Zambia and Zimbabwe.

c/ The 37 countries and territories in the Americas comprise: Antigua, Argentina, Bahamas, Barbados, Belize, Bolivia, Brazil, British Virgin Islands, Eastern Caribbean States, Cayman Islands, Chile, Colombia, Costa Rica, Cuba, Dominica, Dominican Republic, Ecuador, El Salvador, Grenada, Guatemala, Guyana, Haiti, Honduras, Jamaica, Mexico, Montserrat, Netherlands Antilles, Nicaragua, Panama, Paraguay, Peru, St. Lucia, St. Christopher and Nevis, St. Vincent and the Grenadines, Turks and Caicos Islands, Uruguay and Venezuela.

d/ The 13 Arab States comprise: Algeria, Democratic Yemen, Djibouti, Egypt, Iraq, Kuwait, Morocco, Oman, Saudi Arabia, Somalia, Syrian Arab Republic, Tunisia and United Arab Emirates.

e/ The 6 African Arab States comprise: Algeria, Djibouti, Egypt, Morocco, Somalia and Tunisia (relevant figures are deducted since they are already included under both "Africa" and "Arab States").

f/ The 28 countries in Asia and the Pacific comprise: Bangladesh, Bhutan, Burma, China, Cook Islands, Democratic People's Republic of Korea, Fiji, India, Kiribati, Lao People's Democratic Republic, Malaysia, Mongolia, Nepal, Niue, Pakistan, Papua New Guinea, Philippines, Republic of Korea, Samoa, Singapore, Solomon Islands, Sri Lanka, Thailand, Tokelau, Tonga, Tuvalu, Vanuatu and Viet Nam.

g/ The 8 countries in Europe comprise: Albania, Bulgaria, Cyprus, Hungary, Malta, Poland, Turkey and Yugoslavia.

APPENDIX F

MAJOR STUDIES, REPORTS AND SERIES PUBLICATIONS
ISSUED BY UNIDO IN 1987 a/

SYMBOL	TITLE	LANGUAGE
ID/SER.M/19*	Industry and development No. 19	E
ID/SER.M/20*	Industry and development No. 20	E
ID/SER.M/21*	Industry and development No. 21	E
ID/SER.N/4	Small hydropower series No. 4 Guidelines for the application of small hydraulic turbines	E
ID/320*	Rice-bran: An under-utilized raw material	F S
ID/324	Development and transfer of technology series No. 21. The economic use of aluminium	F S
ID/326	Development and transfer of technology series No. 22. Informatics for industrial development	F S
ID/334*	International comparative advantage in manufacturing: Changing profiles of resources and trade	S
ID/343*	Industry and development: Global report 1986	F
ID/346 (ID/WG.462/11)	Third Consultation on the Agricultural Machinery Industry, Belgrade, Yugoslavia, 29 September - 3 October 1986. Report	A C E F R S
ID/347* (UNIDO/LIB/SER.B/61)	Industrial development abstracts Nos. 15101 - 15400	E (F/R/S introduction)
ID/348*	Industry and development: Global report 1987	E
ID/350 (ID/WG.467/5)	First Consultation on the Fisheries Industry, Gdansk, Poland, 1-5 June 1987. Report	A C E F R S
ID/352 (SPEC.)*	Manual for Arabic Translators, Volume I	A/E
ID/352/Add.1 (SPEC.)*	Manual for Arabic Translators, Volume II	A/E
ID/352/Add.2 (SPEC.)*	Manual for Arabic Translators, Volume III	A/E

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 1987

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

Region/Country	Regular budget XP/XA	UNDP/IPF	SIS	UNDP/special measures	IDF b/ -	Other sources c/ -	Total
Africa							
Benin	(870)	142 581	11 075	-	88 167	-	241 547
Botswana	207	424 654	15 166	-	12 506	18 330	470 929
Burkina Faso	302 069	32 467	13 661	-	53 075	-	401 272
Burundi	-	293 606	38 059	-	2 400	29	334 094
Cape Verde	23 831	370 944	-	-	13 812	-	414 587
Central African Republic	(996)	-	49 964	-	-	-	48 968
Chad	-	676 597	-	-	-	-	676 597
Comoros	(901)	-	1 496	-	-	-	595
Equatorial Guinea	(1 090)	-	-	-	-	-	(1 090)
Ethiopia	48 211	1 941 526	(877)	-	58 119	(75)	2 046 904
Gambia	8 894	104 711	64	-	2 325	(3 385)	112 609
Guinea	12 765	620 831	1 462	-	(82 013)	-	553 045
Guinea-Bissau	-	23 259	158 257	-	15 371	-	196 887
Lesotho	1 712	122 205	(5 605)	-	0	7 887	126 199
Malawi	(151)	8 485	-	73 158	59 900	-	141 392
Mali	(18 375)	618 051	6 633	-	138 352	141 024	865 085
Mauritania	-	35 995	0	-	-	-	35 995
Niger	-	389 007	35 092	-	-	-	424 099
Rwanda	8 340	534 701	-	-	36 718	-	579 759
Sao Tomé and Príncipe	-	-	-	-	4 631	-	4 631
Sierra Leone	-	354 148	(133)	-	-	18 807	372 822
Togo	62	446 830	(11 277)	69 011	-	43 094	547 720
Uganda	-	585 450	-	-	227	35 109	620 786
United Republic of Tanzania	136 363	226 197	83 457	-	466 258	17 339	929 614
Subtotal	520 125	7 958 245	397 094	142 169	809 848	278 165	10 165 640
Americas							
Haiti	-	38 094	42 708	-	(5 007)	-	75 795
Arab States							
Democratic Yemen	15 992	154 398	143 499	-	-	-	313 889
Djibouti	(9 445)	-	(280)	-	-	-	(9 725)
Somalia	-	473 145	18 508	-	40 459	6 485	538 597
Sudan	(376)	47 914	(655)	-	65 828	137 714	250 425
Yemen Arab Republic	3 473	26 694	194	-	-	94 760	125 127
Subtotal	9 644	702 151	161 266	-	106 287	238 965	1 218 313
Asia and the Pacific							
Afghanistan	(3 468)	-	2 879	-	-	-	(589)
Bangladesh	-	1 609 099	-	-	-	51 340	1 660 439
Bhutan	9 028	(834 857)	18 981	137 178	1 029 724	-	360 054
Kiribati	-	19 134	-	-	-	-	19 134
Lao People's Democratic Republic	-	82 584	-	-	-	-	82 584
Maldives	-	116 195	-	-	-	-	116 195
Nepal	-	780 499	31 099	5 652	8 618	57 019	882 887
Samoa	-	-	-	-	-	-	-
Tuvalu	-	-	-	-	-	-	-
Vanuatu	-	113 652	83 770	-	16 656	-	214 078
Subtotal	5 560	1 886 306	136 729	142 830	1 054 998	108 359	3 334 782
Regional, interregional and global projects especially designed for LDCs							
	62 955	2 457	-	-	354 337	-	419 749
TOTAL	598 284	10 587 253	737 797	284 999	2 380 463	625 489	15 214 285

a/ The table does not include regional, interregional and global projects or individual fellowships and group training programmes in which LDCs have been involved together with other developing countries; such activities are usually financed from non-least developed countries funds.

b/ Excluding 14 per cent overhead costs.

c/ Other sources include trust funds, United Nations Capital Development Fund and United Nations Financing System for Science and Technology for Development.

Appendix G

Table 2

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

Region/Country	Regular budget XP/XA	UNDP/IPF	SIS	UNDP/special measures	IDF b/	Other sources c/	Total
Africa							
Benin	-	84 800	-	-	5 000	-	89 800
Botswana	-	464 100	15 000	-	15 000	45 654	539 754
Burkina Faso	-	-	112 000	-	19 000	-	131 000
Burundi	-	86 500	55 200	-	2 400	-	144 100
Cape Verde	1 865	-	-	-	31 090	-	32 955
Central African Republic	-	-	-	-	-	-	-
Chad	-	-	-	-	-	-	-
Comoros	-	-	-	-	-	-	-
Equatorial Guinea	-	-	-	-	-	-	-
Ethiopia	-	-	71 200	-	-	-	71 200
Gambia	-	27 000	-	-	-	-	27 000
Guinea	-	4 300	10 900	-	17 200	-	32 400
Guinea-Bissau	-	313 464	102 020	-	-	-	415 484
Lesotho	-	-	-	-	-	-	-
Malawi	-	-	-	-	178 000	-	178 000
Mali	-	691 673	50 600	-	106 100	-	848 373
Mauritania	-	-	-	-	-	-	-
Niger	-	-	11 000	-	-	-	11 000
Rwanda	-	-	-	-	37 500	-	37 500
Sao Tomé and Príncipe	-	12 000	-	-	5 000	-	17 000
Sierra Leone	-	729 064	-	-	32 500	-	761 564
Togo	-	34 800	-	-	-	-	34 800
Uganda	-	1 351 700	-	-	-	-	1 351 700
United Republic of Tanzania	-	14 700	36 336	-	-	-	51 036
Subtotal	1 865	3 814 101	464 256	-	448 790	45 654	4 774 606
Americas							
Haiti	-	-	-	-	-	-	-
Arab States							
Democratic Yemen	33 752	-	124 950	-	-	-	158 702
Djibouti	-	-	-	-	-	-	-
Somalia	24 000	1 537 400	63 000	-	38 166	-	1 662 566
Sudan	-	-	-	-	74 950	-	74 950
Yemen Arab Republic	5 780	24 300	-	-	-	181 804	211 884
Subtotal	63 532	1 561 700	187 950	-	113 116	181 804	2 108 102
Asia and the Pacific							
Afghanistan	-	-	-	-	-	-	-
Bangladesh	-	-	-	-	-	61 459	61 459
Bhutan	-	-	58 000	-	1 200 860	-	1 324 860
Kiribati	-	-	-	-	-	-	-
Laos People's Democratic Republic	-	-	-	-	-	-	-
Maldives	-	-	-	-	-	-	-
Nepal	-	-	-	-	59 700	-	59 700
Samoa	-	-	-	-	-	-	-
Tuvalu	-	-	-	-	-	-	-
Vanuatu	-	-	-	-	-	-	-
Subtotal	-	-	58 000	-	1 320 560	61 459	1 446 019
Regional, interregional and global projects especially designed for LDCs	1	-	-	-	491 672	-	491 673
TOTAL	65 398	5 375 801	710 206	-	2 380 138	288 917	8 820 460

a/ The table does not include regional, interregional and global projects or individual fellowships and group training programmes in which LDCs have been involved together with other developing countries; such activities are usually financed from non-least developed countries funds.

b/ Excluding 14 per cent overhead costs.

c/ Other sources include trust funds.

Table 3

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

Region/Country	Regular budget XP/XA	UNDP/IPF	SIS	UNDP/special measures	IDF b/	Other sources c/	Total
Africa							
Burkina Faso	397	662 267	15 000	-	8 496	-	140 761
Burundi	(3 393)	(1 028)	110 368	-	(27 007)	-	78 960
Cape Verde	(36)	377 087	52 829	-	2 400	(6 505)	143 237
Central African Republic	(996)	-	-	-	31 090	-	408 141
Chad	-	52 796	-	-	-	-	(996)
Comoros	(2 178)	-	-	-	-	(22 178)	52 796
Equatorial Guinea	(2 087)	-	-	-	-	-	(24 356)
Ethiopia	(3 801)	6 192 989	70 593	-	21 286	10 128	(2 087)
Gambia	(2 702)	28 146	(10 537)	-	(51 572)	(6 105)	0 291 195
Guinea	6 344	4 373	(87 999)	(5 744)	(78 906)	(3 905)	(42 770)
Guinea-Bissau	-	313 464	102 658	-	(15 961)	-	(105 837)
Lesotho	(241)	38 967	(6 816)	-	-	-	400 161
Malawi	(1 930)	5 080	-	-	178 000	-	31 890
Mali	5 762	822 953	60 127	-	183 108	15 825	181 150
Mauritania	-	(833)	-	-	(24 165)	-	1 085 775
Niger	-	39 588	5 846	(14 980)	-	-	(24 998)
Rwanda	565	70 016	(5 510)	-	37 500	-	30 454
Sao Tomé and Príncipe	-	12 000	-	-	5 000	(551)	102 571
Sierra Leone	(300)	740 326	900	-	(82 550)	-	16 449
Togo	(4 879)	337 963	(7 806)	780	(15 878)	-	658 376
Uganda	-	1 661 807	-	-	230	(10 039)	310 160
United Republic of Tanzania	(13 071)	29 028	1 416	-	(6 892)	1 794	1 651 998
Subtotal	(22 546)	11 614 175	301 069	(19 944)	179 177	22 118	12 074 069
Americas							
Haiti	-	14 333	-	-	-	-	14 333
Arab States							
Democratic Yemen	33 752	23 784	130 490	-	(711)	-	187 315
Djibouti	(9 445)	(23 133)	(1 453)	-	-	-	(34 031)
Somalia	68 954	1 585 932	28 292	-	90 666	(6 506)	1 767 338
Sudan	-	32 564	(5)	-	76 950	39 543	147 057
Yemen Arab Republic	5 780	24 079	(2 000)	-	-	181 804	209 163
Subtotal	99 041	1 643 226	156 824	-	166 905	214 846	2 276 842
Asia and the Pacific							
Afghanistan	(2 593)	-	(3 965)	-	-	-	(6 558)
Bangladesh	-	(254 318)	-	-	(108 435)	(178 018)	(540 771)
Bhutan	3 721	156 268	58 000	-	1 266 860	-	1 484 849
Kiribati	-	(79)	-	-	-	-	(79)
Lao People's Democratic Republic	-	(2 755)	-	-	-	-	(2 755)
Maldives	-	13 725	-	-	-	-	13 725
Nepal	-	55 031	-	-	22 855	-	77 886
Samoa	-	-	-	-	-	-	-
Tuvalu	-	-	-	-	-	-	-
Vanuatu	-	1 287	31 318	-	750	-	33 355
Subtotal	1 128	(30 841)	85 373	-	1 182 030	(178 018)	1 059 672
Regional, interregional and global projects especially designed for LDCs							
	(23 275)	-	-	-	460 766	-	437 491
TOTAL	54 348	13 240 893	541 266	(19 944)	1 986 878	28 946	15 862 387

a/ The table does not include regional, interregional and global projects or individual fellowships and group training programmes in which LDCs have been involved together with other developing countries; such activities are usually financed from non-least developed countries funds.

b/ Excluding 14 per cent overhead costs.

c/ Other sources include trust funds, United Nations Capital Development Fund, and United Nations Financing System for Science and Technology for Development.

APPENDIX H

INDUSTRIAL DEVELOPMENT FUND

Table 1

UNIDF/IDF statement of pledges and receipts since 1978, as at 31 December 1987

(in US dollars)

Country/ Organization	Debit (credit) balances brought forward from UNIDF	Adjust- ment to prior pledges	IDF pledges for			Collec- tions in 1986-1987	Exchange adjust- ments	Unpaid balance	Advances by	rs
			1986	1987	1988 and future years					
<u>General-purpose convertible</u>										
Afghanistan	1 500	-	1 500	-	-	3 000	-	-	-	-
Algeria	-	-	-	-	25 000	-	-	25 000	-	-
Angola	10 000	-	-	-	-	10 000	-	-	-	-
Argentina	-	150 000	-	-	-	149 990	10	-	-	-
Austria	-	-	57 143	70 423	81 967	152 390	-29 814	86 957	-	-
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	1 000	14 313	-	4 000	-	-
Brazil	15 000	-	15 000	-	-	30 000	-	-	-	-
Burkina Faso	-	-	-	-	6 601	-	-466	7 067	-	-
Cameroon	-	-	-	2 985	-	-	-549	3 534	-	-
Chile	-	-	10 000	10 000	-	20 000	-	-	-	-
Colombia	1 425	40	5 700	5 779	5 700	12 944	-	5 700	-	-
Congo	11 426	-	-	-	-	3 401	76	7 949	-	-
Costa Rica	8 080	-	10 000	-	10 000	18 279	-	9 801	-	-
Cyprus	-	-	1 852	2 335	-	4 495	-308	-	-	-
Democratic People's Republic of Korea	-	-	21 186	22 321	-	43 507	-	-	-	-
Democratic Yemen	-	-	4 400	-	-	-	-	4 400	-	-
Dominica	-	-	1 852	-	-	1 840	12	-	-	-
Ecuador	5 440	-	6 500	6 500	-	6 637	-	11 803	-	-
Egypt	-	-	-	2 000	-	2 000	-	-	-	-
Ethiopia	-	-	1 111	-	-	1 111	-	-	-	-
Fiji	-	-	1 009	-	-	-	280	729	-	-
Ghana	-	-	-	-	5 000	-	-	5 000	-	-
Greece	36 000	-	-	-	-	36 000	-	-	-	-
German Democratic Republic	-	-	-	18 736	-	18 736	-	-	-	-

Table 1 (continued)

Country/ Organization	Debit (credit) balances brought forward from UNIDF	Adjust- ment to prior pledges	IDF pledges for		1988 and future years	Collec- tions in 1986-1987	Exchange adjust- ments	Unpaid balance	Advances by donors
			1986	1987					
<u>General-purpose convertible (continued)</u>									
Guatemala	-	-	10 000	10 000	-	5 000	-	15 000	-
Guinea	-	-108 600	-	-	-	-108 600	-	-	-
Guyana	723	-	1 184	-	-	1 184	422	301	-
Haiti	-	-	-	-	5 000	-	-	5 000	-
Honduras	-	509	1 000	-	-	1 509	-	-	-
India	500 000	-	250 000	250 000	250 000	750 000	-	500 000	-
Indonesia	-	-	50 000	-	-	50 000	-	-	-
Iraq	161 291	-	-	-	-	-	-	161 291	-
Jamaica	4 000	-	-	4 000	-	8 000	-	-	-
Kenya	10 000	-	14 110	-	13 529	-	581	37 058	-
Kuwait	-	-	75 000	75 000	-	-	-	150 000	-
Lao People's Democratic Republic	1 500	-	1 500	-	-	1 500	-	1 500	-
Lesotho	-	1 308	1 477	1 478	-	4 104	159	-	-
Luxembourg	-	-	7 392	9 524	10 568	17 674	-1 717	11 527	-
Madagascar	-	-	1 661	1 391	-	1 385	854	813	-
Malawi	-	-	3 321	2 051	1 794	3 148	226	3 792	-
Malaysia	450	-	20 000	20 000	20 000	40 450	-	20 000	-
Mali	2 611	-	-	-	-	-	-923	3 534	-
Mauritius	-	-	699	759	1 000	786	-131	1 803	-
Mexico	-	4 503	15 000	-	-	4 503	-	15 000	-
Mongolia	-	-	2 162	2 402	2 588	4 583	-19	2 588	-
Morocco	5 037	5 010	5 000	-	-	10 020	-1 301	6 328	-
Mozambique	4 925	-	5 063	-	-	5 563	4 425	-	-
Nepal	-	-	700	700	-	1 400	-	-	-
Nigeria	50 000	-	-	-	-	-	-	50 000	-
Oman	12 000	-	12 000	-	-	12 000	-	12 000	-
Pakistan	-	-	72 327	67 967	-	67 967	5 387	65 940	-
Panama	-	-	2 000	2 000	-	2 000	-	2 000	-
Papua New Guinea	-	-	12 871	-	-	-	-1 902	14 773	-
Paraguay	30 000	-	-	-	-	24 000	-	6 000	-
Peru	25 000	-	-	-	-	5 000	-	20 000	-
Philippines	6 006	-	10 000	-	5 000	5 108	-	15 898	-
Portugal	-	-	15 000	15 000	-	30 000	-	-	-
Republic of Korea	-	-	28 000	28 000	30 000	56 000	-	30 000	-
Rwanda	-	-	4 000	4 000	-	8 000	-	-	-

Table 1 (continued)

Country/ Organization	Debit (credit) balances brought forward from UNIDF	Adjust- ment to prior pledges	IDF pledges for			Collec- tions in 1986-1987	Exchange adjust- ments	Unpaid balance	Advances by donors
			1986	1987	1988 and future years				
<u>General-purpose convertible (continued)</u>									
Saudi Arabia	-	-	1 000 000	1 000 000	-	1 000 000	-	1 000 000	-
Senegal	29 113	-	2 000	2 000	-	20 900	-	12 213	-
Sierra Leone	94	3 184	4 380	883	-	8 539	2	-	-
Somalia	2 467	-	-	-	-	-	-	2 467	-
Sri Lanka	-	-	3 000	3 000	3 333	5 964	36	3 333	-
Sudan	102 712	-	-	-	-	-	-	102 712	-
Suriname	2 000	-	-	-	-	-	-	2 000	-
Swaziland	1 532	1 802	1 498	-	1 970	5 745	-973	2 030	-
Syrian Arab Republic	-	5 372	2 149	2 149	-	9 670	-	-	-
Thailand	-	-	19 925	20 623	-	41 087	-539	-	-
Togo	3 917	-	1 493	1 506	1 650	5 838	-800	3 534	-
Trinidad and Tobago	-	8 375	13 400	13 400	-	36 850	-1 675	-	-
Tunisia	-	-	24 220	22 105	-	44 210	2 115	-	-
Uganda	1 000	1 000	3 000	3 000	3 000	2 000	-	9 000	-
United Republic of Tanzania	-	-	1 212	649	1 666	2 046	624	857	-
Venezuela	-	-	11 467	-	-	11 467	-	-	-
Zaire	3 000	-	3 000	-	100 000	-	-	106 000	-
Zambia	517	-	2 342	4 707	-	7 049	135	382	-
Zimbabwe	-	8 075	7 879	9 175	-	15 954	385	8 790	-
Organizations									
Computech Engineering Services	-	-	30 000	-	-	30 000	-	-	-
Subtotal	1 055 766	80 578	1 927 868	1 721 968	589 533	2 822 697	-24 388	2 577 404	-

Table 1 (continued)

Country/ Organization	Debit (credit) balances brought forward from UNIDF	Adjust- ment to prior pledges	IDF pledges for			Collec- tions in 1986-1987	Exchange adjust- ments	Unpaid balance	Advances by donors
			1986	1987	1988 and future years				
General-purpose non-convertible									
Bhutan	1 320	-	-	-	-	1 320	-	-	-
Bulgaria	-	-	100 000	101 626	95 420	201 690	-64	95 420	-
China	-	-	109 716	108 401	-	217 535	584	-	-
Cuba	-	-	23 890	26 482	27 167	51 906	-1 534	27 167	-
Egypt	72 492	-	-	-	-	72 492	-	-	-
German Democratic Republic	-	-	121 600	150 495	222 989	308 968	-49 035	235 151	-
Hungary	-	-	84 211	92 879	134 831	182 838	4 083	125 000	-
India	-	-	250 000	250 000	250 000	250 000	-	500 000	-
Poland	-	-	137 931	189 711	106 897	306 100	28 439	100 000	-
Turkey	6 011	-67 160	-	-	-	-11 361	-49 788	-	-
Union of Soviet Socialist Republics	-	-	654 450	968 935	1 043 339	1 702 196	-115 205	1 079 733	-
Viet Nam	1 000	-	-	-	-	1 000	-	-	-
Yugoslavia	1 053	-	116 505	203 046	193 664	275 277	101 645	137 346	-
Subtotal	81 876	-67 160	1 598 305	2 091 575	2 074 307	3 559 961	-80 875	2 299 817	-
Total general-purpose	1 137 642	13 418	3 526 173	3 313 543	2 663 840	6 382 658	-105 263	4 877 221	-
Special-purpose convertible									
Argentina	-	-	-	-	-	60 000	-	-	-60 000
Australia	-68 815	-	152 382	96 396	-	166 523	-	13 440	-
Austria	-121 788	-	759 547	789 652	946 644	1 679 416	-	694 639	-
Belgium	-480 520	-	367 644	576 886	332 667	648 649	-	148 028	-
Brazil	-	-	-	-	-	15 000	-	-	-15 000
China	-289 639	-	177 124	262 485	-	570 000	-	-	-420 030
Côte d'Ivoire	108 765	-	-	-	-	-	-	108 765	-
Democratic Yemen	-2 474	-	2 418	56	-	-	-	-	-
Denmark	-	-	4 719	-	-	5 029	-	-	-310
Egypt	-190 893	-	148 713	157 459	2 260	-	-	117 539	-
Finland	-259 801	-	238 650	90 401	-	1 375 841	-	-	-1 306 591
France	-817 302	-	1 103 172	1 861 216	598 934	6 999 251	-	-	-4 253 231

Table 1 (continued)

Country/ Organization	Debit (credit) balances brought forward from UNIDF	Adjust- ment to prior pledges	IDF pledges for			Collec- tions in 1986-1987	Exchange adjust- ments	Unpaid balance	Advances by donors
			1986	1987	1988 and future years				
<u>Special-purpose convertible (continued)</u>									
German Democratic Republic	-95 802	-	-	28 928	-	213 028	-	-	-279 902
Germany, Federal Republic of	-1 429 443	-	2 769 882	6 147 647	6 291 048	7 708 502	-	6 070 632	-
Hungary	5 597	-	-740	123	-	-	-	4 980	-
India	79 685	-	213 427	64 742	24 578	550 000	-	-	-167 568
Italy	-597 640	-	1 121 394	2 894 457	4 915 398	5 756 468	-	2 577 141	-
Japan	-662 483	-	1 087 822	1 434 701	668 322	1 599 617	-	928 745	-
Malta	31 628	-	-	-	-	-	-	31 628	-
Netherlands	-292 528	-	133 342	307 292	419 795	160 000	-	407 901	-
Norway	-282	-	-	-	-	-	-	-	-282
Republic of Korea	-	-	-	98 885	244 775	100 000	-	243 660	-
Spain	-38 245	-	36 089	-	-	-	-	-	-2 156
Sweden	72 067	-	136 201	147 448	196 455	135 000	-	417 171	-
Switzerland	-1 608 536	-	479 516	2 097 029	1 125 036	1 055 260	-	1 037 785	-
United Kingdom of Great Britain and Northern Ireland	-150 310	-	556 825	779 482	77 162	1 163 359	-	99 800	-
Yugoslavia	-1 041	-	-	-	-	-	-	-	-1 041
Organizations									
Arab Industrial Development Organization, Iraq	-19 877	-	-	20 001	-	-20 000	-	20 124	-
African Institute for Higher Technical Training and Research, Kenya	1 253	-	-5 564	-	-	-	-	-4 311	-
Banque Ouest Africaine de Dev. (BOAD), Togo	-	-	2 800	28	-	2 800	-	28	-
Egyptian Iron and Steel Company	-10 576	-	5 863	-	-	-	-	-	-4 713
Kuwait Institute for Higher Technical Training and Research	-48 229	-	21 253	53 141	-	-	-	26 165	-

Table 1 (continued)

Country/ Organization	Debit (credit) balances brought forward from UNIDF	Adjust- ment to prior pledges	IDF pledges for				Exchange adjust- ments	Unpaid balance	Advances by donors
			1986	1987	1988 and future years	Collec- tions in 1986-1987			
Special-purpose convertible (continued)									
S.G.des Eaux Minerales de Vittel, France	-	-	17 224	9 559	-	25 554	-	1 229	-
Nobel Chematur, Sweden	-	-	9 040	-	-	9 040	-	-	-
Apple Computer, United States of America	-	-	-	-	33 900	-	-	33 900	-
Subtotal	-6 887 229	-	9 538 743	17 918 014	15 876 974	29 978 337	-	12 978 989	-6 510 824
Special-purpose non-convertible									
Bulgaria	-	-	-	10 640	-	-	-	10 640	-
China	-295 203	-	-	186 336	-	-	-	-	-108 867
Czechoslovakia	-230 514	-	189 061	435 746	30 851	627 267	-	-	-202 123
Egypt	-	-	-2 789	-3 543	-	-	-	-6 332	-
German Democratic Republic	-399 396	-	-	374 137	-	803 196	-	-	-828 455
Hungary	-48 283	-	73 492	17 743	70 446	55 285	-	58 113	-
India	-194 500	-	19 290	-2 789	-	250 000	-	-	-427 999
Poland	21 117	-	94 130	314 867	439 821	201 172	-	668 769	-
Romania	-	-	-	65 324	-	-	-	65 324	-
Turkey	-210 369	-	117 915	247 200	-	449 332	-	-	-294 586
Yugoslavia	-298 897	-	-	-	-	-	-	-	-298 897
Organizations Egyptian Iron and Steel Company	-26 747	-	-5 195	-	-	-	-	-	-31 942
Subtotal	-1 682 792	-	485 910	1 645 661	541 118	2 386 252	-	796 514	-2 192 869
Total special-purpose	-8 570 021	-	10 024 653	19 563 675	16 418 092	32 364 589	-	13 775 503	-8 703 693
GRAND TOTAL	-7 432 379	13 418	13 550 826	23 377 218	19 081 932	38 747 247	-105 263	18 652 724	-8 703 693

Table 2

Status of resources of the Industrial Development Fund as at 31 December 1987

(In thousands of US dollars)

	Convertible		Non-convertible	Total
	General-purpose	Special-purpose		
Available for programming				
Balance from UNIDF <u>a/</u>	4 590	-	1 896	6 486
Pledges, 1986-1987	4 180	27 795	6 636	38 521
Pledges, 1988 and future	-	22 406	4 469	26 875
Exchange adjustments	31	2 961	(462)	2 530
TOTAL AVAILABLE	8 801	53 072	12 539	74 412
Approvals				
Projects				
Expenditure, 1986-1987	3 740	20 704	5 363	29 814
Commitments, 1988 and future	162	4 583	79	4 824
Not yet implemented	3 436	13 297	1 562	16 295
Subtotal	7 344	38 584	7 004	52 932
Support costs, 1986-1987				
General-purpose convertible	467	487	-	-
Special-purpose convertible	4	2 530	-	2 534
Non-convertible <u>b/</u>	662	35	-	697
Subtotal	1 153	2 565	-	3 717
Reserve for support costs, 1988 and future				
General-purpose convertible	468	-	-	468
Special-purpose convertible	-	2 181	-	2 181
Non-convertible <u>b/</u>	210	4	-	214
Subtotal	678	2 185	-	2 863
TOTAL APPROVALS	9 175	43 334	7 004	59 513
PROGRAMMABLE BALANCE	(374) <u>c/</u>	9 738	5 535	14 899
Cash position				
Balance from UNIDF	4 366	9 324	3 400	17 290
Contributions received	2 757	29 978	6 012	38 747
Interest and other income	3 071	2 928	(202)	5 797
Subtotal	10 194	42 430	9 210	61 834
Disbursements, 1986-1987 (including support costs)	4 187	21 859	5 793	31 839
CASH BALANCE	6 007	20 571	3 417	29 995
Unliquidated obligations, 1987 and prior	1 022	4 047	1 154	6 223
Commitments, 1988 and future	162	4 583	79	4 824
Reserve for support costs, 1988 and future	678	2 185	-	2 863
Residual value of projects	3 436	13 297	1 562	18 295
TOTAL COMMITMENTS	5 298	24 112	2 795	32 205
UNCOMMITTED CASH BALANCE	709 <u>c/</u>	(3 541)	622	(2 210)

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.c/ Against which has been established the operational reserve totalling \$0.550 million.

Table 3

Cumulative list of projects approved for financing under UNIDF/IDF,
classified according to priority area, as at 31 December 1987

UNIDP/IDF priority area	Number of projects	Special-purpose convertible (excluding overheads) (in US dollars)	General-purpose convertible (in US dollars)	Special/general-purpose non-convertible (US dollar equivalent)	Total (in US dollars)
Special measures for industrial development of the least developed countries	128	6 272 838	3 320 292	1 892 175	11 485 305
Transfer and adaptation of technology and development of appropriate technology and industrial information	335	17 037 749	6 765 012	1 815 948	25 618 709
Economic and technical co-operation among developing countries	114	585 231	3 681 062	1 540 154	5 806 447
Group training and strengthening industrial training institutions in developing countries	652	17 728 804	4 606 592	15 600 076	37 935 472
Industrial institutional infrastructure	84	2 979 301	2 004 174	422 493	5 405 968
Industries processing local natural resources including export-oriented industries	125	10 281 078	2 148 541	533 337	12 962 956
Industries satisfying basic needs and support to rural industries	79	4 275 636	1 867 602	338 189	6 481 427
Promotional activities	207	23 691 013	3 839 824	1 377 781	28 908 618
Other activities	56	572 974	2 168 630	134 902	2 876 506
TOTAL	1 780	83 424 624	30 401 729	23 655 055	137 481 408

APPENDIX I

TRAINING ACTIVITIES IN 1987 ^{a/}

Table 1

In-plant group training programmes in 1987

Field of study	Type of programme				Number of participants			
	National	Regional	Inter-regional	Host country	All developing countries	of which		
						LDCs	Female	African participants
Plastics technology	-	-	x	Austria	19	0	3	5
Man-made fibres	-	-	x	Austria	9	4	1	6
Mould making	-	-	x	Austria	5	3	-	2
Cotton textile industry	-	x	-	Belgium	12	8	-	12
Maintenance - small/medium ships	-	-	x	Belgium	17	5	1	4
Maintenance - railway	-	x	-	Belgium/Gabon	11	5	-	11
Diesel engines	-	-	x	China	15	5	-	7
Agricultural machinery	-	-	x	China	14	4	-	8
Maintenance - textile machinery	-	-	x	China	14	5	-	3
Diesel engines	-	-	x	Czechoslovakia	16	-	1	3
Training of trainers - foundry industry	-	-	x	Poland	11	3	-	2
Reconditioning of spare parts	-	-	x	Romania	12	2	-	3
Iron and steel industry	-	-	x	Turkey	13	4	-	2
Beet and cane sugar industry	-	-	x	Turkey	10	4	-	4
Small-scale foundry operations	-	-	x	Turkey	10	5	-	0
Cement industry ^{b/}	-	-	x	Turkey	22	8	-	16
Food processing	-	-	x	Turkey	9	5	1	8
Maintenance and repair - railway	-	x	-	United Kingdom/Kenya	15	5	-	15
Rice processing	-	-	x	USSR	15	2	1	2
Grain milling and storage	-	-	x	USSR	15	3	1	7
Metalworking industry ^{b/}	-	-	x	USSR	30	8	-	4
Fertilizer industry	-	-	x	USSR	13	2	-	3
Electric welding ^{b/}	-	-	x	USSR	35	4	-	13
Iron and steel ^{b/}	-	-	x	USSR	34	9	-	10
Industrial information	-	-	x	USSR	15	0	4	0
Management - agro-industrial enterprises	-	-	x	Yugoslavia	14	2	3	5
Maintenance engineering	-	x	-	Zimbabwe	20	7	-	20
TOTAL					425	124	16	187

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

^{b/} Two programmes carried out in 1987.

Table 2 a/
Other group training programmes in 1987

Field of study	Type of programme			Host country	Number of participants			
	National	Regional	Inter-regional		All developing countries	of which		
						LDCs	Female	African participants
Fertilizer plant maintenance	x	-	-	Austria	17	-	-	-
Mini hydropower development	-	-	x	Austria	17	14	-	14
Financial analysis and COMFAR application	x	-	-	Bangladesh	12	12	-	-
Management - air/water pollution	-	-	x	Belgium	29	4	8	7
Pollution/waste treatment - textiles	-	-	x	Belgium	11	5	1	11
Financial analysis and COMFAR application	x	-	-	Benin	12	12	1	12
Management - medium-size industrial enterprises	-	x	-	Bulgaria	16	14	1	15
Industrial maintenance	x	-	-	Cameroon	22	-	-	22
Preparation/evaluation of feasibility studies	x	-	-	China	96	96	20	-
CAD/CAM applications - basic engineering industries	-	-	x	Czechoslovakia	12	-	2	2
Petroleum refineries	-	-	x	France	16	1	-	4
Pharmaceutical technologies	-	x	-	France	21	4	4	21
Management - quality control	-	x	-	France	10	-	-	10
Pesticide formulation	-	-	x	German Democratic Republic	19	3	7	8
Industrial planning	-	-	x	German Democratic Republic	25	7	5	7
Printing industry	-	-	x	German Democratic Republic	19	4	2	7
Financial analysis and COMFAR application	-	x	-	Germany, Federal Republic of	22	6	2	22
Project preparation, evaluation and financing	-	-	x	Germany, Federal Republic of	20	4	4	8
Project preparation, evaluation and financing	-	-	x	Germany, Federal Republic of	21	5	6	9
Instrumentation policies with special emphasis on repair/maintenance	-	-	x	Hungary	20	1	-	7
Classification of low-grade coals	-	x	-	Hungary	20	-	-	-
Metallurgical industries	-	x	-	Hungary	18	10	-	18
R + D - pesticide formulation	-	x	-	India	10	-	1	-
Quality control - pesticide formulation	-	x	-	India	9	-	2	-
Tyre and rubber technology	-	-	x	Iran, Islamic Republic of	21	1	-	2
Financial analysis and COMFAR application	-	x	-	Iraq	9	-	4	-

Table 2 a/(continued)

Field of study	Type of programme				Number of participants			
	National	Regional	Inter-regional	Host country	All developing countries	of which		
						LDCs	Female	African participants
Management - industrial co-operatives	-	x	-	Italy/Poland	15	10	1	15
Industrial planning	-	-	x	Japan	7	-	3	1
Quality improvement - industrial products	-	-	x	Malaysia	22	1	3	3
Industrialized building systems	-	x	-	Malaysia	11	2	2	-
Small-scale industry consultancy	-	-	x	Philippines	13	8	1	3
Power plant design	-	-	x	Philippines	14	10	-	-
Assessment of typhoon damage to houses	-	x	-	Philippines	6	1	-	-
Industrial project preparation, evaluation and financing	-	-	x	Poland	25	3	4	8
Appropriate technologies and equipment - metallurgical and metal processing industries	-	x	-	Poland	25	7	1	19
Financial analysis and COMFAR application	x	-	-	St. Lucia	10	-	4	-
Financial analysis and COMFAR application	x	-	-	Saudi Arabia	32	-	-	-
Industrial project preparation, evaluation and financing	-	x	-	Sudan	23	19	4	19
Railway transportation	-	-	x	Switzerland	13	-	-	5
Financial analysis and COMFAR application	x	-	-	Thailand	5	-	4	-
Pesticide residual analysis	-	x	-	Thailand	14	-	7	-
Cement industry	-	x	-	Turkey	6	2	-	6
Energy saving - cement industry	-	-	x	Turkey	10	3	-	1
Management - human resources development	-	-	x	USSR	15	5	1	5
Production/management - public sector mechanical wood processing industries	-	-	x	Yugoslavia	27	8	4	9
Maintenance systems - iron and steel industry	-	x	-	Zimbabwe	20	4	-	20
TOTAL					837	286	109	327

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 1987,
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	3	1	4	-	-	-	-	-	-	4	
Botswana	1	2	3	-	-	-	-	-	-	3	
Burundi	9	-	9	-	-	-	-	-	-	9	
Cameroon	3	2	5	-	-	-	1	-	1	6	
Cape Verde	5	1	6	-	-	-	-	1	1	7	
Chad	2	-	2	-	-	-	-	-	-	2	
Congo	1	1	2	-	-	-	-	-	-	2	
Côte d'Ivoire	9	-	9	-	-	-	1	-	1	10	
Equatorial Guinea	1	-	1	-	-	-	-	-	-	1	
Ethiopia	26	2	28	-	-	-	-	-	-	28	
Gabon	1	-	1	-	-	-	-	-	-	1	
Ghana	-	-	-	-	-	-	1	-	1	1	
Guinea	6	1	7	-	-	-	-	-	-	7	
Kenya	1	-	1	-	-	-	2	-	2	3	
Liberia	5	-	5	-	-	-	-	-	-	5	
Madagascar	5	4	9	-	-	-	2	-	2	11	
Mali	4	-	4	-	-	-	2	-	2	6	
Mozambique	15	-	15	-	-	-	-	-	-	15	
Niger	11	-	11	-	-	-	-	-	-	11	
Nigeria	5	3	8	-	-	-	1	1	2	10	
Rwanda	18	-	18	-	-	-	-	-	-	18	
Togo	8	-	8	-	-	-	-	-	-	8	
United Republic of Tanzania	9	1	10	-	-	-	2	-	2	12	
Zaire	12	-	12	-	-	-	-	-	-	12	
Zambia	7	-	7	-	-	-	-	-	-	7	
Zimbabwe	7	1	8	-	-	-	-	2	-	2	10
Total Africa	174	19	193	-	-	-	14	2	16	209	

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	
AMERICAS										
Argentina	3	1	4	-	-	-	3	-	3	7
Bolivia	2	3	5	-	-	-	-	-	-	5
Brazil	-	-	-	-	-	-	2	-	2	2
Chile	11	-	11	-	-	-	1	-	1	12
Colombia	3	1	4	-	-	-	1	-	1	5
Costa Rica	-	-	-	1	-	1	-	-	-	1
Cuba	4	1	5	-	-	-	8	2	10	15
El Salvador	4	-	4	-	-	-	-	-	-	4
Guyana	1	-	1	-	-	-	-	2	2	3
Honduras	1	1	2	-	-	-	-	-	-	2
Jamaica	-	3	3	-	-	-	-	-	-	3
Mexico	5	1	6	-	-	-	-	-	-	6
Montserrat	-	2	2	1	1	2	-	-	-	4
Nicaragua	4	1	5	-	-	-	-	-	-	5
Paraguay	6	2	8	-	-	-	-	-	-	8
Peru	3	1	4	-	-	-	7	3	10	14
Venezuela	23	7	30	-	-	-	-	-	-	30
Total Americas	70	24	94	2	1	3	22	7	29	126
ARAB STATES										
Algeria	39	1	40	-	-	-	4	-	4	44
Bahrain	6	-	6	-	-	-	-	-	-	6
Democratic Yemen	3	1	4	-	-	-	-	-	-	4
Egypt	23	5	28	-	-	-	-	-	-	28
Iraq	7	1	8	-	-	-	1	-	1	9
Jordan	6	3	9	-	-	-	-	-	-	9
Kuwait	-	-	-	-	-	-	-	1	1	1
Morocco	15	-	15	-	-	-	-	-	-	15
Syrian Arab Republic	1	-	1	-	-	-	-	-	-	1
Tunisia	25	1	26	-	-	-	1	-	1	27
Total Arab States	125	12	137	-	-	-	6	1	7	144

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	5	-	5	-	-	-	-	-	-	5
Bangladesh	2	-	2	-	-	-	-	-	-	2
Burma	10	3	13	-	-	-	-	-	-	13
China	114	19	133	3	-	3	60	17	77	213
Democratic People's Republic of Korea	19	-	19	-	-	-	-	-	-	19
India	218	5	223	1	-	1	13	-	13	237
Indonesia	12	2	14	-	-	-	-	-	-	14
Iran (Islamic Republic of)	30	2	32	-	-	-	-	-	-	32
Lao People's Democratic Republic	3	-	3	-	-	-	-	-	-	3
Maldives	1	-	1	-	-	-	-	-	-	1
Mongolia	9	2	11	2	-	2	-	-	-	13
Nepal	15	2	17	-	-	-	-	-	-	17
Pakistan	13	-	13	-	-	-	-	-	-	13
Papua New Guinea	1	-	1	-	-	-	2	-	2	3
Philippines	9	10	19	-	-	-	6	4	10	29
Republic of Korea	31	4	35	-	-	-	1	-	1	36
Sri Lanka	24	7	31	-	-	-	2	-	2	33
Thailand	5	-	5	-	-	-	-	-	-	5
Tonga	1	-	1	-	-	-	-	-	-	1
Viet Nam	53	11	64	-	-	-	-	-	-	64
Total Asia and the Pacific	575	67	642	6	-	6	84	21	105	753
EUROPE										
Albania	31	-	31	-	-	-	-	-	-	31
Bulgaria	54	13	67	-	-	-	-	5	1	6
Cyprus	4	1	5	-	-	-	-	-	-	5
Czechoslovakia	40	5	45	-	-	-	-	-	-	45
Greece	8	4	12	-	-	-	-	-	-	12
Hungary	39	3	42	-	-	-	-	-	-	42
Poland	34	3	37	1	-	1	-	-	-	38
Portugal	1	2	3	-	-	-	-	-	-	3
Romania	15	1	16	-	-	-	-	3	-	3
Turkey	8	1	9	-	-	-	-	-	-	9
Yugoslavia	20	3	23	-	-	-	-	-	-	23
Total Europe	254	36	290	1	-	1	8	1	9	300
GRAND TOTAL	1,198	158	1,356	9	1	10	134	32	166	1,532 ^{b/}

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

b/ Including 191 females; 144 individuals from least developed countries; 323 individuals from African countries (including African Arab States).

Table 4
Fellowships and study tours started in 1987, 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	2	-	4	6
Australia	12	-	1	13
Austria	94	3	30	127
Austria (UNIDO Headquarters)	88	-	7	95
Barbados	1	-	-	1
Belgium	35	-	4	39
Botswana	1	-	-	1
Brazil	31	-	3	34
Bulgaria	2	-	-	2
Cameroon	4	-	1	5
Canada	32	-	1	33
Cape Verde	-	-	2	2
China	10	-	6	16
Colombia	-	-	4	4
Comoros	2	-	-	2
Costa Rica	3	-	-	3
Côte d'Ivoire	-	-	2	2
Cuba	2	-	-	2
Czechoslovakia	76	-	-	76
Democratic People's Republic of Korea	-	-	2	2
Denmark	15	-	6	21
Ecuador	6	-	-	6
Egypt	24	-	-	24
Finland	5	-	1	6
France	181	-	12	193
Gabon	1	-	-	1
German Democratic Republic	31	-	-	31
Germany, Federal Republic of	182	-	39	221
Greece	5	-	-	5
Honduras	5	-	4	9
Hong Kong	7	-	-	7
Hungary	61	-	2	63
India	48	-	-	48
Indonesia	2	-	-	2
Ireland	11	1	1	13
Italy	96	-	19	115
Japan	113	-	12	125
Jordan	1	-	-	1
Kenya	22	-	1	23
Kuwait	-	-	1	1
Luxembourg	1	-	-	1
Madagascar	1	-	-	1
Malawi	-	-	1	1
Malaysia	20	-	-	20
Mauritius	3	-	-	3
Mexico	7	-	-	7

Table 4 (continued)

Country/geographical area/ territory of study	Number of individuals placed			Total
	UNDP	Regular programme	Other programmes	
Morocco	4	-	-	4
Netherlands	34	1	5	40
New Zealand	1	-	-	1
Niger	2	-	-	2
Nigeria	1	-	-	1
Norway	4	-	-	4
Pakistan	2	-	-	2
Panama	3	-	2	5
Philippines	29	-	-	29
Poland	27	-	9	36
Portugal	13	-	-	13
Republic of Korea	16	-	3	19
Reunion	2	-	-	2
Senegal	10	-	8	18
Seychelles	2	-	-	2
Singapore	16	-	-	16
Spain	23	-	3	26
Sri Lanka	5	-	-	5
Sweden	17	-	-	17
Switzerland	57	-	4	61
Thailand	19	-	-	19
Togo	6	-	-	6
Trinidad and Tobago	1	-	-	1
Tunisia	29	-	-	29
Union of Soviet Socialist Republics	16	3	-	19
United Arab Emirates	2	-	-	2
United Kingdom	229	2	31	262
United Republic of Tanzania	3	-	-	3
United States of America	183	-	17	200
Yugoslavia	18	-	1	19
Zaire	1	-	-	1
Zimbabwe	1	-	-	1
TOTAL	2,020	10	249	2,279

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 488 or 21.4 per cent were arranged in developing countries, thus contributing to technical co-operation among developing countries.

APPENDIX J

AGREEMENTS CONCLUDED BY UNIDO IN 1987

Agreements with StatesAustria

Exchange of letters between the Director-General and the Permanent Representative of Austria to UNIDO concerning the continuation of the project "UNIDO Service in Austria for the Strengthening of Industrial Co-operation and Promotion of Investment with Developing Countries", dated 9 and 13 January 1987

Brazil

Memorandum of Understanding between the United Nations Industrial Development Organization and the Government of the Federal Republic of Brazil, signed on 1 September 1987

Working arrangement between the United Nations Industrial Development Organization (UNIDO) and the National Industrial Apprenticeship Service (SENAI), signed on 4 September 1987

Bulgaria

Memorandum of Understanding between the United Nations Industrial Development Organization and the Government of the People's Republic of Bulgaria, signed on 15 July 1987

Czechoslovakia

Memorandum of Understanding between the Government of the Czechoslovak Socialist Republic and the United Nations Industrial Development Organization on Co-operation in Industrial Development, signed on 27 April 1987

Finland

Agreement between the United Nations Industrial Development Organization and the Government of the Republic of Finland on Associate Experts, signed on 6 April 1987

France

Agreement between the United Nations Industrial Development Organization and the Government of the French

Republic on measures to be adopted for the Second Consultation on the Training of Industrial Manpower, Paris, France, 14-18 September 1987, signed on 22 July 1987.

German Democratic Republic

Working Arrangement between the State Planning Commission of the German Democratic Republic and the United Nations Industrial Development Organization, signed on 13 October 1987

Hungary

Memorandum of Understanding between the United Nations Industrial Development Organization and the Institute for Economic and Market Research, Budapest, signed on 22 September 1987

Agreement between the United Nations Industrial Development Organization and the Government of the Hungarian People's Republic regarding the Arrangements for the United Nations Industrial Development Organization's First Consultation on the Non-ferrous Metals Industries, signed on 21 October 1987

Italy

Agreement between the United Nations Industrial Development Organization and the Government of Italy on Associate Experts, signed on 15 January 1987

Japan

Memorandum concerning the Interregional Project of the UNIDO Service in Japan for the Promotion of Industrial Investment in Developing Countries, signed by the Permanent Representative of Japan to UNIDO and the Director-General on 21 and 22 October 1987

Norway

Agreement between the United Nations Industrial Development Organization and the Government of the Kingdom of Norway regarding Associate Experts, signed on 22 October 1987

Philippines

Memorandum of Understanding between the United Nations Industrial Development Organization (UNIDO) and the Government of the Republic of the Philippines (Technical Assistance Council) on the Continuation of Joint Co-operative Training Programmes to be Implemented in the Philippines in 1988 to 1991, signed on 19 November 1987

Poland

Agreement between the United Nations Industrial Development Organization and the Government of the Polish People's Republic regarding the Arrangements for the United Nations Industrial Development Organization's First Consultation on the Fisheries Industry, signed on 21 May 1987

Memorandum of Understanding between the United Nations Industrial Development Organization and the Central School of Planning and Statistics of Poland, signed on 18 August and 28 October 1987

Memorandum of Understanding between the United Nations Industrial Development Organization and the Government of the Polish People's Republic, signed on 28 October 1987

Republic of Korea

Agreement between the United Nations Industrial Development Organization and the Government of the Republic of Korea, signed on 15 April 1987

Spain

Exchange of notes between the Permanent Mission of Spain to UNIDO and UNIDO concerning the Third Consultation on the Pharmaceutical Industry in Madrid, 5-9 October 1987, dated 30 July, 28 September, 14 October and 23 October 1987

Sweden

Agreement between the United Nations Industrial Development Organization and the Government of the Kingdom of Sweden on Associate Experts, signed on 29 September 1987

Switzerland

Agreement between the Swiss Confederation represented by the Directorate for Co-operation in Development and Humanitarian Aid and

the United Nations Industrial Development Organization on the holding of an in-service training course in the application of dyes to different substrates, signed on 17 November 1986 and 13 February 1987.

Thailand

Agreement between the United Nations Industrial Development Organization and the Government of Thailand regarding the Arrangements for the Second Regular Session of the General Conference of UNIDO, signed on 30 September 1987

Tunisia

Joint Declaration of Intent to strengthen co-operation between the Government of the Republic of Tunisia and the United Nations Industrial Development Organization (UNIDO), signed on 3 October 1987

USA

Exchange of letters between the Director-General and the Permanent Representative of the United States of America to UNIDO concerning UNIDO Service in Washington D.C. for the Promotion of Industrial Development in Developing Countries, dated 30 October 1986 and 2 July 1987

Agreements with specialized agencies and other organizations within the United Nations system

Specialized and related agenciesILO

Agreement between the International Labour Organisation and the UNIDO, and Protocol regarding the Entry into Force, signed on 14 September 1987

IAEA

Agreement between the United Nations Industrial Development Organization and the International Atomic Energy Agency, signed on 9 October 1987

Subsidiary organs of the United NationsUNFDAC

Letter of Agreement between the United Nations Fund for Drug Abuse Control and the United Nations Industrial Development Organization, signed on 22 October 1987

Agreements with other intergovernmental organizations

AIDO

Relationship Agreement between the United Nations Industrial Development Organization and the Arab Industrial Development Organization, signed on 8 November 1987

QMEA

Exchange of letters between the Director-General and the Secretary of the Council for Mutual Economic Assistance, dated 9 May, 23 May and 13 November 1986 and 15 January 1987, reconfirming the Agreement ca

Co-operation concluded between the Council for Mutual Economic Assistance (QMEA) and the former UNIDO

GEPLACEA

Relationship Agreement between the United Nations Industrial Development Organization and the Group of Latin American and Caribbean Sugar Exporting Countries, signed on 3 April 1987

GOIC

Relationship Agreement between the United Nations Industrial Development Organization and the Gulf Organization for Industrial Consulting, signed on 22 October and 31 October 1987