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UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION

15800-E

**ANNUAL
REPORT
OF
UNIDO
1985**

INDUSTRIAL DEVELOPMENT BOARD, Vienna, 1986



CORRIGENDUM

Ref.: IDB.2/10

6 October 1986

Vienna

INDUSTRIAL DEVELOPMENT BOARD
Vienna, 1986

ANNUAL REPORT OF UNIDO, 1985

Corrigendum

1. *Page 22, table 3*

The title *should read* UNIDF APPROVALS IN 1985, BY REGION

2. *Page 109, paragraph 272, lines 5 and 6*

For Republic of Korea *read* Democratic People's Republic of Korea

ANNUAL REPORT OF UNIDO, 1985

**UNITED NATIONS
INDUSTRIAL DEVELOPMENT ORGANIZATION**
Vienna



**ANNUAL REPORT
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INDUSTRIAL DEVELOPMENT BOARD
Vienna, 1986

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Distr.
GENERAL

IDB.2/10
2 June 1986

ORIGINAL: ENGLISH

Distr.: 1 August 1986

ISSN 0258-8137

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ABBREVIATIONS

AADFI	Association of African Development Finance Institutions
ACABQ	Advisory Committee on Administrative and Budgetary Questions
ACC	Administrative Committee on Co-ordination
AIDO	Arab Industrial Development Organization
ARCEDEM	African Regional Centre for Engineering Design and Manufacturing
ASEAN	Association of South-East Asian Nations
CAD	Computer aided design
CAM	Computer aided manufacturing
CARICOM	Caribbean Community
CCAQ	Consultative Committee on Administrative Questions
CEAO	West African Economic Community
CEPGL	Economic Community of the Great Lakes Countries
CMEA	Council for Mutual Economic Assistance
COMFAR	UNIDO Computer Model for Feasibility Analysis and Reporting
CORIS	Computerized Registry Information System
CPC	Committee for Programme and Co-ordination
ECA	Economic Commission for Africa
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
GATT	General Agreement on Tariffs and Trade
GEPLACEA	Group of Latin American and Caribbean Sugar Exporting Countries
GOIC	Gulf Organization for Industrial Consulting
HASIDA	Handicraft and Small-scale Industries Development Agency
IAEA	International Atomic Energy Agency
ICGEB	International Centre for Genetic Engineering and Biotechnology
ICP	Investment Co-operative Programme
ICPE	International Centre for Public Enterprises in Developing Countries
ICSC	International Civil Service Commission
IDDA	Industrial Development Decade for Africa
IDF	Industrial Development Fund
IDIOM	International Dynamic Input/Output Model
IFC	International Finance Corporation
IIASA	International Institute for Applied Systems Analysis
ILO	International Labour Organisation
INPRIS	Investment Promotion Information System
INSTRAW	International Research and Training Institute for the Advancement of Women
INTIB	Industrial and Technological Information Bank

IPF	Indicative planning figure
IPS	Investment Promotion Service
ITC	International Trade Centre UNCTAD/GATT
JPO	Junior Professional Officer
LINK	On-Line-Information Key
MEPS	Methodology for assessing and programming production/consumption systems
NDT	Non-destructive testing
NGOs	Non-governmental organizations
OAU	Organization of African Unity
OECD	Organisation for Economic Co-operation and Development
OIC	Organization of the Islamic Conference
OLADE	Latin American Energy Organization
OPEC	Organization of Petroleum Exporting Countries
PAC	Pan African Congress
PAC	Purchase and Contract Service
PPRS	Project Personnel Recruitment Section
PROPSPIN	Project Profile Screening and Pre-Appraisal Information System
PTA	Preferential Trade Area for Eastern and Southern African States
REMLAC	Regional Network for Micro-electronics in Latin America and the Caribbean
RP	Regular programme
SADCC	Southern African Development Co-ordination Conference
SELA	Latin American Economic System
SIDFA	Senior Industrial Development Field Adviser
SIDO	Small Industries Development Organization
SIS	Special Industrial Services
SONEPI	Société nationale d'études et de promotion industrielle
TCDC	Technical Co-operation among Developing Countries
TF	Trust funds
TIES	Technological Information Exchange System
TIMOD	Trade Impact Model
UDEAC	Central African Customs and Economic Union
UNCDF	United Nations Capital Development Fund
UNCTAD	United Nations Conference on Trade and Development
UNDP	United Nations Development Programme
UNDRO	Office of the United Nations Disaster Relief Co-ordinator
UNEP	United Nations Environment Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNFDAC	United Nations Fund for Drug Abuse Control
UNFSSTD	United Nations Financing System for Science and Technology for Development
UNICEF	United Nations Children's Fund
UNICs	United Nations Information Centres
UNIDF	United Nations Industrial Development Fund
UNIS	United Nations Information Service
UNOV	United Nations Office at Vienna
UNSO	United Nations Statistical Office
VIC	Vienna International Centre
WHO	World Health Organization
WIPO	World Intellectual Property Organization

PREFACE

The period covered in this report is a year unique in the annals of United Nations history. For the first time, a new specialized agency emerged from within the United Nations Secretariat. Despite the complex changes this move entailed, the emergence of UNIDO as an independent body came on schedule with no adverse consequences on programme delivery. This achievement is a tribute to the concerted effort of Member States to enhance the ability of UNIDO to play a catalytic role in industrialization. It also testifies to the commitment of the staff and their ability to contribute to the enhancement of that role.

The establishment of UNIDO as an independent organization reflected a growing consensus on the part of the international community that the United Nations system can make an important contribution to co-operation between industrialized and developing countries in promoting world industrial development. This consensus is clearly evident in the expansion of the activities of UNIDO far beyond the original concept of an agency delivering technical assistance to Member States. In the year past, UNIDO showed itself capable of assuming greater responsibility. UNIDO looks forward to the continuing support of the Member States in promoting international co-operation in the field of industrial development.

The 1985 *Annual Report* presents an overview of the Organization's activities during the year of its transformation. Statistical data and summary tables at the end of the *Report* provide additional details of UNIDO activities in 1985. UNIDO will continue to rationalize its organizational set-up and attain improved operational efficiency so as to enable it to make a greater contribution to the industrial development of the developing countries.

DOMINGO L. SIAZON, Jr.

Director-General

Chapter I

INTERGOVERNMENTAL POLICY-MAKING ORGANS

1. The year 1985 saw the transformation of UNIDO into a specialized agency. The General Assembly of the United Nations in its resolution 37/213 of 20 December 1982 on the conversion of UNIDO into a specialized agency had recommended that consultations to determine the date of the entry into force of the Constitution of UNIDO be organized in three stages among States that had ratified, accepted or approved that Constitution and other interested States. This series of consultations was completed with the holding on 10 June 1985 of a one-day closing meeting in New York. Pursuant to paragraph 1 (c) of General Assembly resolution 37/213, that meeting dealt with the receipt of the conclusions of previous consultations and the execution of individual notifications to the Secretary-General of agreement for the entry into force of the Constitution. Subsequently, in accordance with its Article 25, the Constitution of UNIDO—adopted on 8 April 1979 by the United Nations Conference on the Establishment of the United Nations Industrial Development Organization as a Specialized Agency at its second session—entered into force on 21 June 1985: on that day 80 States that had deposited instruments of ratification, acceptance or approval had notified the Secretary-General as Depositary that they had agreed that the Constitution should enter into force.

2. The General Assembly in its resolution 34/96 on transitional arrangements relating to the establishment of UNIDO as a specialized agency, adopted on 13 December 1979, had decided to terminate UNIDO as one of its organs at the end of the last day of the calendar year in which the General Conference of the new agency was first convened. Since the first session of the General Conference was convened in 1985, UNIDO ceased to exist as an organ of the General Assembly on 31 December 1985 and assumed its functions as a specialized agency on 1 January 1986. From 21 June to 31 December 1985, the United Nations and UNIDO Secretariats became heavily involved in ensuring a smooth transition from the “old” to the “new” UNIDO.

3. The present chapter sets out—to a certain extent in chronological order—the decisions and recommendations of the policy-making organs of UNIDO during the year 1985. Information is also given on decisions taken by the Governing Council of the United Nations Development Programme (UNDP) relevant to UNIDO.

INDUSTRIAL DEVELOPMENT BOARD

(organ of the United Nations General Assembly)

4. The Industrial Development Board as an organ of the United Nations General Assembly held its nineteenth session in Vienna from 13 to 31 May 1985. It had before it 23 agenda items.

5. In conclusion 1985/1, the Board adopted the report of the Permanent Committee on the work of its twenty-first session (ID/B/327), which dealt with the proposed programme of work for the biennium 1986-1987, the Industrial Development Field Advisers (SIDFA) programme, co-ordination, evaluation, and control and limitation of documentation.

6. Action taken by the Board at its nineteenth session also included the adoption of conclusions on the follow-up of the Fourth General Conference of UNIDO and the eleventh special session of the General Assembly; the Industrial Development Decade for Africa (IDDA); restructuring of world industrial production and redeployment; the System of Consultations; development and transfer of technology, including the Industrial and Technological Information Bank; the proposed programme budget, 1986-1987; the regular programme of technical co-operation; the United Nations Industrial Development Fund (UNIDF); progress of industrialization of the least developed countries; progress in the field of industrial co-operation among developing countries; technical assistance to the Namibian people; technical assistance to the Palestinian people; technical assistance to the South African national liberation movements recognized by the Organization of African Unity; integration of women in development; and matters concerning intergovernmental and non-governmental organizations (conclusions 1985/2 to 1985/17 respectively). On most of these subjects follow-up was referred to the next session of the competent organs of UNIDO.

UNITED NATIONS DEVELOPMENT PROGRAMME

7. The Governing Council of UNDP held its thirty-second session at United Nations Headquarters from 3 to 29 June 1985. Some of the decisions of particular relevance to UNIDO are summarized below.

8. In decision 85/41 on sectoral support, the Governing Council requested the Administrator to undertake the necessary review of the policy of UNDP in regard to the SIDFA programme in the fourth programming cycle, "taking due account of the possible change of status of the United Nations Industrial Development Organization to a specialized agency", and to report to the Governing Council at its thirty-third session on the results of that review; and further decided to consider and decide on the UNDP support in the fourth cycle for the SIDFA programme at its thirty-third session.

9. In decision 85/3 on co-ordination, the Governing Council urged all relevant organizations of the United Nations system to co-operate fully with the

Resident Co-ordinators with respect to co-ordination of operational activities carried out at the country level including activities arising from co-financing arrangements. In decision 85/4 on programme implementation, agencies were urged to make every effort to streamline internal procedures and institutional mechanisms in order to ensure the speedy implementation of activities financed by UNDP in accordance with existing rules and regulations; and the Administrator was requested to carry out further intensive consultations with participating and executing agencies in order to improve project budgeting practices.

10. In decision 85/34 on the annual review of the financial situation, 1984, executing agencies were urged to implement the measures undertaken by the Administrator to improve programme delivery and performance in order to achieve full delivery at the recognized programming targets for the third cycle.

11. The guidelines, criteria and other conditions for the allocation of financial resources to the various programmes within the fourth programming cycle (1987-1991) were established by the Governing Council in its decision 85/16.

12. By decision 85/10, the Governing Council endorsed the Administrator's initiative and efforts to use, as appropriate, nationally recruited project personnel, the transfer of knowledge through expatriate nationals and operational assistance contracts, and urged agencies to pay particular attention at the project design stage to ensuring greater cost-effectiveness in the utilization of project personnel and to continue their efforts to improve their recruitment policies and procedures with respect to project personnel. In decision 85/22, organizations in the United Nations system were also urged to continue and increase the utilization of United Nations Volunteers.

13. Concerning guidelines for the procurement of equipment, supplies and services (decision 85/39), the executing agencies were requested to continue their co-operation to achieve uniformity in their procurement practices and to reflect such common practices in the General Business Guide issued by the Inter-Agency Procurement Services Unit so as to make the United Nations system's procurement process both more accessible and more transparent; they were also urged to increase their efforts to expand the geographical distribution of the sources of supply, including under-utilized donors and developing countries.

14. On the subject of women in development, the organizations of the United Nations development system were urged in decision 85/7 to implement the recommendations in paragraphs 103 to 125 of the report of the Administrator on the interorganizational assessment of women's participation in development (DP/1985/10); in decision 85/27 the agencies and organizations were invited to include, as appropriate, specific reference to women in all promotional activities for technical co-operation among developing countries, as an important aspect of human resource development and to elaborate further and to disseminate guidelines on the incorporation of issues relevant to the advancement of women into programmes and projects for technical co-operation among developing countries.

15. Other decisions of interest to UNIDO are 85/5 on development of human resources; 85/6 on reports of the Joint Inspection Unit; 85/11 on

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implementation of the Substantial New Programme of Action for the 1980s for the Least Developed Countries; 85/12 on strengthening the response to the crisis in Africa; 85/13 on the focal point for short-term advisory services; 85/14 on assistance to the national liberation movements recognized in its area by the Organization of African Unity (OAU); 85/15 on assistance to the Palestinian people; 85/17 on programming; 85/18 on country and intercountry programmes and projects; 85/26 on technical co-operation among developing countries; 85/29 on implementation of the Plan of Action to Combat Desertification in the Sudano-Sahelian region; 85/31 on programmes in energy development; and 85/42 on matters relating to the financial structure of the system administered by UNDP.

ECONOMIC AND SOCIAL COUNCIL OF THE UNITED NATIONS

16. The second regular session of the Economic and Social Council for 1985 was held in Geneva from 3 to 26 July. Under agenda item 12 (industrial development co-operation), the Council¹ considered matters related to UNIDO. It had before it, *inter alia*, the following documents: report of the Industrial Development Board on the work of its nineteenth session¹ and a note by the Secretary-General transmitting the fourth progress report of the Executive Director of UNIDO and the Executive Secretary of the Economic Commission for Africa (ECA) on the Industrial Development Decade for Africa (IDDA) (A/40/420, E/1985/111). In its decisions 1985/169 and 1985/170, the Council took note of the report of the Board, including its recommendations, and of the fourth IDDA progress report respectively.

17. The Council also adopted resolution 1985/74 on arrangements for the negotiation of an agreement between the United Nations and UNIDO, in which it authorized the Committee on Negotiations with Intergovernmental Agencies to meet at an appropriate time to negotiate with UNIDO a relationship agreement between the United Nations and UNIDO. Subsequently the Committee on Negotiations with Intergovernmental Agencies agreed to invite the Chairman of the UNIDO Committee to Negotiate a Relationship Agreement between the United Nations and UNIDO to participate in its work. After both Committees agreed on a text, the draft agreement between the United Nations and UNIDO was approved by consensus by the Council at its resumed second regular session on 12 December as contained in resolution 1985/81.

18. The Council discussed IDDA under agenda item 8 (regional co-operation). In resolution 1985/61, the Council recognized and expressed appreciation for measures taken by or under way in Member States, intergovernmental organizations and the secretariats of OAU, ECA and UNIDC to implement the programme for and the activities of the Decade, and called upon the General Assembly to consider the allocation to ECA of \$700,000—to be absorbed from the \$5 million already approved in General Assembly resolution 39/233—for implementing multinational projects.

¹Official Records of the General Assembly, Fortieth Session, Supplement No. 16 (A/40/16).

19. Other resolutions adopted by the Council at its second regular session of 1985 relevant to UNIDO are: 1985/57 on assistance to the Palestinian people, 1985/59 on implementation of the Declaration on the Granting of Independence to Colonial Countries and Peoples by the specialized agencies and the international institutions associated with the United Nations, and 1985/63 on measures to ensure the effective and accelerated implementation of the Substantial New Programme of Action in African least developed countries during the second half of the 1980s.

GENERAL CONFERENCE

(principal organ of UNIDO as a specialized agency)

20. The General Conference, consisting of all Members of UNIDO, held its first session in Vienna in two parts: part one from 12 to 17 August and part two from 9 to 13 December 1985.²

21. In August the Conference adopted 15 decisions. Amongst these were the election of members of the Industrial Development Board (GC.1/Dec.7—see para. 25 below) and members of the Programme and Budget Committee (GC.1/Dec.8—see para. 29 below). The Conference appointed by acclamation Domingo L. Siazon, Jr. as Director-General of UNIDO (GC.1/Dec.12). In decision GC.1/Dec.9 on matters arising out of the process of establishing the new UNIDO, the Conference affirmed the conclusions of the Formal Meeting on the Conversion of the United Nations Industrial Development Organization (convened in Vienna from 16 to 20 May 1983), particularly concerning the programme of work of the new UNIDO, financial questions and the structure and staffing of the Secretariat; it endorsed the consensus reached during the informal consultations held in Vienna in May 1984 as contained in the report of the Secretary-General of the United Nations (A/39/376); and invited the Director-General to take due account of paragraph 4 of General Assembly resolution 34/96 concerning the acquired rights and contractual status of the staff of the United Nations assigned to UNIDO.

22. At part two of its first session, in December, the Conference adopted 29 decisions, most of them based on recommendations submitted to it by the Industrial Development Board (see paras. 26-28 below). In particular, the Conference decided to establish a scale of assessments for the regular budget expenditures of UNIDO for the financial years 1986, 1987 and 1988, based on the one most recently adopted by the General Assembly of the United Nations, as of 1 January 1986 (GC.1/Dec.25—see also para. 34 below). The Conference approved the programme and budget of the Organization, 1986-1987 and adopted (a) total appropriations for the regular budget for the biennium 1986-1987 to the amount of \$154,752,547 of which \$112,706,804 would be the assessment on Member States and (b) 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 (GC.1/Dec.26). The

²For decisions adopted by the General Conference, see UNIDO/GC.1/INF.3 and UNIDO/GC.1/INF.6.

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Conference also decided that a working capital fund should be established for UNIDO for the biennium 1986-1987 (GC.1/Dec.33). The Conference also requested the Director-General to take the necessary measures to effect the transfer of assets from the United Nations to UNIDO (GC.1/Dec.35). As the External Auditor for UNIDO the Conference appointed the Senior President of the Audit Office of Belgium for a period of two years beginning on 1 July 1986 (GC.1/Dec.34). Still under financial matters, the Conference took note of Board decision IDB.1/Dec.12 concerning the financial regulations of UNIDO (GC.1/Dec.31).

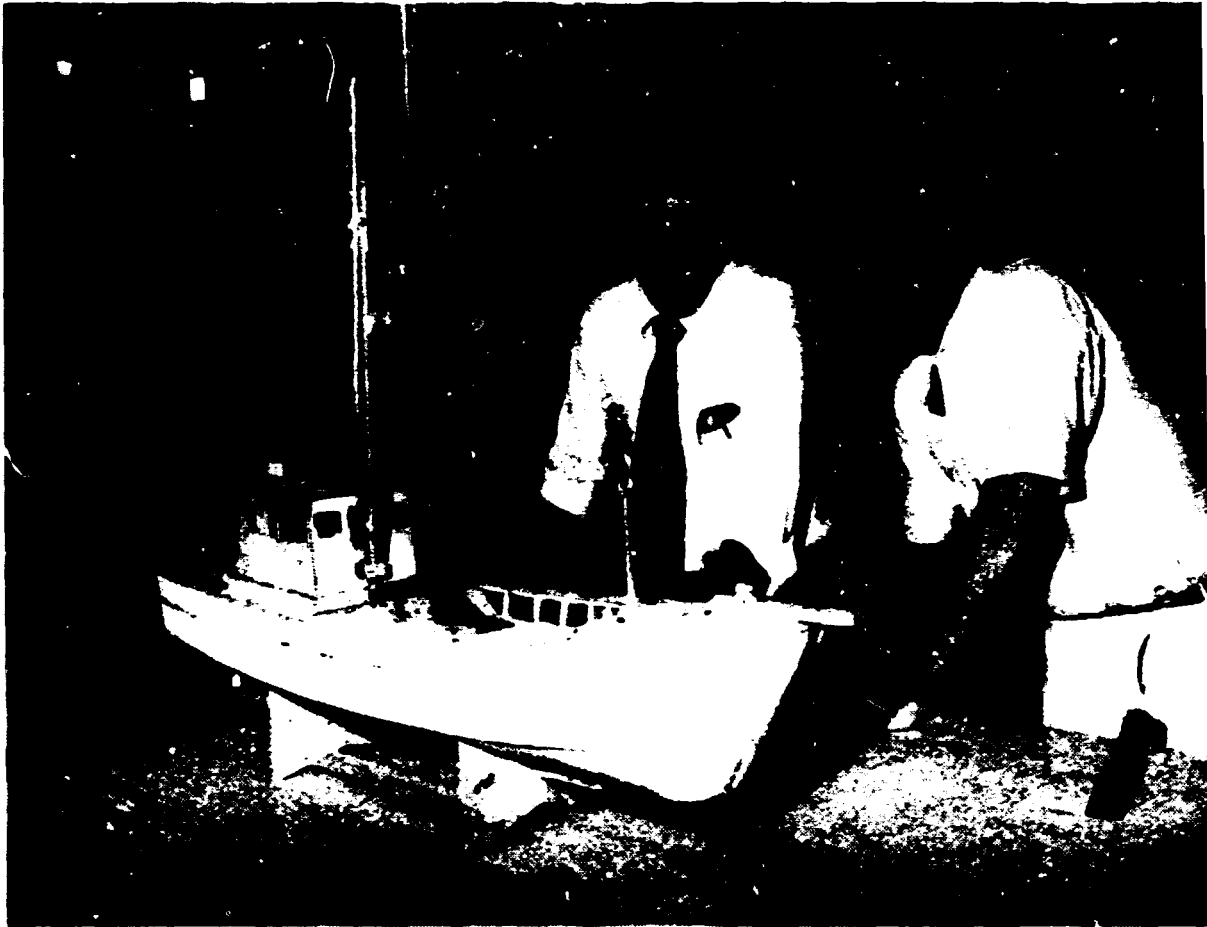
23. The Conference adopted three decisions related to the programme of work of the Organization and dealing with the implementation of Article 2 (c) of the Constitution (GC.1/Dec.30), the contribution of UNIDO to the International Year of Peace 1986 (GC.1/Dec.28) and the integration of women in industrial development (GC.1/Dec.29).

24. A number of decisions set out the legal provisions for the new Organization, e.g. decisions on UNIDO participation in the United Nations Joint Staff Pension Fund (GC.1/Dec.37) and in administrative tribunals (GC.1/Dec.36) and on the question of a standard basic co-operation agreement between Governments and UNIDO (GC.1/Dec.40). In compliance with Articles 18 and 19 of the Constitution, the Conference further approved a draft relationship agreement between the United Nations and UNIDO, subject to corresponding approval by the General Assembly of the United Nations (GC.1/Dec.38—see also paras. 17 above and 32 below), and established guidelines for the relationship of UNIDO with intergovernmental, governmental, non-governmental and other organizations (GC.1/Dec.41). Furthermore, the Director-General was requested to commence negotiations with the Administrator of UNDP with a view to establishing the final text of an agreement between UNIDO and UNDP and was authorized to conclude such an agreement on behalf of UNIDO (GC.1/Dec.39).

INDUSTRIAL DEVELOPMENT BOARD

(principal organ of UNIDO as a specialized agency)

25. The Industrial Development Board of the new UNIDO consists of 53 Members of the Organization. The following States were elected by the Conference as members of the Board: Argentina, Australia, Austria, Bangladesh, Belgium, Brazil, Burundi, Chile, China, Côte d'Ivoire, Cuba, Czechoslovakia, Ecuador, Egypt, France, Germany, Federal Republic of, Ghana, Greece, Hungary, India, Indonesia, Iraq, Italy, Jamaica, Japan, Kenya, Lesotho, Malawi, Malaysia, Mauritius, Mexico, Nigeria, Norway, Pakistan, Peru, Philippines, Poland, Romania, Saudi Arabia, Senegal, Spain, Sweden, Switzerland, Thailand, Tunisia, Turkey, Union of Soviet Socialist Republics, United Arab Emirates, United Kingdom of Great Britain and Northern Ireland, United States of America, Venezuela, Zaire and Zambia. In accordance with Article 9.2 of the Constitution, the Conference decided that the following States were to hold office until the close of the second regular session of the Conference in 1987: Argentina, Belgium, Brazil, China, Czechoslovakia, France, Germany, Federal Republic of, Ghana, Hungary, Italy, Japan, Lesotho, Malawi, Malaysia,



New type of wooden boat kit developed at Jakarta (Indonesia). The project was based on a UNIDO feasibility study

Mauritius, Nigeria, Norway, Pakistan, Peru, Philippines, Romania, Senegal, United Arab Emirates, United Kingdom of Great Britain and Northern Ireland, United States of America. The other members of the Board are to hold office until the close of the third regular session in 1989 (GC.1/Dec.7 and Dec.22).

26. The Board held its first session in Vienna from 13 to 17 August (part one), 4 to 15 November (part two) and 10 to 11 December 1985 (resumed part two).³ In August the Board adopted 5 decisions; the main decisions were the recommendation to the General Conference of a candidate for the post of Director-General (IDB.1/Dec.2) and the establishment of the Committee to Negotiate a Relationship Agreement between the United Nations and UNIDO (IDB.1/Dec.4).

27. At the second part of its first session, in November and December, the Board adopted 33 decisions dealing with organizational, procedural, financial, personnel, administrative and legal matters. On the basis of conclusions by the Programme and Budget Committee, the Board submitted recommendations to the Conference for action on financial matters such as: scale of assessments of

³For the reports of the Board on the work of its first session, see UNIDO/IDB.1/6 and Corr.1, UNIDO/GC.1/7 and Corr.1, and UNIDO/GC.1/7/Add.1 and Corr.3.

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Member States (IDB.1/Dec.8), programme and budget, 1986-1987 (IDB.1/Dec.9), working capital fund (IDB.1/Dec.35), and appointment of External Auditor (IDB.1/Dec.16). Action subsequently taken by the Conference is reported in para. 22 above. Also upon recommendation of the Programme and Budget Committee, the Board approved the application by the Director-General of the financial regulations of the United Nations as of 31 December 1985, *mutatis mutandis*, pending the adoption of the new financial regulations of UNIDO by the Conference (IDB.1/Dec.12); it also approved the indicative programme for 1986 and plan for 1986-1987 of the Industrial Development Fund (IDF) as contained in document ID/B/333 and Corr.1 except in respect of the proposal to earmark a small component within the general-purpose segment of the Fund for disaster relief assistance, and authorized the Director-General to approve projects for financing under the Fund (IDB.1/Dec.13). The Board decided that five deputy directors-general should be appointed, each to head a Department of UNIDO, and requested the Director-General to recommend for its approval the appointment of five deputy directors-general (IDB.1/Dec.11). The Board further decided that the United Nations operational rate of exchange in effect in December 1985 (1 US dollar = 17.70 Austrian schillings) be applied only to 90 per cent of the regular budget for 1986-1987 (IDB.1/Dec.39).

28. The Board decided to accept the Statutes of the International Civil Service Commission and of the Joint Inspection Unit for UNIDO, effective 1 January 1986 (IDB.1/Dec.18 and Dec.22) and submitted recommendations to the Conference for action concerning UNIDO participation in the United Nations Joint Staff Pension Fund (IDB.1/Dec.19) and in administrative tribunals (IDB.1/Dec.20). Other recommendations submitted to the Conference for its consideration included the transfer of assets from the United Nations to UNIDO (IDB.1/Dec.21), relationship agreement with the United Nations (IDB.1/Dec.37), agreement between UNIDO and UNDP (IDB.1/Dec.24), guidelines for the relationship of UNIDO with intergovernmental, non-governmental, governmental and other organizations (IDB.1/Dec.26) and a standard basic co-operation agreement between Governments and UNIDO (IDB.1/Dec.38).

PROGRAMME AND BUDGET COMMITTEE

(subsidiary organ of UNIDO as a specialized agency)

29. The Programme and Budget Committee consists of 27 Members of the Organization. The following States were elected by the Conference as members of the Programme and Budget Committee: Algeria, Angola, Argentina, Bangladesh, Belgium, Brazil, Bulgaria, Cameroon, Cape Verde, China, Colombia, Denmark, Ethiopia, France, German Democratic Republic, Germany, Federal Republic of, India, Indonesia, Japan, Netherlands, Nigeria, Switzerland, Thailand, Trinidad and Tobago, Turkey, Union of Soviet Socialist Republics and United States of America. In accordance with Article 10.2 of the Constitution, the members of the Committee shall hold office until the close of the second regular session of the Conference in 1987.

30. The Committee held its first session in Vienna from 30 September to 11 October and on 9 December 1985 and addressed a number of recommendations to the Board (see para. 27 above).⁴

GENERAL ASSEMBLY OF THE UNITED NATIONS

31. The 1985 session of the General Assembly (17 September to 18 December) marked the fortieth anniversary of the creation of the United Nations. Of primary concern to UNIDO were the resolutions adopted relating to the conversion of UNIDO into a specialized agency.

32. By Assembly resolution 40/180 UNIDO was brought into relationship with the United Nations in accordance with Articles 57 and 63 of the Charter of the United Nations. Also in connection with the conversion, the Assembly had before it the report of the Secretary-General (A/C.5/40/48) and the related report of the Advisory Committee on Administrative and Budgetary Questions (ACABQ) (A/40/7/Add.14) which dealt with (a) transitional arrangements, (b) budgetary effects of the conversion of UNIDO, (c) conference services, and (d) administrative and common services in Vienna. The Assembly adopted the recommendations contained in the ACABQ report including a loan of \$24 million to UNIDO under special budgetary measures (resolution 40/253 A, para. 6).

33. The Assembly also considered some aspects of the work programme of UNIDO. At its thirty-ninth session the Assembly had decided to transmit to its fortieth session for consideration the draft resolution concerned with mobilization of financial resources for industrial development and referred to it by the President of the Fourth General Conference of UNIDO (decision 39/447). At its fortieth session, the General Assembly decided to refer consideration of this draft to its forty-first session (decision 40/434). The General Assembly also took note of document A/40/420 entitled "Note by the Secretary-General on the implementation of the programme of the Industrial Development Decade for Africa" (decision 40/435).

34. A number of other resolutions and decisions were taken which affect the programme of work of UNIDO. The Assembly decided, *inter alia*, to resume the Second Committee of the General Assembly immediately prior to the first regular session of the Economic and Social Council in 1986 for one week in order to give in-depth consideration to ways in which international co-operation in the interrelated areas of money, finance, debt, resource flows, trade and development can be promoted effectively and to deal with unfinished business under item 84 (development and international economic co-operation) of its agenda. It requested the Secretary-General to invite the appropriate organizations of the United Nations system to provide the Committee with information on their ongoing activities in the above-mentioned areas (decision 40/445). By resolution 40/248 the Assembly adopted the scale of assessments

⁴For the report of the Programme and Budget Committee on the work of its first session, see UNIDO/IDB.1/14 and Add.1.

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for the apportionment of expenses of the United Nations, for the financial years 1986, 1987 and 1988 (see para. 22 above).

35. The Assembly also considered the question of the implementation of the Substantial New Programme of Action for the 1980s for the Least Developed Countries. In resolution 40/205 it called upon all Governments, intergovernmental and multilateral institutions, the organizations of the United Nations system, non-governmental organizations and others concerned to take immediate, concrete and adequate steps to implement the Substantial New Programme of Action, taking full account of the conclusions and recommendations of the mid-term global review, so as to enable each least developed country to achieve a minimum standard of performance in socio-economic development. The resolution renewed the invitation to the governing bodies of appropriate organizations of the United Nations system to take the necessary and appropriate measures for effective implementation, monitoring and follow-up of the Substantial New Programme of Action and of the conclusions and recommendations adopted by the Intergovernmental Group on the Least Developed Countries at its sixth session.

36. By resolution 40/40 the Assembly decided to meet from 27 to 31 May 1986 in a special session at ministerial level to consider in depth the critical economic situation in Africa. It requested the Secretary-General, in close cooperation with the relevant organs, organizations and bodies of the United Nations system, to submit to the Preparatory Committee of the Whole for the Special Session of the General Assembly on the Critical Economic Situation in Africa and to the Assembly at its special session reports containing action-oriented proposals to deal with the situation, particularly the major developmental areas identified in the Declaration on the Critical Economic Situation in Africa annexed to Assembly resolution 39/29, taking fully into account the priorities set by the Assembly of Heads of State and Governments of OAU at its twenty-first session.

37. With regard to the development of the energy resources of developing countries, the Assembly in resolution 40/208 requested the Secretary-General to continue to undertake appropriate studies and analyses of trends in energy exploration and development, taking into account the activities of relevant organizations of the United Nations system in this field.

38. In resolution 40/177 on co-ordination in the United Nations and the United Nations System, the Assembly called upon the Secretary-General, after consultation with the executive heads of the specialized agencies, to re-examine critically and constructively all aspects of the question of co-ordination in the United Nations and the United Nations system; to submit to the Assembly at its forty-second session, through the Committee for Programme and Co-ordination and the Economic and Social Council, a comprehensive report setting out his considered views on current mechanisms and procedures, and his specific recommendations aimed at enhancing co-ordination in the future, as envisaged in the Charter of the United Nations and the agreements between the United Nations and the specialized agencies.

39. The General Assembly gave particular attention to co-ordination between agencies and organizations with regard to operational activities for develop-

ment and in resolution 40/211 requested the Director-General for Development and International Economic Co-operation to include in his report for the 1986 comprehensive policy review recommendations on such issues as measures to strengthen the existing mechanisms within the United Nations system to further the coherence and co-ordination of operational activities and analyses of activities carried out and efforts undertaken in the United Nations system in relation to various aspects of technical co-operation. The governing bodies of the organizations of the United Nations system were invited, where possible, to provide the Economic and Social Council at its second regular session of 1986 and the General Assembly at its forty-first session their views on the system-wide policy issues affecting operational activities identified by the Assembly in its resolutions 38/171 and 40/211. The organizations of the United Nations system were also invited to co-operate with the Director-General for Development and International Economic Co-operation in the preparation of his report for that review.

40. In resolution 40/250 on administrative and budgetary co-ordination of the United Nations with the specialized agencies and the International Atomic Energy Agency (IAEA), the Assembly, among other things, recommended that further efforts be made to achieve the maximum possible standardization and comparability in the budgetary and administrative practices of all organizations concerned. It invited the Secretary-General of the United Nations and the executive heads of the specialized agencies and IAEA to submit to the Assembly, at its forty-first session, their comments on matters referred to in resolution 40/250.

41. Among other resolutions that have some bearing on the work of UNIDO are: International Year of Peace and its programme (40/3 and 40/10); assistance to the Palestinian People (40/170); International Drinking Water Supply and Sanitation Decade (40/171); countries stricken by desertification and drought (40/175); strengthening the role of the United Nations in the field of international economic, scientific, technological and social co-operation (40/178); Charter of Economic Rights and Duties of States (40/182); specific action related to the particular needs and problems of land-locked developing countries (40/183); reverse transfer of technology (40/191); United Nations Financing System for Science and Technology for Development (40/194); co-operation between the United Nations and the Southern African Development Co-operation Conference (40/195); technical co-operation among developing countries (40/196); and effective mobilization and integration of women in development (40/204).

42. In a number of resolutions UNIDO, among other organizations of the United Nations, was asked by the Assembly to bring to the attention of its governing body the special needs of the Central African Republic (40/217), Sierra Leone (40/220), Benin (40/222), the Gambia (40/224), Cape Verde (40/226) and Vanuatu (40/233) and to report to the Secretary-General by 15 July 1986 on the pertinent decisions of its governing body, and in some cases, the steps being taken by UNIDO.

43. Resolutions adopted on assistance to Democratic Yemen (40/215), Equatorial Guinea (40/216), Chad (40/218), Mauritania (40/219), the drought-stricken areas of Djibouti, Ethiopia, Kenya, Somalia, the Sudan and Uganda

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(40/221), the Comoros (40/223), Guinea-Bissau (40/225), Djibouti (40/227), the drought-stricken areas of Ethiopia (40/228), Lebanon (40/229), Madagascar (40/230), Bangladesh (40/231), Mozambique (40/232), Nicaragua (40/234) and Guinea (40/235) also called for action by UNIDO.

44. Of relevance to UNIDO are also decision 40/438 on International Development Strategy for the Third United Nations Development Decade and decision 40/436 on the biennial programme of work for the Second Committee for 1986-1987. By decision 40/470 on the suspension of the fortieth session, the Assembly decided to resume its fortieth session, at a date to be announced, for the sole purpose of considering 13 agenda items, including item 41, the launching of global negotiations on international economic co-operation for development.

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SOURCES OF FUNDS

A. Technical co-operation planning and programme development

1. Technical co-operation for the benefit of the developing countries dominates the activities of UNIDO. In 1985 the indicative planning figures (IPFs) of the United Nations Development Programme (UNDP) continued to be the major source of funds for technical co-operation. Other sources of financing included the Special Industrial Services (SIS) programme of UNDP, the United Nations Industrial Development Fund (UNIDF), the UNIDO regular programme (RP) within the United Nations regular budget, Trust Funds (TF) and self-financing arrangements by developing countries, the United Nations Fund for Drug Abuse Control (UNFDAC) and the United Nations Capital Development Fund (UNCDF). The following paragraphs report on the availability and utilization of some of these financial resources in the year 1985. A summary of the situation with regard to support costs is also provided.

2. A sound planning, initiation and development of programmes and projects for technical co-operation formed the basis for financing and building up the substantive activities of the Organization. The immediate and long-term objectives of industrial development in the respective developing countries and the mandates given to the Organization provided the framework for the conception, preparation and implementation of these programmes and projects. Consistent progress was maintained in the development of programmes, at national, regional, interregional and global levels, and the implementation of the technical co-operation projects formulated on the basis of these programmes. Feed-back from the projects already in operation and their periodic evaluation provided guidance for improving the quality of future programmes and, in turn, facilitated their financing.

3. In 1985 UNIDO introduced an innovative and focused approach to programming technical co-operation in Africa and organized a series of seminars on and demonstrations of selected basic technologies which have a direct impact on the priority sectors of food, housing and energy and which utilize indigenous resources. As a result of the new approach, a number of project concepts of importance to the economies of African countries have been identified and formulated. The exercise is also expected to make a significant contribution to the fourth UNDP programming cycle (1987-1991) for these countries.

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4. Joint UNIDO/national programmes with Member States have contributed extensively to programme development. Co-operation with Czechoslovakia, Hungary and Poland included expert services provided free of charge for the programme of technical advisory services to African countries (see chap. V, para. 98). At the regional level, co-operation with the Pan African Telecommunications Union, an organization created by the Organization of African Unity, was invaluable when organizing a regional seminar and demonstrations on the telecommunications industry in Africa, which took place in Harare (Zimbabwe) in early 1986.

5. Co-operation with regional banks (e.g. the Inter-American Development Bank, the African Development Bank and the Asian Development Bank) on co-financed and jointly administered projects has been fostered with the aim of yielding additional resources for project implementation. An exercise has started in which UNIDO and the Asian Development Bank pursue this approach to promote small-scale industries and entrepreneurship in a developing country in Asia. Similar schemes are planned for the Caribbean and Central American regions as well as for the Pacific island States, which include the involvement of regional institutions and interested Member States in those areas.

6. In the development of programmes, emphasis is being placed on small-scale industries and on projects designed for rural development. The technical co-operation programme is also being streamlined to include intensified co-operation with the private sector through provision of more direct foreign investment to developing countries and through the transfer of appropriate technology.

7. A continuing growing interest is shown by Governments and other entities in recipient countries to finance technical co-operation projects partly (i.e. through cost-sharing) or fully (i.e. through a self-financing trust fund) (see para. 29 below). In the case of cost-sharing arrangements, co-financing is frequently secured from the UNDP indicative planning figure.

UNDP INDICATIVE PLANNING FIGURE AND COST SHARING

8. The UNDP indicative planning figure (IPF) continued to be the largest source from which UNIDO technical co-operation activities were financed. The resource outlook for UNDP remained stagnant, with total pledges for 1985 voluntary contributions to UNDP amounting to \$677 million. Thus, the programming level was maintained at 55 per cent of the illustrative IPF for the current (third) cycle. This meant a programming level (authorized budget level) of \$696 million with an expenditure target of \$500 million for 1985. The majority of the programming and project development efforts for the third UNDP programming cycle (1982-1986) had been accomplished after passing the mid-point in 1984; therefore, 1985 shows a slightly lower approval level. Activities in 1985 related to the commencement of programming and project development for the fourth UNDP programming cycle (1987-1991). Those

activities are expected to lead to a higher approval level in 1986 that will result in the implementation of programmes and projects from 1986 and onwards.

9. Between June 1981 and June 1985, 142 programmes were approved under the third cycle (1982-1986). UNIDO was designated executing agency for 533 projects amounting to \$432.2 million (see appendix K, table 1). These projects account for 14.6 per cent of the total programme for the third cycle, which compares favourably with a figure of 12.4 per cent for the second cycle (1977-1981). The actual UNIDO share of the third cycle period is expected to be larger than the original allocation in the country programme documents. A comparison by region of the 123 country programmes approved during the second and third cycles (19 countries did not have programmes in the second cycle) indicates an increase for each region of the overall UNIDO share: Africa (including African Arab States) from 11.5 to 13.2 per cent; the Americas from 13.6 to 15.5 per cent; Arab States (including African Arab States) from 9.6 to 11.6 per cent; Asia and the Pacific from 13.5 to 17.5 per cent; and Europe from 24.5 to 29.5 per cent (see appendix K, table 3).

10. During 1985, 50 missions were fielded for programming, project formulation and programme review to the following 51 countries and territories, listed by region:

Africa: Gambia, Kenya, Mauritania, Mauritius, Mozambique, Nigeria, Senegal, Seychelles, Sierra Leone, Swaziland, United Republic of Tanzania;

Americas: Barbados, Brazil, Costa Rica, Cuba, El Salvador, Grenada, Guatemala, Guyana, Honduras, Mexico, Nicaragua, Saint Christopher and Nevis, Trinidad and Tobago;

Arab States: Algeria, Bahrain, Democratic Yemen, Egypt, Iraq, Morocco, Saudi Arabia, Somalia, Tunisia, United Arab Emirates, Yemen;

Asia and the Pacific: Bhutan, China, Fiji, Hong Kong, India, Mongolia, Nepal, Pakistan, Papua New Guinea, Philippines, Solomon Islands, Tonga, Vanuatu, Viet Nam;

Europe: Hungary, Turkey.

11. The listing given below highlights some of the projects developed during 1985 and financed from UNDP/IPF resources in combination with other sources of funds such as cost-sharing by recipient Governments or by a third party.

(a) *Promotion and development of small- and medium-scale industries in Bahrain* (IPF: \$315,220; government cost-sharing: \$315,220): The objective is to strengthen the capacity of the Government to provide direct support to existing small- and medium-scale industries and in promoting new industries;

(b) *Industrial project development and pre-investment studies in Bahrain* (IPF: \$143,250; government cost-sharing: \$143,250): A group of experts will, together with government officials, undertake market surveys with a view to identifying industrial project opportunities, elaborating pre-investment studies and formulating a strategy for the implementation of viable projects;

(c) *The Federal Institute of Industrial Research at Oshodi (FIIRO), Industrial Information Centre, Phase II in Nigeria* (IPF: \$513,650; government cost-sharing: \$599,910): The immediate objective is to strengthen the Industrial

Information Centre at FIIRO through: (i) the establishment and the organization of industrial information extension services, (ii) the establishment of computerized information facilities and sources, (iii) the creation of a training unit for manpower development in industrial information, (iv) the establishment of an advisory service to industrial institutions with respect to their in-house information development, and (v) the set-up of linkages with sectoral, national, regional and international information networks;

(d) *Centre for meat- and dairy-processing industries in Bolivia* (IPF: \$450,000; third party cost-sharing: \$1,422,000). The objective is to establish a centre for meat- and dairy-processing industries to (i) train technical personnel, (ii) provide assistance to industries and institutions concerned in food technology, (iii) assist industry in research and development of new products and production methods, and (iv) develop co-operation with other training institutions specialized in technological processes.

SPECIAL INDUSTRIAL SERVICES PROGRAMME

12. 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 is executed through the use of short-term, high-level advisory services and missions.

13. The SIS programme is financed by UNDP and administered by UNIDO. The level of SIS resources for a given five-year programme cycle is determined by the Governing Council of UNDP. Since the start of the programme, the following amounts (\$ millions) have been allocated to the SIS programme:

1966-1971	1972-1976	1977-1981	1982-1986
17.4	14.3	17.2	13.95

14. The original plan to increase resources from \$17.2 million in the third cycle (1977-1981) to \$25 million for the fourth cycle (1982-1986) proved to be impossible. In fact, the allocation for the third cycle was limited to \$13.95 million because of the restriction imposed on all UNDP programmes. The annual average therefore was \$2.79 million. Although the number of requests for SIS assistance has increased, shortage of resources has forced UNIDO to adopt a cautious policy with regard to financing of projects from this source of funds. Inflationary factors have also limited the scope of the programme. Expert costs in particular have been rising steadily: in 1985 the *pro forma* cost for experts amounted to \$6,900 per month, as compared with \$2,500 in 1972.

15. In programming SIS resources, efforts were made to ensure a reasonable geographical distribution of funds during the current cycle, while trying to meet, by priority, the requirements of those countries which were the most in need of such assistance. Approvals in 1985 are shown in table 1 below.

TABLE 1. SIS APPROVALS IN 1985, BY REGION

<i>Region</i>	<i>\$ million</i>	<i>Percentage of all approvals</i>
Africa (including African Arab States)	1.77	36.5
Americas	1.29	26.6
Arab States (excluding African Arab States)	0.32	6.6
Asia and the Pacific	0.97	20.0
Europe	0.50	10.3
TOTAL	4.85	100.0

16. Assistance under the SIS programme in 1985 covered a wide variety of activities with a total of 263 projects related mainly to chemical industries, agro-industries, metallurgical and engineering industries. The distribution of SIS expenditures in 1985 by field of activity is given in table 2 below.

TABLE 2. SIS EXPENDITURES IN 1985, BY FIELD OF ACTIVITY

<i>Field of activity</i>	<i>\$ thousand</i>	<i>Percentage</i>
Industrial planning	35	1.30
Institutional infrastructure	101	3.76
Factory establishment and management	54	2.01
Agro-industries	568	21.15
Metallurgical industries	492	18.32
Engineering industries	382	14.22
Chemical industries	974	36.26
Regional and country studies	31	1.15
Feasibility studies	49	1.83
TOTAL	2 636	100.00

17. At the end of 1985 a UNDP evaluation mission carried out a review and an evaluation of the SIS programme before completion of the third UNDP programming cycle, to assess its performance and its impact as well as to suggest improvements in its future operation. The evaluation was made on the basis of questionnaires received from 50 UNDP field offices, an in-depth review of another 50 randomly selected projects and a field visit by one consultant to five countries. On the basis of this evaluation, a decision on the continuation and allocation of SIS funds to UNIDO for the fifth cycle (1987-1991) will be made by the Governing Council of UNDP in June 1986.

UNITED NATIONS INDUSTRIAL DEVELOPMENT FUND

18. Pledges to the United Nations Industrial Development Fund (UNIDF) in 1985 decreased to \$14.5 million (from \$16.9 million in 1984). The breakdown in segments is as follows: general-purpose convertible \$2.3 million; general-

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purpose non-convertible dollar equivalent 1.2 million; special-purpose convertible \$10 million; and special-purpose non-convertible dollar equivalent 1 million.

19. The slight decrease in pledges was mainly the result of exchange rate fluctuations which gave an artificially negative and hopefully transitory picture. The decrease in the total pledges cannot be considered as reflecting a real negative trend. The level of contribution in 1985 expressed in national currencies remained comparable with that of 1984. The continuing decrease in the general-purpose convertible segment of the Fund, however, is a cause for concern because the small general-purpose segment of the Fund is the only form of financing which allows for speedy and flexible programming to implement the priority programmes established by the Industrial Development Board.

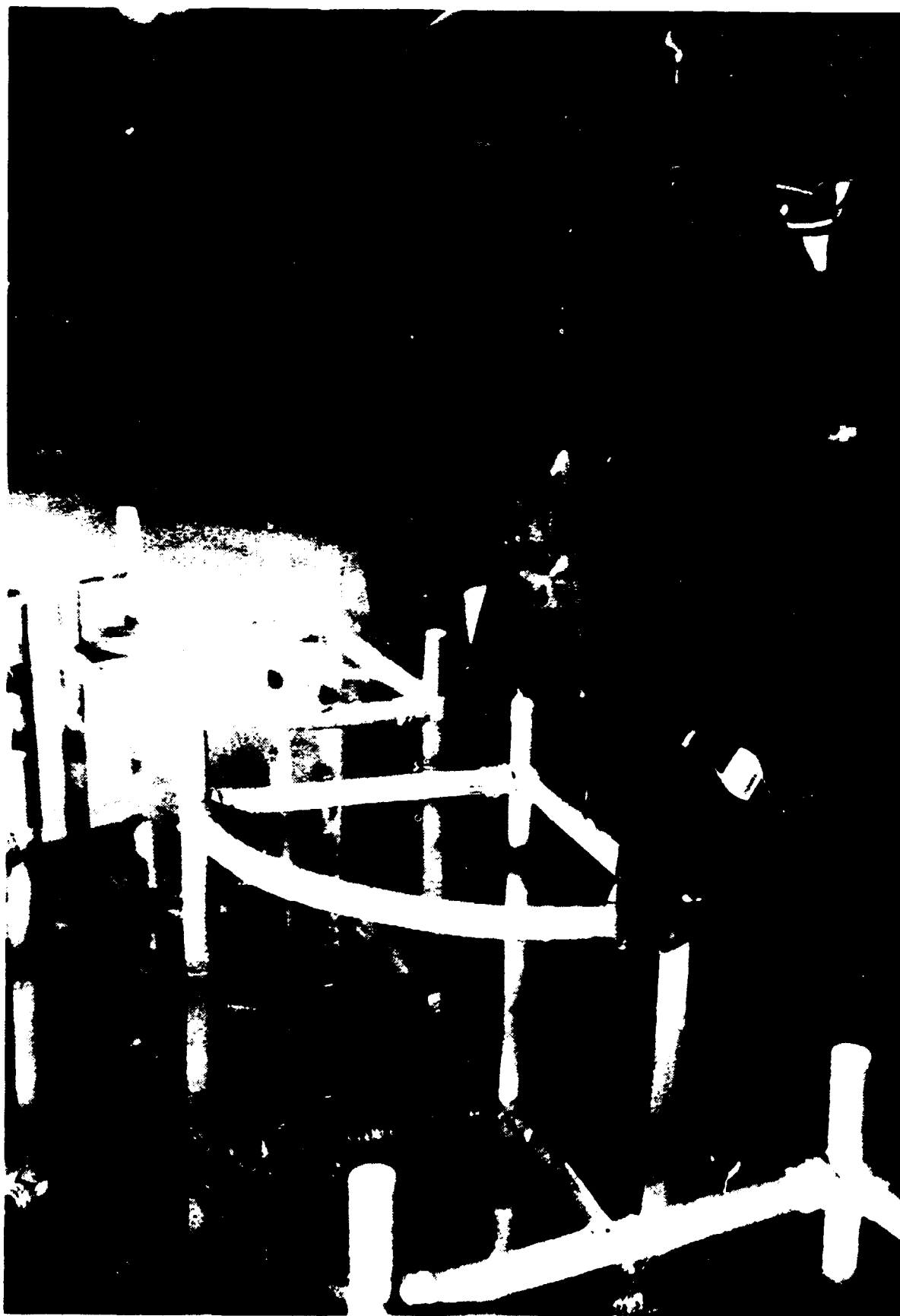
20. The Organization continued its efforts to encourage special-purpose donors to follow the example of Austria, which provided a complementary pledge to the general-purpose convertible pool, and to encourage donors of non-convertible contributions to follow the examples set by China and the German Democratic Republic and provide complementary convertible contributions to the general-purpose non-convertible pool.

21. Saudi Arabia and India continued to be the two main donors contributing to the general-purpose segment; India decided to provide half of its traditionally general-purpose pledge as a special-purpose contribution for 1985.

22. The trend in contributions to the special-purpose segment of the Fund remained positive for 1985. Most of the regular special-purpose donors to UNIDF maintained or increased their pledges.

23. New donors joined or were in the process of joining the Fund. The Government of the Netherlands joined UNIDF for the first time in 1985. Spain, which started contributing in 1984, strengthened its co-operation with UNIDF through additional contributions. A co-operation agreement with Portugal was signed, which paved the way for this country to become a special-purpose donor to UNIDF. The Government of Hungary provided an additional special-purpose contribution for 1985 in the context of the Industrial Development Decade for Africa (IDDA). Negotiations are under way with, among others, the Governments of Denmark and Norway concerning possible contributions to the Fund. The Organization is also pursuing negotiations to secure UNIDF contributions from non-governmental organizations.

24. Despite the limited resources available under the general convertible pool, the Organization continued its efforts to programme UNIDF resources according to the nine priority areas endorsed by the Board. In order to ensure the maximum impact of the Fund's modest resources, emphasis continued to be placed on sponsoring innovative projects of a pilot nature which would have a global, interregional or subregional impact. In fact, the increasing support by special-purpose donors encouraged UNDP to make additional contributions to ongoing UNIDF non-traditional experimental pilot projects because of the impact generated from those projects.



Manufacture of rattan furniture at Medan (Indonesia). The project was based on a UNIDO feasibility study,

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25. Special care has been exercised to support projects related to IDDA and the least developed countries and to promote projects which are oriented towards regional and interregional co-operation under arrangements for economic and technical co-operation among developing countries (ECDC/TCDC).

26. In 1985 the Organization also undertook special efforts to devise modalities of technical co-operation with special-purpose donors to UNIDF. In particular, the Organization endeavoured to establish a tripartite partnership between the recipient country, the donor country and UNIDO in joint project identification, formulation, monitoring and evaluation. Donor countries were encouraged to participate with UNIDO in the joint identification and formulation of projects in the recipient country. Close contacts were maintained with the UNDP field offices to ensure efficient co-ordination.

27. The results of many UNIDF projects were disseminated through the preparation and distribution of UNIDO publications, and through the holding of seminars and workshops to ensure that individual projects benefit as large a number of countries and individuals as possible.

28. Net approvals in 1985 amounted to \$12.65 million (excluding programme support costs). The distribution of approvals by region is given in table 3 below.

TABLE 3. SIS APPROVALS IN 1985, BY REGION

<i>Region</i>	<i>\$ million</i>	<i>Percentage</i>
Africa (including African Arab States)	2.78	22.0
Americas	1.83	14.4
Arab States (excluding African Arab States)	0.30	2.4
Asia and the Pacific	1.21	9.5
Europe	(0.01)	—
Global	3.31	26.2
Interregional	3.23	25.5
TOTAL	12.65	100.0

TRUST FUNDS AND SELF-FINANCING ARRANGEMENTS

29. There is a growing interest by recipient Governments and other entities to finance technical co-operation projects partly or fully under trust-fund agreements. However, UNIDO has encountered inherent difficulties in projecting the timing and the level of the inflow of funds under such trust fund agreements. In 1985 the Organization commenced to reappraise projects under such arrangements. This resulted in downward budget revisions and led to a substantial reduction of the approval figures for 1985 for projects to be implemented under trust-fund agreements. The reappraisal process is expected to continue in 1986. Consequently, while new projects approved in 1986 under this source of funds could exceed \$10 million, the actual forecast is lower due to

the reappraisal of ongoing projects. In the longer period, these initiatives will enable UNIDO to approach the growth of this programme on a sound and realistic financial basis, not only reflecting the needs in the recipient countries, but also taking into account changes of financial conditions in those countries.

UNIDO REGULAR PROGRAMME OF TECHNICAL CO-OPERATION

30. In 1983, the Permanent Committee at its nineteenth session considered proposals submitted by the Executive Director suggesting allocations for the biennium 1984-1985 under the UNIDO regular programme of technical co-operation. At the recommendation of the Permanent Committee, the Board at its seventeenth session in 1983 approved the tentative pattern of allocation for the 1984-1985 regular programme. In 1984, the Board, at its eighteenth session, approved the revised allocations for 1984-1985 on the basis of the appropriation estimated by the Secretary-General of the United Nations. For the biennium the original appropriation was set at \$6,610,600, out of which \$925,700 was to be made available in non-convertible currency.

31. During the biennium UNIDO received in addition a special appropriation in non-convertible currencies equivalent to \$414,300, bringing the total appropriation in non-convertible currencies to \$1,340,000. However, owing to exchange rate fluctuations, the total convertible allotment was reduced to \$5,436,900, bringing the overall regular programme allotment for the biennium to \$6,776,900. In 1984 and 1985 appropriations of \$1 million and \$5 million respectively were made from the regular budget for the implementation of IDDA. For budgetary purposes these appropriations are being considered as a part of the regular programme.

32. The UNIDO regular programme continued to supplement the resources of the Organization for industrial manpower development through individual fellowships, group training and the establishment and strengthening of training facilities in developing countries. Further emphasis was put on special needs of the least developed countries as well as on co-operation among developing countries. Other regular programme components included regional advisory services, short-term advisory services (interregional advisers) and consultations with Governments.

33. 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.

PROGRAMME SUPPORT COSTS

34. In 1985, 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

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Committee on Co-ordination. At its March session, the CCAQ (FB) reviewed the questions that had emerged during the thirty-ninth session of the General Assembly during its consideration of the analysis of the relationship between programme delivery and administrative costs for operational activities. To assist the Director-General for Development and International Economic Co-operation in responding positively to the questions raised by the General Assembly the Committee decided to provide him with a statement dealing with the differences between the levels of support costs incurred for technical co-operation projects managed by different organizations.¹ A draft of such a statement was considered by the CCAQ (FB) at its August/September session² when a number of suggestions were made by member organizations. The Office of the Director-General for Development and International Economic Co-operation agreed to take into account those suggestions in the final version of the statement which was included in the Director-General's report to the General Assembly at its fortieth session.³

35. In his report to the Governing Council of UNDP at its thirty-first session,⁴ the Administrator of UNDP noted that the difference in support arrangements and support cost ratios led to the question of the relative efficiency of support arrangements in contributing to the delivery of organizations' technical co-operation programmes. The Administrator also noted that appropriate instruments for measuring efficiency of operations are made available to the governing bodies of the organizations in reports on programme and budget implementation, in-depth reviews of specific programme sectors, inspection and audit reports and evaluation studies.

36. Under the methodology developed by UNIDO for identifying support costs, distribution of direct and indirect costs of the substantive activities and the percentage relationship of these costs to technical assistance delivery for the last five years are as shown in table 4 below.

TABLE 4. PROGRAMME SUPPORT COSTS
(In thousands of US dollars)

	1981	1982	1983	1984	1985
<i>Support costs</i>					
Indirect	6 917	6 294	5 855	6 029	6 695
Direct	16 615	17 322	18 478	17 824	18 928
TOTAL	23 532	23 616	24 333	23 853	25 623
<i>Technical assistance delivery</i>	88 500	91 900	78 000	87 200	94 500
<i>Support costs as a percentage of technical assistance delivery</i>	26.6 %	25.7 %	31.2 %	27.4 %	27.1 %

¹ACC/1985/7.

²ACC/1985/FB/R.35.

³ACC/1985/17.

⁴DP/1984/62.

37. In 1985, the level of technical assistance delivery increased by 8.3 per cent over the 1984 level resulting in the total cost as a percentage of delivery decreasing to 27.1 per cent. 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 4.

B. Regular budget

38. Activities other than technical co-operation projects were financed from appropriations from the United Nations regular budget for UNIDO. That portion of the regular budget is discussed under two separate headings. The first covers UNIDO (section 17 of the United Nations regular budget) and deals with the second performance report for the biennium 1984-1985 and the programme budget 1986-1987 as approved by the General Conference of UNIDO as a specialized agency.⁵ The second heading deals with general expenses including the running costs of the Vienna International Centre (VIC) (sections 28M—Administrative Services, Vienna; 29C—Conference Services, Vienna; and 29F—Library Service, Vienna) with regard to performance during the 1984-1985 biennium. As a result of the conversion of UNIDO to a specialized agency, proposed estimates for 1986-1987 for general expenses, including the running costs of the VIC, are now included in the programme budget 1986-1987 as approved by the General Conference for the Organization in its new status.

UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION

39. On the basis of revised estimates resulting from the first performance report for the biennium 1984-1985 submitted by the Secretary-General to the General Assembly in December 1984,⁶ the General Assembly, in resolution 39/237, approved revised budget appropriations for UNIDO amounting to \$74,323,300 under section 17 of the United Nations regular budget. In this amount, account was taken, *inter alia*, of: (a) adjustments of the exchange rate from AS 19.00 per \$1 for the biennium to AS 19.80 per \$1 in 1984 and an estimated AS 21.30 per \$1 in 1985; (b) lower costs resulting from an average inflation rate of 5.5 per cent in 1984 and an estimate of 4 per cent in 1985; (c) higher costs resulting from additional requirements related to the adjustments to standard costs; and (d) programme budget implications contained in General Assembly resolutions on the conversion of UNIDO into a specialized agency (39/231), on the industrial development co-operation (39/232), on the Industrial Development Decade for Africa (39/233) and on the programme budget for the biennium 1984-1985 (39/237).

40. Following approval of the revised appropriation, fluctuations in the exchange rate varied from the AS 21.30 per \$1 assumed in the first performance report. The actual average exchange rate for the first 11 months of 1985 was

⁵UNIDO/GC.1/10/Rev.1.

⁶A/C.5/39/88.

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AS 20.78 per \$1, while a rate of AS 18.60 per \$1 was assumed to be maintained to the end of the year. The second performance report for the biennium 1984-1985, submitted by the Secretary-General to the General Assembly at its fortieth session,⁷ showed an increase in the final appropriation for section 17 of \$4,367,900 owing to (a) increases related to losses in exchange rates (\$637,400), decisions of policy-making organs (\$1,118,900) and other changes (\$2,724,600) and (b) a decrease in the inflation rate (\$113,000). Preparation of the UNIDO programme budget (section 17) for the biennium 1986-1987 was initiated and completed during the second half of 1984. UNIDO submitted a draft proposed programme budget for review by the Secretary-General in December 1984, and subsequently that proposed programme budget was considered by the Board at its nineteenth session in May 1985. The Board's views on the proposed programme budget were made available to the Committee for Programme and Co-ordination at the end of May. Owing to the imminent conversion of UNIDO into a specialized agency, the Secretary-General decided not to review the UNIDO proposal.

41. The Director-General of UNIDO submitted a draft proposal for the programme budget 1986-1987 for UNIDO as a specialized agency to the Programme and Budget Committee at its first session in October 1985. The Board subsequently considered the proposals for the UNIDO programme and budget at part two of its first session in November and December 1985 and, in its decisions IDB.1/Dec.9 and 34, approved the net amount of \$95,267,929 (\$1 = AS 21.30) and recommended to the General Conference the adoption and approval of the appropriation. The General Conference at its first session in its decision GC.1/Dec.26, adopted and approved the net appropriations for the biennium 1986-1987 of \$112,706,804 (\$95,267,929 recalculated on the basis of 90 per cent Austrian schillings expenditures at \$1 = AS 17.70 in accordance with Board decision IDB.1/Dec.39).

VIENNA INTERNATIONAL CENTRE

42. With regard to the biennium 1984-1985, in his second performance report submitted to the General Assembly,⁸ the Secretary-General proposed an increase of \$397,900 under section 28M (Administrative Services, Vienna) primarily owing to losses as a result of the variations in the exchange rate.

43. Revised requirements for Administrative Services, Vienna, therefore, amounted to \$31,814,800, reflecting the increase of \$397,900 as follows:

(a) An increase of \$202,500 under services provided by the United Nations Office at Vienna (UNOV);

(b) An increase of \$195,400 under services provided by UNIDO.⁹

⁷A/C.5/40/50 (part I).

⁸*Ibid.*

⁹A/C.5/40/50/Add.28.

44. With regard to the biennium 1986-1987, an understanding was reached between the United Nations and UNIDO in October 1985 to establish for the period of 1986-1987:

(a) A joint United Nations/UNIDO meetings and interpretation service to be operated by the United Nations.

(b) A joint UNIDO/United Nations translation and documents service to be operated by UNIDO. Conference servicing requirements and facilities of the Vienna-based organizations would, during 1986-1987, be analysed systematically in a comprehensive study to be carried out jointly by the International Atomic Energy Agency, UNIDO and the United Nations. The results of the study would be submitted to policy-making organs in 1987 so that conclusions could be reflected in the respective 1988-1989 budgets.¹⁰

45. Estimates of income and expenditure related to the joint services are contained in the UNIDO programme and budget 1986-1987.¹¹

¹⁰UNIDO/TDB.1/26.

¹¹UNIDO/GC.1/10/Rev.1.

Chapter III

INDUSTRIAL OPERATIONS

A. Implementation overall in 1985

1. As in previous years, by far the largest part of technical co-operation activities was financed from the United Nations Development Programme (UNDP). Although the authorized budget levels of UNDP continued to be maintained at 55 per cent of the illustrative indicative planning figure (IPF) and the funds available under all sources for 1985 amounted practically to the same as in 1984, UNIDO was able to increase its delivery of technical co-operation projects by \$7.3 million. This was mainly the result of a higher level of implementation in UNDP-financed projects and of a higher rate of projects financed under the UNIDO regular programme of technical co-operation which included an additional \$5.0 million for the Industrial Development Decade for Africa (IDDA).

2. A total of 1,694 projects were implemented or under implementation in 1985, comprising 140 projects larger than \$1 million in value, 457 projects larger than \$150,000 in value and 1,097 projects below that value. Tables 1 and 2 below show technical co-operation expenditure in 1985, by source of funds and project component.

3. In 1985, the trend in technical co-operation continued to shift towards a higher degree of specialization, including sophisticated technology. This trend was reflected in an increased use of short-term, highly specialized international experts and split missions in UNIDO projects. This in turn raised the workload at Headquarters in identifying and recruiting candidates with the required qualifications and which was compounded by the uncertainties concerning government decisions on the selection of candidates. At the same time, there was an increase in the number of national experts and national project directors recruited by Headquarters.

4. The increase in the rate of project implementation continued to be hampered by delays in the approval of job descriptions for and the acceptance of consultant and expert candidates, the nomination of fellows and participants in study tours, the processing of requests for equipment specifications and the finalization of terms of reference for subcontracting, as well as the lack of or late provision of required counterpart staff and facilities.¹ Delays were also

¹ID/B/340, chap. III, para. 3.

operation among developing countries (ECDC); they also provided inputs to the activities carried out under those programmes. UNIDO continued to cooperate closely with other organizations within the United Nations system, including the regional commissions. In particular, close working arrangements were maintained with the Economic Commission for Africa in the implementation of the programme for IDDA. Relations with the World Bank and other development banks and financing institutions continued to be intensified.

7. In 1985, a growing recognition was observed on the part of the developing countries of the need to review and reassess at both the sectoral and subsectoral levels the progress and direction of their industrial development endeavours and the contribution of such endeavours to the overall national economic and social development. For that reason, in a number of projects, technical co-operation activities dealing with industrial planning were geared to a critical review of the problems and prospects of industrial development, the identification of industrial subsectors with higher development potential and comparative advantage, industrial restructuring, the reorientation of industrial strategies and policies and the formulation of industrial master plans.

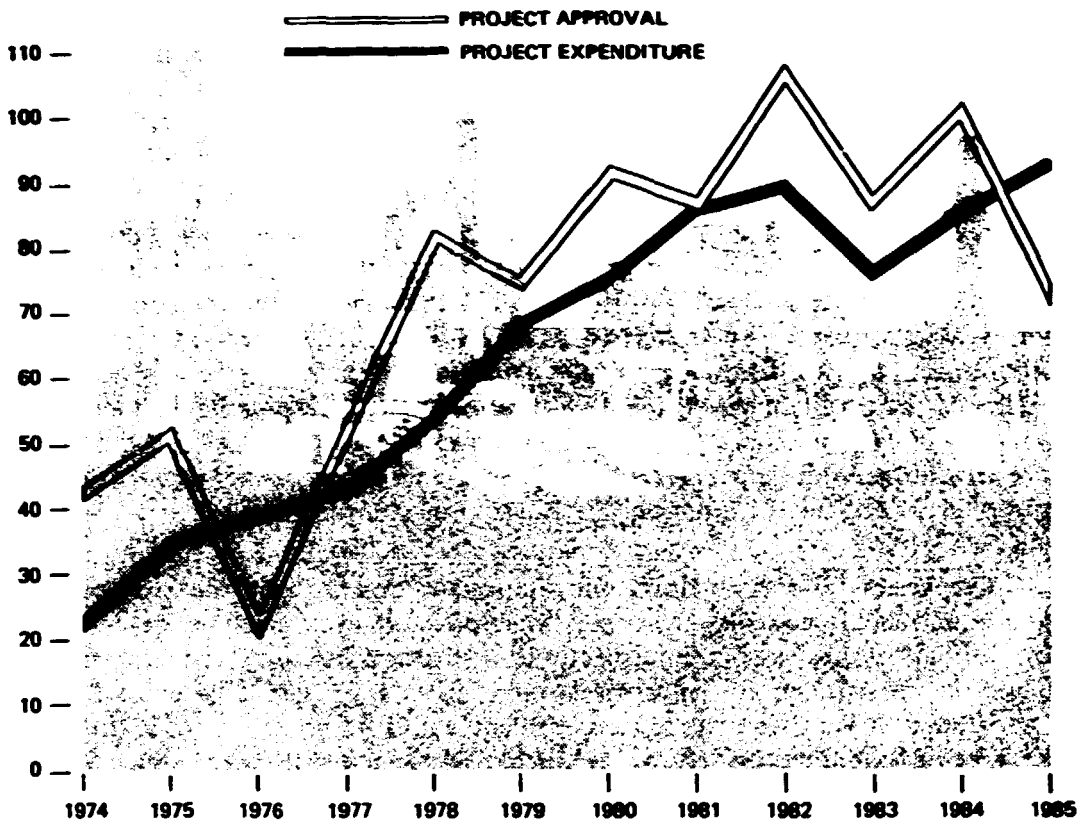
8. The general trend in developing countries towards the development of small- and medium-scale industries was reflected in a growing demand for UNIDO assistance in this field, both for institution building and support and for direct assistance to enterprises. Similarly, a greater awareness of the importance of rural industrial development could be observed from the large number of requests received for technical assistance to the rural areas. Strong support continued to be offered to the development of the institutional infrastructure in developing countries by providing assistance in the establishment and strengthening of multi-purpose industrial research and services institutions, covering a wide range of activities, from standardization, quality control and metrology to industrial information services. Other requests for technical assistance in the field of institutional infrastructure dealt with energy conservation at the factory level, the establishment and strengthening of local industrial consultancy services, the introduction of new and improved management techniques (including computer application and the development of specific software), and rehabilitation programmes for industries.

9. In the year under review there was a remarkable increase in the number of participants in individual training programmes (fellowships and study tours) and in the placement of trainees in developing countries—a contribution to technical co-operation among developing countries (TCDC) (see also paras. 174-176 below and appendix N). It should be noted, however, that while the majority of technical co-operation projects include a training element, those training activities which are carried out at the project site are not reflected in the statistics contained in appendix N.

10. Efforts to develop national skills in the preparation of pre-investment studies continued successfully and in this connection the Computer Model for Feasibility Analysis and Reporting (COMFAR) was further developed. At the end of 1985, COMFAR was being used in 36 countries. The development of COMFAR software (dialogues and reporting) in English, French, German, Russian and Spanish was completed in 1985.

TECHNICAL CO-OPERATION ACTIVITIES AT A GLANCE

(In millions of US dollars)



11. The development of the agro-industry sector is a main concern of developing countries. Many of the UNIDO activities in this field concentrated on the identification of new uses for agro-based raw materials, by-products and wastes. Other activities were directed towards the optimum utilization of basic agricultural raw materials (such as rice, grains, fruits, vegetables) as well as the appropriate integration of agricultural raw material production and agro-industrial processing with a view to increasing production efficiency. Special attention was also paid to the improvement of product quality and the minimization of production costs.

12. In a number of countries requests for assistance in the field of metallurgical industries showed a trend towards the development of small-scale universal foundry units—possibly combined with small forging and/or mechanical workshops—for the production of simple cast parts for agricultural purposes in the rural areas. Other developing countries requested high-technology assistance in the form of institution-building projects, techno-economic studies and pilot and demonstration plants.

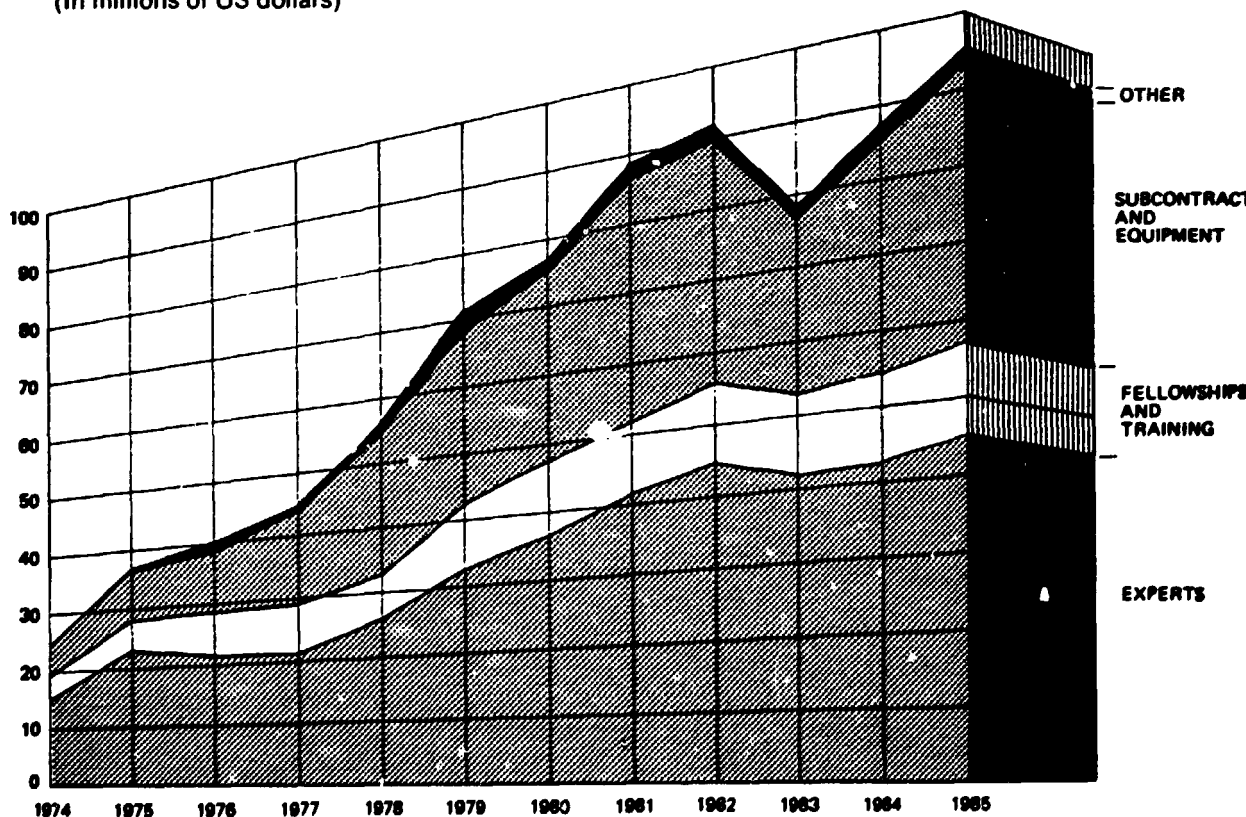
13. Activities relating to engineering industries concentrated on the development of prototypes of agricultural implements, repair and maintenance, the production of agricultural machinery, the production of machine tools and equipment using computers and numerical control techniques, the application of micro-electronic technology and the manufacture of marine transport equipment.

14. An interesting activity in the field of chemical industries was a global project to assess the feasibility of producing liquid rubber. The project was completed in 1985 with the establishment of a pilot plant. The feasibility of a new technique was proved which will reinforce the competitiveness of natural rubber over synthetic rubber and open up new opportunities for the natural rubber-producing countries. Other activities related to chemical industries dealt with the use of plastics in agriculture, particularly in countries with arid zones to increase food production. There was a trend towards production of more active and bio-degradable pesticides rather than highly persistent organochlorine pesticides. Emphasis was also placed on greater safety measures and the application of Integrated Pest Management (IPM) to reduce the impact of synthetic pesticides on the environment. The utilization of local plant resources—both spontaneous and cultivated—for the production of pharmaceuticals, essential oils and perfumery chemicals continued to be a major factor in technical co-operation programmes, particularly in the African and Asian regions. In a number of countries, pilot plants for the utilization of local plant resources have been established or are under construction. They contribute to self-sufficiency in the production of basic pharmaceuticals.

15. The developing countries' concern in energy development and conservation was reflected in all fields of activity. Technical co-operation projects on energy-related technologies continued to cover a wide scope of activities, including manpower development through group training programmes (e.g. on

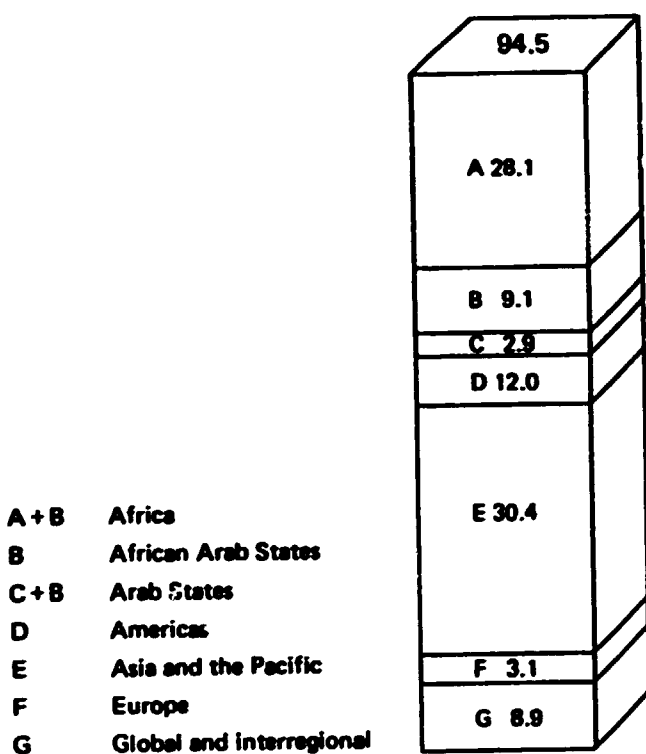
TECHNICAL CO-OPERATION PROJECT EXPENDITURES BY PROJECT COMPONENT, 1974-1985

(In millions of US dollars)



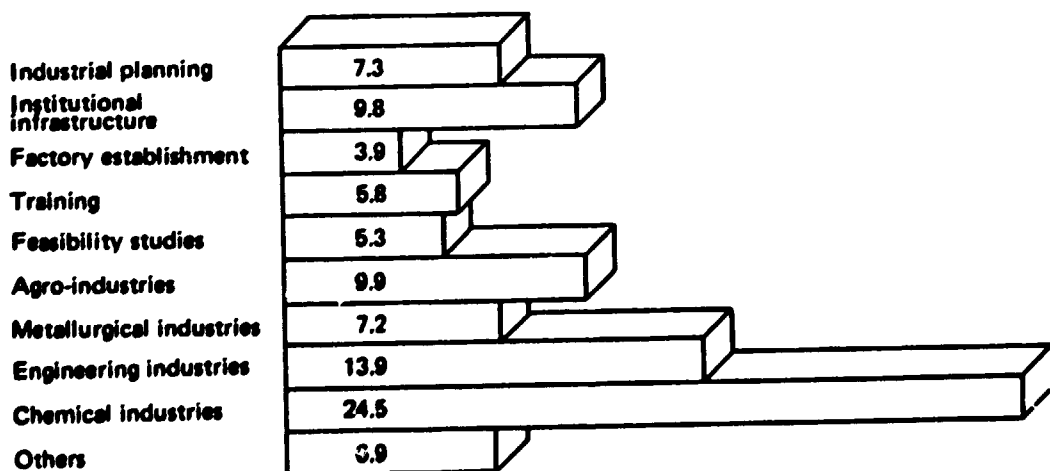
TECHNICAL ASSISTANCE DELIVERED BY UNIDO IN 1985

(In millions of US dollars)



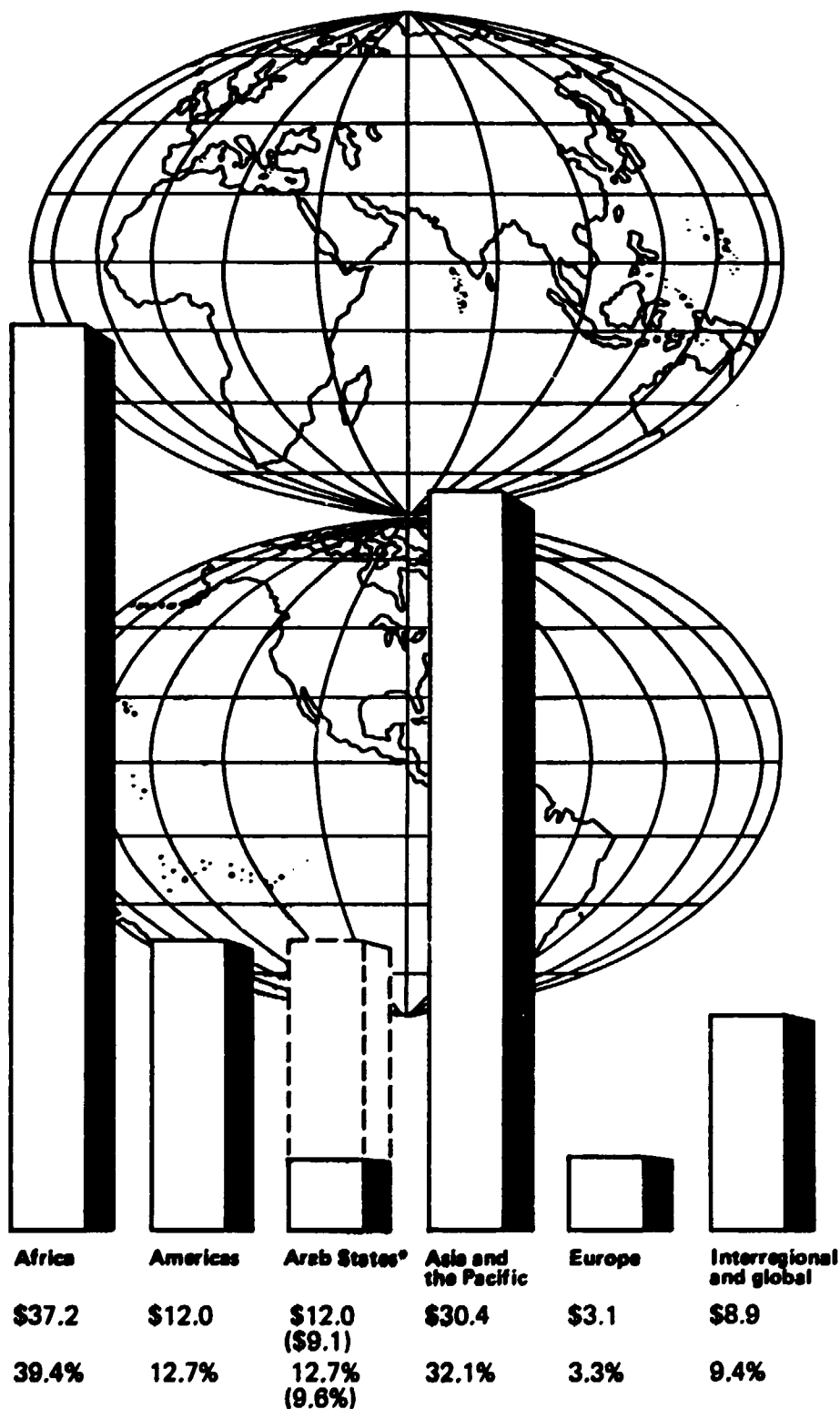
DISTRIBUTION OF TECHNICAL CO-OPERATION ACTIVITIES IN 1985

(In millions of US dollars)



TECHNICAL ASSISTANCE DELIVERED BY UNIDO IN 1985

(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".

energy planning and management), the development of new and improved energy conversion equipment (e.g. internal combustion engines, gasifiers, pyrolytic converters), and the harnessing of additional energy resources such as coal, lignite, small-scale hydropower, wind, solar and biomass.

16. UNIDO activities in the environmental sector aroused growing interest in many developing countries. Assistance in 1985 related to the preservation and improvement of environmental conditions and included activities related to transfer of low and non-waste technologies, recycling of waste materials, industrial water management, monitoring and abatement of industrial pollution, management of hazardous wastes and materials, and elaboration of industrial safety procedures. Environmental aspects were taken into consideration in all technical co-operation programmes and projects.

17. The interregional advisers in the Office of the Director of the Division of Industrial Operations continued to play an important role in the provision of direct technical consultancy services in response to urgent requests from Governments of developing countries, as well as in assisting in programming and project design and formulation and review and evaluation missions.

18. Highest priority was accorded to the implementation of projects within the programme for IDDA (see chapter V, paras. 90-106). The \$5 million special allocation under the UNIDO regular programme of technical co-operation for the implementation of the programme for IDDA made possible the financing of such activities as workshops and seminars on industrial development strategies; advisory services to the leather and leather products, pharmaceuticals, pesticides, and low-cost building materials industries; and assistance in the development of industrial manpower, strengthening of industrial institutional infrastructure and in the preparation of industrial studies. Assistance was also provided to a demonstration programme on the use of indigenous biomass resources, to a foundry and mechanical workshop and in the establishment of a pilot and demonstration plant for the production of oral rehydration salts and intravenous fluids.

19. The joint UNIDO/national programmes with Bulgaria, Czechoslovakia, Hungary, Romania, Turkey, Yugoslavia, the Union of Soviet Socialist Republics and the Council for Mutual Economic Assistance (CMEA) continued to provide services, experts, training and training material and technical demonstration in a wide range of industrial sectors, thereby supporting UNIDO activities in the transfer of technology in a number of specialized areas. As reported under the various fields of activity, a number of developed and developing countries offered their institutional facilities to UNIDO for research and training programmes.

20. The type of technical co-operation required for the development, adaptation and transfer of suitable technology continued to become more and more complex, specialized and specific in nature. A growing number of projects were of a multi-disciplinary character, calling for a co-ordinated input by two or more branches or sections of UNIDO and a spirit of teamwork in implementation. There was therefore a need for further improvement in the management instruments for the monitoring of projects in order to ensure timely implementation and to maintain a high standard of delivery. In this

respect the internal self-evaluation system was a useful management tool. In-depth evaluations were carried out in close co-operation with the Evaluation Unit. Co-operation was intensified with national recruitment centres, non-governmental organizations and companies to develop more efficient and expedient ways of access to expertise, sources of equipment supply, contractual services and training institutions and thus accelerate the overall implementation in technical co-operation activities.

B. Implementation by region

AFRICA

21. The value of projects executed by UNIDO in Africa in 1985 amounted to \$37.2 million (including \$9.1 million for African Arab States) which constituted an increase of \$7.2 million or 24.0 per cent (\$0.3 million or 3.4 per cent for African Arab States) over technical assistance delivery for Africa in 1984. A breakdown of technical assistance delivery, by source of funds and project component, is given in tables 3 and 4 below.

22. The overall economic situation in Africa did not change appreciably as compared with 1984 except for an improvement of food supply, after the drought ended in many parts of the continent. The economic base of many African countries that depend on the export of bulk commodities, such as

TABLE 3. 1985 TECHNICAL CO-OPERATION EXPENDITURE IN AFRICA,^a BY SOURCE OF FUNDS

Source of funds	1985	
	\$ thousand	%
Regular programme	6 642	17.8
UNDP		
IPF and cash counterpart	18 340	49.3
SIS	981	2.6
Special programme resources and special measures	293	0.8
Subtotal	19 614	52.7
UNDP-administered trust funds	1 441	3.9
Other funds		
Other trust funds	6 565	17.7
UNIDF	2 615	7.0
UNFDAC	—	—
Non-UNIDO funds	345	0.9
Subtotal	9 525	25.6
TOTAL	37 222	100.0

^aIncluding African Arab States (Algeria, Djibouti, Egypt, Libyan Arab Jamahiriya, Morocco, Somalia, Sudan, Tunisia).

TABLE 4. 1985 TECHNICAL CO-OPERATION EXPENDITURE IN AFRICA,^a BY PROJECT COMPONENT

Project component	1985	
	\$ thousand	%
Project personnel	22 320	60.0
Subcontracts	5 339	14.3
Fellowships and training	3 221	8.7
Equipment	5 374	14.4
Miscellaneous	968	2.6
TOTAL	37 222	100.0

^aIncluding African Arab States (Algeria, Djibouti, Egypt, Libyan Arab Jamahiriya, Morocco, Somalia, Sudan, Tunisia).

minerals and agricultural products, deteriorated further. The weakness of the economic, institutional and physical structure of most countries of the region prevailed, and the level of improvement that would induce self-acceleration of industrial development will be hard to achieve in those countries in the near future. Consequently, UNIDO assistance to the countries of the region concentrated on long-range industrial plans and strategies, industry performance, institutional infrastructure, and development and transfer of technologies. Special projects carried out under funding provided for the programme for the Industrial Development Decade for Africa (IDDA) were closely integrated with regular technical co-operation activities financed from traditional UNIDO sources of funds thus resulting in a synergetic effect.

23. In the field of planning and policy formulation, UNIDO continued to assist the Government of Cameroon in the formulation of a master plan for industrialization.² The long-term objective of this project is the promotion of an integrated industrial development strategy and policy, based on the optimum use of the country's natural resources and agricultural potential; the immediate objective was assistance in the preparation of the sixth 5-year plan (1986-1991). Of the 55 subsectoral studies planned within the project, 20 of the 22 for which UNIDO is responsible were completed in 1985.

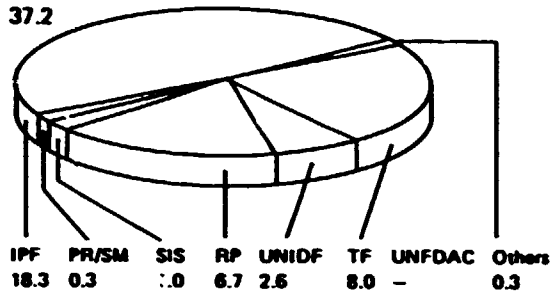
24. In the context of the industrial restructuring process in the region, UNIDO assisted an increasing number of countries, including Cape Verde, Côte d'Ivoire, Guinea and Senegal, in reviewing and revising their industrial strategies and policies (see para. 112 below). Projects for the establishment or strengthening of industrial planning institutes were carried out in Ghana and Sierra Leone.

25. Six national workshops on industrial strategies and policies within the framework of the programme for IDDA were held in Benin, Burkina Faso, Mauritania, Niger, Sierra Leone and Uganda. The workshops provided for the first time the opportunity for representatives of national institutions and of the public and private industrial sectors to discuss problems related to industrial development of their respective countries as well as to develop concepts of strategy and policy recommendations for development. Also within the

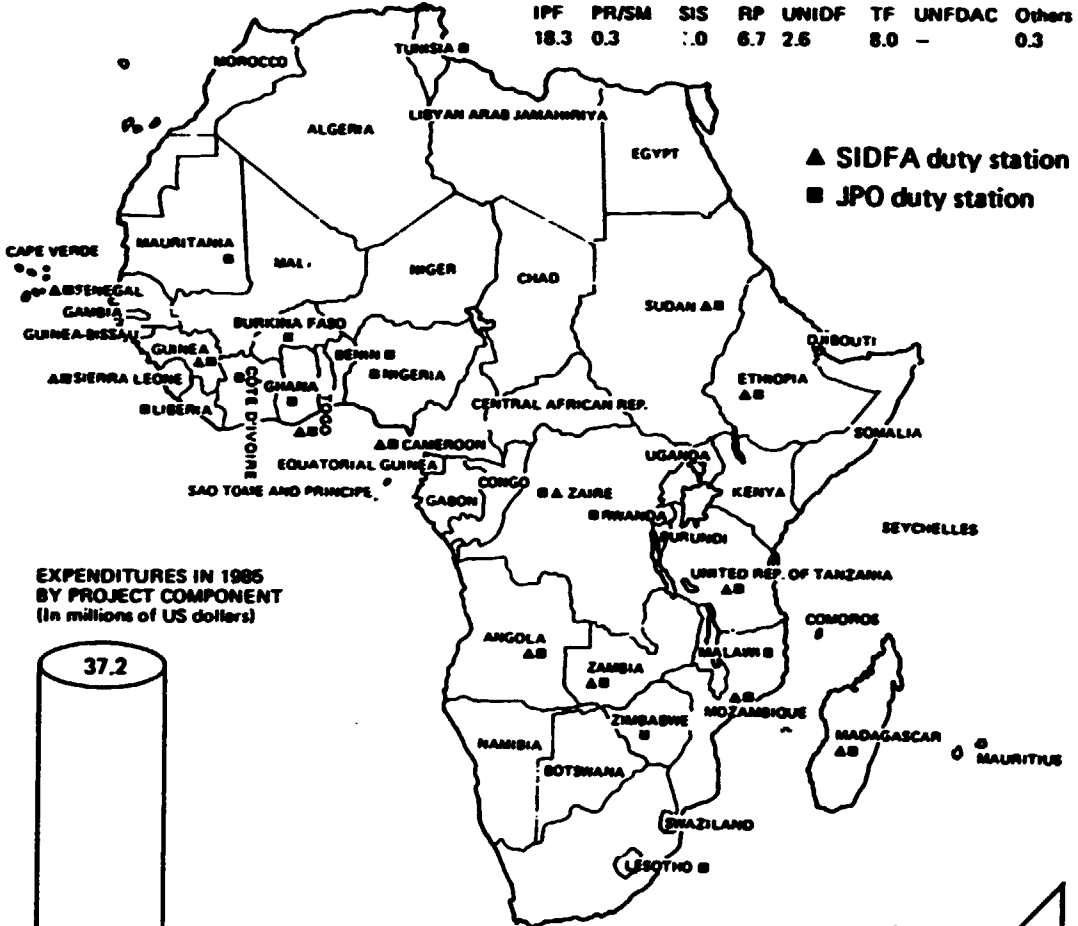
¹*Ibid.*, para. 103.

EXPENDITURES IN 1985 BY SOURCE OF FUNDS
(In millions of US dollars)

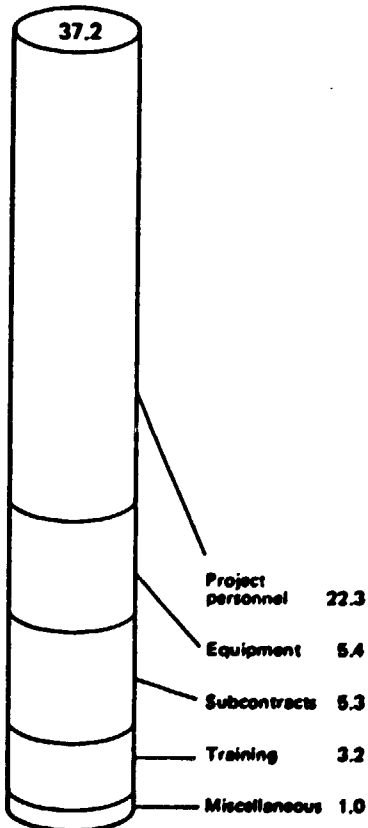
37.2



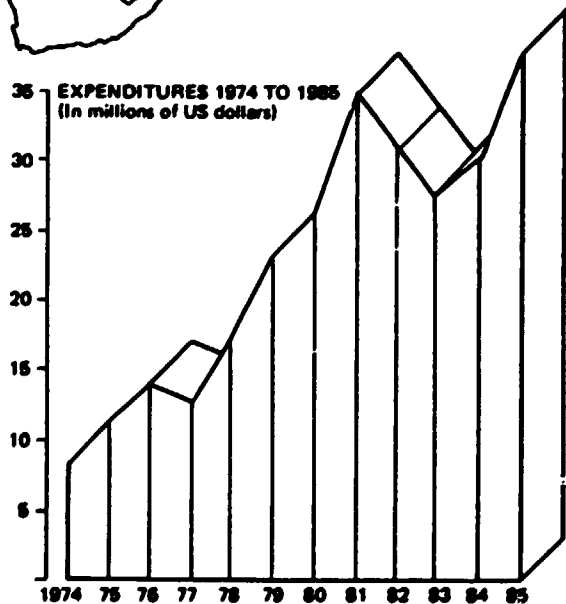
AFRICA



EXPENDITURES IN 1985
BY PROJECT COMPONENT
(In millions of US dollars)



EXPENDITURES 1974 TO 1985
(In millions of US dollars)



Chapter III

framework of the programme for IDDA, UNIDO assisted in the implementation of the initial integrated industrial promotion programme for the four African subregions (see chap. V, paras. 92-94).

26. UNIDO also assisted in strengthening the industrial planning systems of a number of intergovernmental organizations in Africa (e.g. the Economic Community of West African States, the Economic Community of the Great Lakes Countries (CEPGL) and the Preferential Trade Area for Eastern and Southern Africa). To CEPGL, for instance, assistance was provided in the preparation of a draft industrial development plan for CEPGL member States. This plan aims at supporting the agricultural sector by raising agricultural productivity through the provision of essential industrial inputs (e.g. fertilizers, pesticides, agricultural machinery, glass containers, iron and steel).

27. During the year under review, the first of a series of workshops on industrial planning was organized by UNIDO and the Union of Soviet Socialist Republics' counterpart agencies specifically for participants from English-speaking African countries. The workshop focused on strengthening and improving industrial planning systems in African countries.

28. Technical assistance activities related to new investments in the industrial sector of the region, particularly the preparation and evaluation of industrial feasibility studies, received increased attention in 1985. Thus two institution-building projects in Zambia were approved in 1985 with the aim of standardizing methodologies for project preparation and appraisal. Another aim of the projects is to strengthen the professional capabilities of the responsible government agencies in project preparation and appraisal by applying UNIDO standard pre-investment methodologies (see para. 184 below). Assistance was also given in the development of financing institutions, e.g. the African Development Bank at Lomé (Togo).

29. Under a special-purpose contribution by the Government of the Netherlands pre-investment studies were being carried out in Benin for a packaging factory and a mini-steel plant, in Guinea-Bissau for a flour mill, and in Burkina Faso for the production of pesticides. Eight studies of an opportunity, pre-feasibility and feasibility nature, finalized in 1985 for the Directorate of Planning in Madagascar, contributed to the improvement of the decision-making process in investment planning in that country. Implementation of a large-scale project in Chad continued with the preparation of a pre-feasibility study for a plant in Mayo-Kebbi, producing 100,000 tons of cement a year.

30. National training seminars on industrial project preparation, evaluation and financing as well as COMFAR seminars were conducted in Madagascar, Mozambique, Rwanda, Togo and Zambia. At the subregional level, within the framework of IDDA, a six-week training programme on project preparation and evaluation was organized in co-operation with CEPGL, at which emphasis was placed on practical aspects of preparing feasibility studies (see para. 200 below).

31. A number of projects continued to be directed towards the development and strengthening of national standardization bodies, elaboration and imple-

mentation of standards, development of quality and quality control systems and organizations and operation of national legal and industrial metrology services and laboratories. In 1985 technical co-operation projects were implemented in Ethiopia, Guinea, Nigeria, Zambia and Zimbabwe. A regional project assisting the African Regional Organization for Standardization benefited a large number of African countries.

32. The programme of assistance to small- and medium-scale industries, which is of particular relevance to the African region, was further consolidated and systematized by providing a comprehensive package of mutually supportive inputs that cover a wide range of technical services and facilities. In Ethiopia, assistance was provided in strengthening the capability of the Handicraft and Small Industry Development Agency.³ In Senegal, assistance continued to be provided to the Société nationale d'études et de promotion industrielle (SONEPI);³ in each of the three regional offices of SONEPI mechanical pilot workshops were established and started operation within existing industrial estates in 1985. In Zambia, under a project on rural industrial development, UNIDO provided assistance to the Village Industry Service in policy, strategy and programme development and in the training of instructors who conduct demonstration and training sessions in food processing and woodworking through a mobile training unit. Similarly, UNIDO carried out preliminary assistance to the Namibian people in meat and eggs processing in rural areas. On the occasion of the Fourth Technology for the People (International Technology and Licensing) Fair held at Budapest (Hungary) in August 1985, UNIDO, *inter alia*, sponsored the participation of several representatives from eight African countries (Algeria, Angola, Morocco, Niger, Rwanda, United Republic of Tanzania, Zambia, Zimbabwe). Technologies particularly suited to the developing countries were demonstrated at the Fair.

33. High priority continued to be accorded in the region to the need for urgent remedial action to rehabilitate existing industries or to improve their performance. For example, in Ethiopia a project aimed at strengthening the capacities of the Ministry of Industry in industrial project development and at improving performance of the enterprises under its responsibility. Another aspect of assistance to African countries was the improvement of management-related skills and the development of local consultancy skills. In view of the scarcity of local energy resources and the high cost of imported energy, energy conservation in the industrial sector of the African region is of particular importance. During 1985, UNIDO thus conducted for African participants seminars on energy management, industrial consultancy and general management. To accelerate the rehabilitation of factories, diagnostic activities started as the first step in the implementation of a project to assist African countries through the provision of short-term technical advisory services (see also chap. V, para. 98).

34. In the field of agro-industries, a practical approach was followed in two projects which could be considered a model for similar future projects. One project, in Guinea-Bissau, consisted of a preparatory mission in the form of an expert group meeting attended by high-level government officials, UNIDO consultants, equipment suppliers and representatives of financing institutions.

³*Ibid.*, para. 33.

Chapter III

The meeting analysed a large agro-industry complex that could not start operation because of technical problems and shortage of raw materials, and made specific recommendations for a rehabilitation and start-up programme. In the other project, in Niger, a large number of small plants to process manioc, onions and tomatoes at the community level were identified as the best and most economical approach to agro-industry development. In co-operation with the Centre de recherche agro-alimentaire in Lubumbashi (Zaire), UNIDO continued to prepare studies and evaluations on the development of agro-industries in Zaire. As a result, an extension service was set up for product development, and pre-feasibility studies were carried out for soup cube production, animal feed and tomato processing. Ethiopia was assisted in finding a use for its slaughterhouse by-products and Mozambique received assistance in producing yeast.

35. Also in the field of agro-industries, in accordance with recommendations made by the Third Consultation on the Leather and Leather Products Industry (April 1984), a project was launched to assist the integrated development of that industry in selected African countries and to carry out a model study in Egypt for starting up footwear components production. The textile and garment manufacturing are important industries in Africa that offer employment opportunities, particularly for women. Assistance was provided to the Pan Africanist Congress of Azania through a three-month training programme for women to study garment manufacture.⁴

36. In the field of engineering industries, technical co-operation activities in Africa aimed at fostering each country's capabilities and resources. Attention was given particularly to the development of infrastructures and to fuller utilization of available and potential resources, for the purpose of creating or improving existing production capacities. Examples in the region of the multi-faceted activities of UNIDO in the field of engineering industries were: agricultural tools and implements production (Lesotho and Togo); pump manufacture and repair and maintenance (Mali and Senegal); alternative sources of energy, such as solar energy (Madagascar); and hydropower miniplants (Ethiopia). Within the framework of the United Nations Transport and Communication Decade for Africa (1978-1988), UNIDO contributed to the rehabilitation of industries and the promotion of spare parts production, repair and maintenance, training and co-operation among developing countries in Africa. Mention should also be made of the project on local manufacture of radios in Rwanda which may develop into a subregional programme. Also at the subregional level was a meeting of experts in Mauritius at which a number of recommendations were made for the development of small-scale boat building and boat repair in East African countries.

37. In the field of metallurgical industries, the emphasis of technical assistance to the African region was on establishment and expansion of metallurgical plants, development of the foundry industry and initiation and strengthening of R + D activities. Thus, under a project aimed at assisting the iron ore and scrap processing industry in Angola, the first scrap-processing plant of the country was commissioned during 1985. Also in Angola, assistance started in 1985 for the development of the foundry industry and the rehabilitation of the national

⁴*Ibid.*, para. 47.

steel works. Other projects under implementation covered assistance, *inter alia*, to the United Republic of Tanzania in the establishment of a foundry with an integrated mechanical workshop and in developing a programme for the improvement of foundry performance; and to Mozambique³ in strengthening its capability for planning the development of its iron and steel industry, setting up a network of metal production and processing units and establishing a technological semi-industrial metallurgical and non-metallic testing and development laboratory. For nationals from 12 African countries, including four least developed countries, a demonstration workshop on appropriate technologies and equipment for the African metallurgical and metal-processing industries was organized jointly by UNIDO and the Polish Chamber of Foreign Trade (see para. 247 below). In close co-operation with the African Regional Centre for Engineering Design and Manufacture (ARCEDEM), located in Nigeria, the second ARCEDEM/UNIDO workshop and study tour on core metallurgical and engineering industries for nationals from African countries was organized in Hungary in September/October 1985.

38. In the area of building materials and construction industries the preparatory phase of two important projects in Chad and in Madagascar was concluded in 1985. Despite the different geographic and climatic conditions of the two countries, clay-based materials—covering sun-dried clay-blocks, lime or cement-stabilized soil blocks and fired clay bricks—were found to be the optimal building materials. This finding confirms a general observation in the African region that fired or unfired clay products will play an increasingly important role in the future for low-cost housing, provided the production and construction techniques are adapted to local conditions.

39. In the area of basic chemicals, activities focused on the petrochemical sector aiming at the development of main petrochemical downstream industries, particularly plastics, synthetic fibres and rubber products based on natural rubber. Three training courses on plastics technology, mould making and synthetic fibres are held annually in Vienna with the support of the Government of Austria, for participants from the African region. In Africa, a particularly important goal is to utilize plastics in agriculture and water management to achieve self-sufficiency in food production. UNIDO responded to this trend by organizing, in co-operation with the Government of Egypt, a workshop on the utilization of plastics in agriculture for participants from drought-stricken countries in Africa.

40. Assistance in fertilizer and pesticides production was given to Zimbabwe aiming at self-sufficiency of the country by using local raw materials. The local production of salt for human consumption and industrial use was further pursued in Nigeria and Zambia. Activities in the area of pulp and paper concentrated on the utilization of non-wood fibre materials.

41. In the area of biofuels, support was given to research and demonstration programmes for the development of alternative sources of energy. Examples for such assistance are the biofuel demonstration programme in Ethiopia on utilization of agricultural residues and a project in Zimbabwe on the development of technologies for the use of agricultural and food-processing

³*Ibid.*, paras. 44 and 213.

residues as fuels and of efficient charcoal-making techniques in order to reduce deforestation.

42. Most of the activities related to the development of pharmaceutical industries supported national health care programmes. In conformity with the relevant guidelines of the World Health Organization, technologies were adapted for the local production of pharmaceutical chemicals using available resources; preventive measures were enhanced by promoting production of biologicals and vaccines; and national institutions were strengthened to sustain R + D efforts and to serve as national drug control laboratories. Assistance in the industrial utilization of medicinal and aromatic plants continued in Burkina Faso, Mali, Rwanda and the United Republic of Tanzania. In Guinea, a pilot and demonstration plant for the production of oral rehydration salts and intravenous fluids is being established, while in Mozambique preparatory assistance for the establishment of a pilot plant for pharmaceuticals is under implementation. Projects were also developed for the rehabilitation and expansion of vaccine production facilities in Cameroon, Ethiopia, Madagascar and the United Republic of Tanzania.

43. As interest increases in Africa for protecting the environment, emphasis is being placed on assistance in safeguarding scarce water resources and prevention of water pollution. Expert services were thus provided to Burkina Faso to advise the Government on appropriate taxation schemes for industrial water pollution abatement, while in the Seychelles problems were resolved that were related to the collection and controlled disposal of waste oil.

44. Industrial manpower development and training is viewed as the most urgent and crucial task for Africa in its quest to develop its industries. Therefore, programmes implemented within the IDDA framework provided a unique opportunity to identify needs and policies to build up the skilled and specialized manpower necessary for industry and to promote co-operation among African countries in that respect. A workshop for English-speaking top executives of African development banks was organized at Cairo (Egypt) in November 1985 and a seminar of training of trainers for financial institutions was organized at Abidjan in October-November 1985 in co-operation with the African Association of Development Financing Institutions. These programmes provided the professional staff of development financing institutions with opportunities to be exposed to such issues as resource mobilization, training policies and programmes, and project appraisal including appraisal of small- and medium-scale industries.

45. A major part of the training activities were related to the setting up of training institutions. Projects were designed to foster a gradual harmonization of training policies and activities between African countries and to promote regional co-operation while giving proper attention to manpower development needs at the national level. In this context, a training seminar was held on financing of small- and medium-scale enterprises at Libreville (Gabon), in September 1985, the recommendations of which were endorsed in December 1985 by the six member countries of the Central African Customs and Economic Union (UDEAC) in the Libreville Plan of Action on the Development of the Small- and Medium-scale Industries in the UDEAC Countries. The Libreville Plan of Action also aims at subregional technical co-operation in establishing a coherent common policy for the development of that sector.

46. Under the IDDA allocation, a series of training programmes on food-processing were organized as a means of fighting malnutrition and health hazards. An assessment was also carried out of the training needs in the textile industry in Kenya with a view to strengthening the country's training capacities and expanding them to the regional level. Of particular importance was the development of a training manual for trainers in industrial maintenance for small- and medium-scale enterprises and of a modular approach for courses in maintenance.

47. In addition to two programmes on railroad maintenance organized within the framework of the Transport and Communications Decade for Africa (see para. 172 below), nationals from six African countries took part in an interregional programme on ship maintenance conducted in Belgium. A number of participants from the African region also took part in interregional training programmes on maintenance and repair of diesel engines organized in China and Czechoslovakia. An assessment of training needs in the field of iron and steel industry of the member countries of the Preferential Trade Area was conducted as a follow-up to a resolution on the subject adopted by a meeting of heads of States and Governments of the member countries of the Southern African Development Co-ordination Conference (SADCC). At that meeting, authorities from Zimbabwe offered to host regional training programmes in the field of iron and steel. In Niger, a number of training programmes were organized for some 150 managers in industry to improve management skills of existing cadres.

THE AMERICAS

48. The value of projects executed by UNIDO in the Americas in 1985 amounted to \$12.0 million which constituted an increase of \$3 million or 33.3 per cent over technical assistance delivery for that region in 1984. A breakdown of technical assistance delivery, by source of funds and project component, is given in tables 5 and 6 below.

49. The second half of the 1980s started in Latin America with some signs of recovery. There was a noticeable improvement in exports as a result of an upswing in world trade and of regional efforts. A slight growth in industrial production and significant programmes aimed at resolving the foreign debt issue are indications that the region is beginning to recover from recession. Economic policies, however, had to be reoriented in search of short-term solutions for increasingly serious social problems prevalent in the region.

50. As a consequence, industry in general, and industrial planning in particular, received specific attention on the part of government authorities in most Latin American countries. Governments are increasingly looking at industrial planning techniques as an instrument to best respond to basic social needs through improved technologies and an increase in the local production. The reorganization and modernization of the food-processing, textile, clothing, building materials and construction industries, as well as the energy and transportation sectors received particular attention, while the development of the capital goods sector aimed at technological improvement and enhancement.

TABLE 5. 1985 TECHNICAL CO-OPERATION EXPENDITURE IN THE AMERICAS, BY SOURCE OF FUNDS

Source of funds	1985	
	\$ thousand	%
Regular programme	228	1.9
UNDP		
IPF and cash counterpart	7 683	63.9
SIS	757	6.3
Special programme resources and special measures	3	—
Subtotal	8 443	70.2
UNDP-administered trust funds	196	1.6
Other funds		
Other trust funds	500	4.2
UNIDF	798	6.7
UNFDAC	1 503	12.5
Non-UNIDO funds	350	2.9
Subtotal	3 151	26.3
TOTAL	12 018	100.0

TABLE 6. 1985 TECHNICAL CO-OPERATION EXPENDITURE IN THE AMERICAS, BY PROJECT COMPONENT

Project component	1985	
	\$ thousand	%
Project personnel	5 746	47.8
Subcontracts	1 287	10.7
Fellowships and training	897	7.5
Equipment	3 679	30.6
Miscellaneous	409	3.4
TOTAL	12 018	100.0

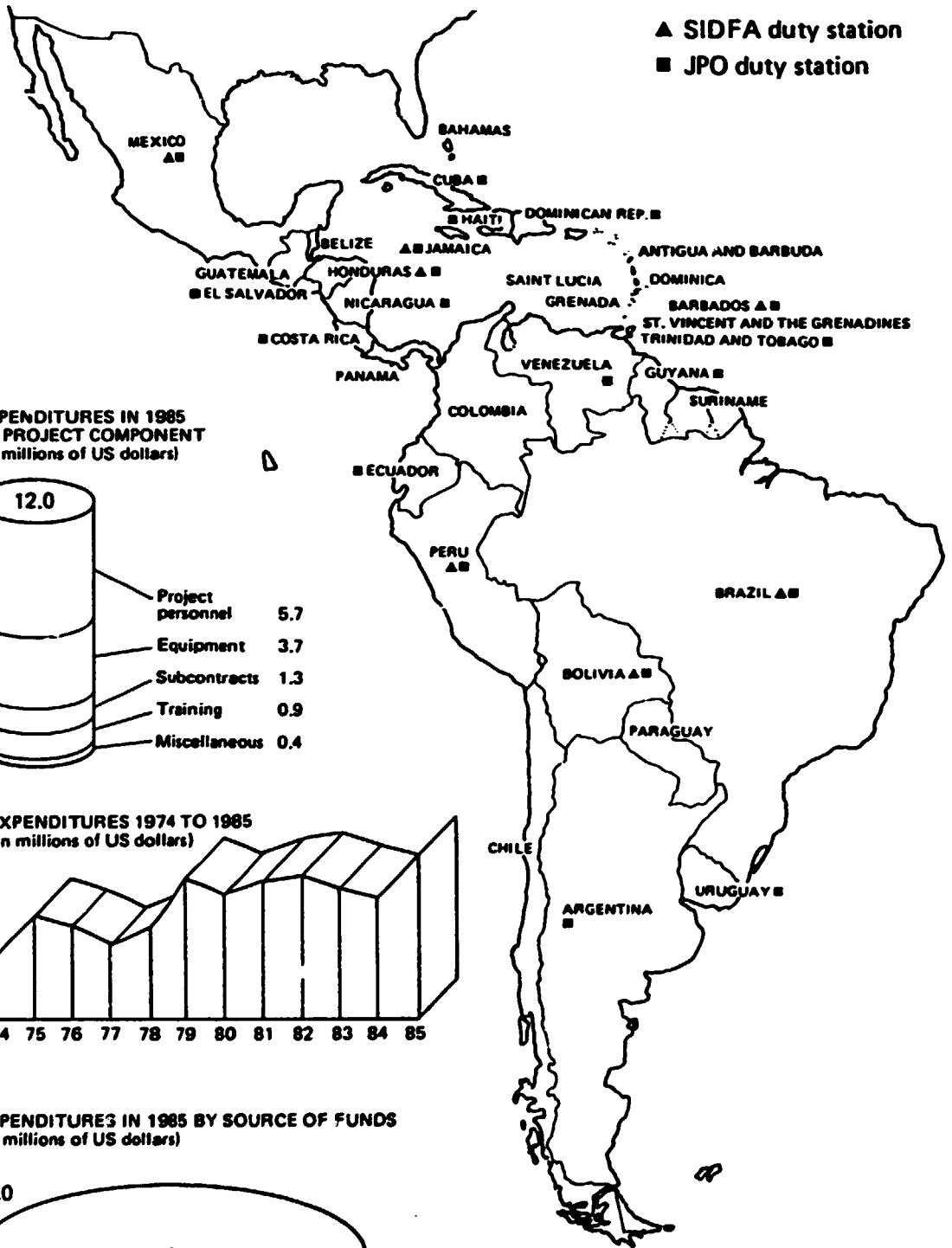
In Venezuela, the formulation of a national industrial policy continued through the elaboration of plans for specific industrial subsectors. Assistance in this respect was given through a new project to support the sectoral planning office of the Ministry for Development and an ongoing project on the formulation of strategies for the development of the capital goods industry.⁶ Also worth mentioning are workshops held in Honduras that were aimed at developing national consensus and a spirit of co-operation among private and public employers, industrial employees and the Government.

51. With a view to stepping up industrial productivity, micro-computers as a management tool are increasingly used not only in larger firms but also in smaller enterprises. Based on the model of a project in Barbados that provided for improved management through computer support,⁷ similar assistance was

⁶*Ibid.*, paras. 53 and 106.

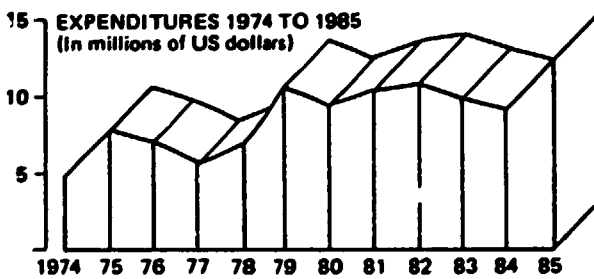
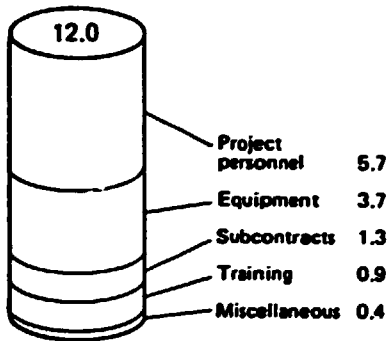
⁷*Ibid.*, para. 57.

THE AMERICAS

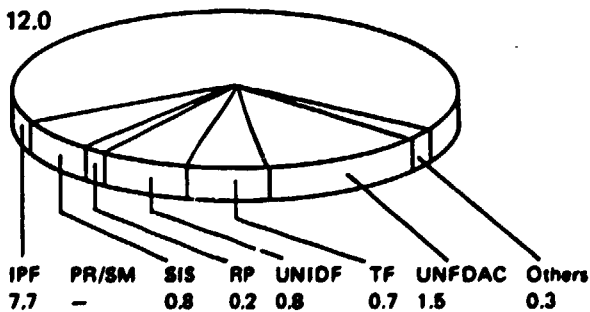


▲ SIDFA duty station
■ JPO duty station

EXPENDITURES IN 1985 BY PROJECT COMPONENT
(In millions of US dollars)



EXPENDITURES IN 1985 BY SOURCE OF FUNDS
(In millions of US dollars)



provided to Cuba, where a team of experts helped introduce computer aided management tools in a pharmaceutical plant producing antibiotics. The project was successful, and it is planned to use this concept in other countries with similar needs. In Central America rehabilitation of private sector industries is accorded high priority. To achieve this goal, the Central American Development Bank received a loan of \$50 million from the United States Agency for International Development of which \$5 million have been earmarked to strengthen the Bank itself. This activity has been complemented by a UNIDO regional project to provide the required technical assistance. Furthermore, computer models based on the work done in Cuba and Central America will be developed and integrated with management methods to be used for training purposes in other Latin American countries.

52. Another area where micro-computers are exceptionally useful tools is investment decision-making. A training seminar on industrial project preparation and evaluation was organized in Cuba, which also included training in COMFAR, the UNIDO computer software programme. The new multilingual versions were presented at regional meetings held for that purpose in Brazil, Mexico, and Trinidad and Tobago.

53. To respond to the specialized and high-technology requirements of small- and medium-scale industries in Latin American countries, a modular approach was introduced to define appropriate technical assistance in line with prevailing local conditions and the level of development of the requesting country. In Mexico, for example, as a result of the work carried out under a project which covered strategies for the development of small- and medium-scale industries,⁸ a presidential decree was promulgated in July 1985 for promoting and coordinating development inputs to the small- and medium-scale industry sector. Similarly, in Venezuela, assistance was provided for the restructuring and modernization of the Small- and Medium-Scale Industry Development Corporation to enhance the capacity of this key institution through rationalization, decentralization and technical orientation of its activities. The project included advice in defining the priorities and policies for financial assistance to existing small- and medium-scale industries.

54. In industrial institutional infrastructure development, a broad range of various integrated, multi-disciplinary programmes were implemented in the region. UNIDO, with the International Atomic Energy Agency as associated agency, continued to assist Latin American countries on a regional basis to develop their non-destructive testing (NDT) capacity, which is particularly important for the enhancement of the capital goods sector. Four regional courses on specific NDT topics were organized, and the regional NDT network was expanded. The project was financed from various sources of funds within the United Nations system and from contributions by the Governments of Canada and Italy. A regional project approved in 1985 for the eastern Caribbean subregion has as its main objective the stimulation of production in the region by using locally available agro-based raw materials, thereby enhancing the competitiveness of export products. A new project was approved for Jamaica whereby the Government will be assisted in the promotion of the handicraft industry through provision of improved product development, technical know-how and training services to craft producers.

⁸*Ibid.*, paras. 26 and 128.

55. 1985 was a particularly positive year for programmes in the region in food processing and general agro-industry development. SIS funds were one of the main sources of finance, which enabled UNIDO to supply high-level expertise at very short notice. Expertise was provided in the setting up of a cocoa-processing plant in Peru; in developing integrated programmes for agro-industry development in Mexico, Bolivia and Brazil; and in identifying potential varieties of processed meat products in Uruguay for export. As regards wood industries, UNIDO assisted the Federation of Furniture Manufacturers in organizing the First Latin American Congress of Furniture Production and Design, which took place in Argentina in May. At the national level, the Ecuadorian furniture factory Arte-PRACTICO received assistance in improving its financial management, developing products for export and introducing appropriate technology and effective quality control. Continued interest in the UNIDO-developed low-cost modular prefabricated wooden bridge system resulted in a number of new requests. For example, in Ecuador, where the first prototype bridge was built in 1985, a new project for assistance in the construction of further bridges was initiated. A project in Argentina aimed at improving export capabilities of the shoe industry while in Jamaica on-the-spot assistance was provided to tanners to upgrade their traditional methods of vegetable tanning and thus achieve the level of quality required for exporting. In order to meet market requirements, the Jamaican Government also requested assistance in upgrading the quality of package design. Assistance was also provided to Peru in the improvement of the quality of tobacco products for both domestic and foreign markets.

56. Metallurgical projects in the Americas were predominantly devoted to the development and expansion of the iron and steel industries. An example is a project in Bolivia that aims at defining the most suitable technological process routes for iron and steel production. As regards heavy, non-ferrous metals, a large-scale sophisticated project became operational in 1985 in Chile which involves a large number of national scientists and technologists and international experts. The project is intended to develop, in an integrated, multi-disciplinary approach, economic technologies for the bacterial leaching of copper from the tailings of copper sulphide ores. Similar assistance is being given to Peru at the factory level. At the regional level, a bauxite demonstration workshop was held in Jamaica in June and July. With its well-equipped pilot plant set up with the help of UNIDO, the country is in a position to launch a new era of TCDC; under the auspices of UNIDO it has already provided assistance in testing bauxite ores from other developing countries on a bilateral basis.

57. As in the past, a number of individual fellowships programmes were organized for Latin American countries to improve quality control (in Costa Rica and El Salvador) and industrial maintenance (in Cuba). A large-scale project was launched in Bolivia with the support of the Government of Italy for the establishment of a training centre for processing meat and dairy products. The Centre is expected to serve other member countries of the Andean Group. Also at the regional level, a seminar on curriculum development for training managers of industrial public enterprises in Latin America was held at Buenos Aires (Argentina) in co-operation with the Latin American Centre for Development Administration and the Inter-American Centre for Training and Public Administration.

58. While technological co-operation between engineering industries and R + D institutions in Latin America varies with the degree of available technological infrastructure, emphasis was placed in 1985 on assistance in the promotion of advanced infrastructure for engineering institutions. For example, in Argentina, UNIDO assistance is geared towards the establishment of a computer aided design and manufacturing centre within the Centre for Advanced Technology to serve the metalworking and engineering industries of that country. Assistance is also being provided to Chile in the establishment of a model centre for the repair and maintenance of biomedical and electronic hospital equipment. With the aim of reducing repair and maintenance costs in the sugar plants, the Government of Cuba requested UNIDO assistance in the selection of materials that are resistant to the corrosion currently encountered in the sugar production process. Such assistance is crucial in view of the key role that the sugar industry plays in the economy of the country.

59. In some countries of the region, priority continued to be given to rural development. In Haiti, for example, major efforts were expended on the development of agricultural tools and implements production. In this connection, use was made of the experience acquired in prototype-development and adaptation in Africa.

ARAB STATES

60. The value of projects executed by UNIDO in the Arab States in 1985 amounted to \$12.0 million (including \$9.1 million for African Arab States) which constituted a decrease of \$0.9 million or 7.0 per cent over the total figure for 1984 (an increase of \$0.3 million or 3.4 per cent for African Arab States). A breakdown of technical assistance delivery, by source of funds and project component, is given in tables 7 and 8 below.

61. A prominent feature of the area, characterized by different levels of development in the African Arab and the West Asian Arab States, is the effect of prices of mineral oil and derivative products on the development of some of the countries. The mineral oil exporting countries, such as Algeria, Egypt and the Libyan Arab Jamahiriya, suffered as a result of the drop in mineral oil prices while mineral oil-importing countries, such as Morocco and Jordan, benefited. Mounting debt burdens and reduced external capital flows required financial adjustments, which influenced domestic development policies.

62. UNIDO assistance to the five least developed countries among the Arab States covered a broad range of activities. For example, in the field of industrial planning, UNIDO was called to assist the Government of Djibouti in the preparation of an industrial development programme and in the Sudan, UNIDO experts helped the Government in the elaboration of an industrial census and in the identification of strategies for industrial promotion. With a view to improving the productivity of public enterprises, an ongoing project in Somalia was supplemented by several short-term projects providing advice in industrial legislation and assistance in the rehabilitation and maintenance of industrial equipment. Also in Somalia assistance under various projects was

TABLE 7. 1985 TECHNICAL CO-OPERATION EXPENDITURE IN ARAB STATES,^a BY SOURCE OF FUNDS

Source of funds	1985			
	\$ thousand		%	
Regular programme	641	(406)	5.4	(4.5)
UNDP				
IPF and cash counterpart	4 320	(2 460)	36.1	(27.0)
SIS	467	(277)	3.9	(3.0)
Special programme resources and special measures	—	—	—	—
Subtotal	4 787	(2 737)	40.0	(30.0)
UNDP-administered trust funds	13	(13)	0.1	(0.1)
Other funds				
Other trust funds	5 958	(5 720)	49.7	(62.7)
UNIDF	532	(247)	4.4	(2.7)
UNFDAC	—	—	—	—
Non-UNIDO funds	49	—	0.4	—
Subtotal	6 539	(5 967)	54.5	(65.4)
TOTAL	11 980	(9 123)	100.0	(100.0)

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

TABLE 8. 1985 TECHNICAL CO-OPERATION EXPENDITURE IN ARAB STATES,^a BY PROJECT COMPONENT

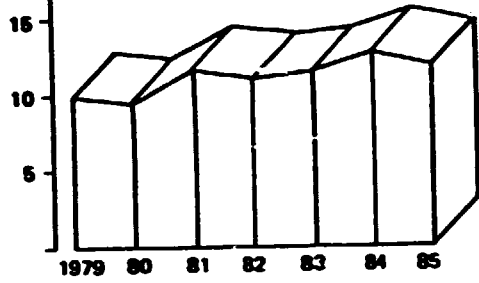
Project component	1985			
	\$ thousand		%	
Project personnel	9 735	(7 411)	81.2	(81.2)
Subcontracts	454	(439)	3.8	(4.8)
Fellowships and training	674	(266)	5.6	(2.9)
Equipment	906	(876)	7.6	(9.6)
Miscellaneous	211	(131)	1.8	(1.5)
TOTAL	11 980	(9 123)	100.0	(100.0)

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

provided in modernizing a foundry and mechanical workshop in Mogadiscio. Through a rational combination of UNDP, UNIDF and IDDA funds and a special-purpose contribution from Egypt it proved possible to mobilize financial resources for upgrading staff skills, introducing new products and adapting new technologies. The concept of TCDC applied in that expertise was provided by Egypt. SIS funds were utilized in Yemen to assist in the improvement of bread production and distribution and to give advice on the manufacture of rubber products.

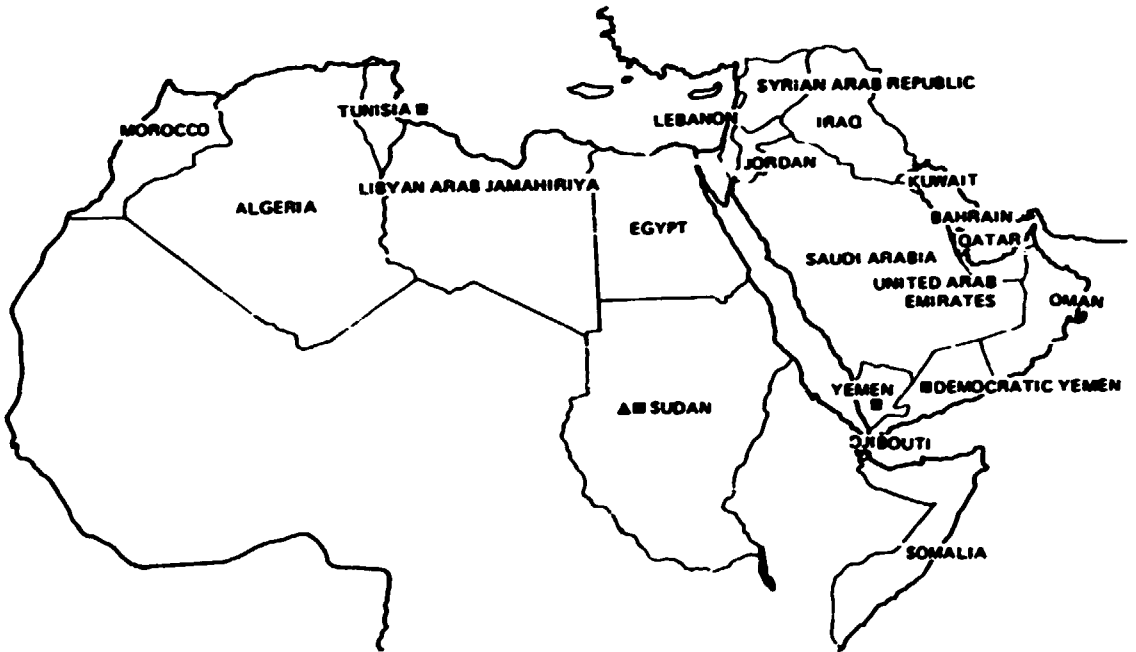
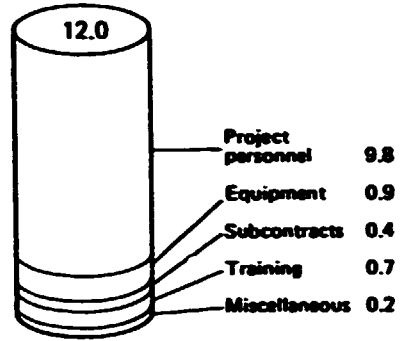
63. As regards strengthening institutional infrastructure base, advisory services were provided to the Ministry of Industry in the Sudan to assist in establishing policies and programmes for the promotion and development of small- and

EXPENDITURES 1979* TO 1985
(In millions of US dollars)

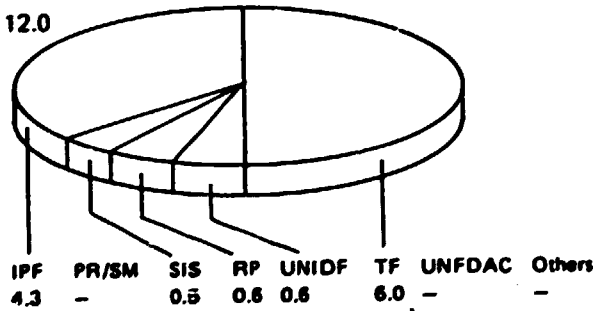


* For previous years, expenditures related to Arab States were reported partly under Africa and partly under Europe and Western Asia.

EXPENDITURES IN 1985 BY PROJECT COMPONENT
(In millions of US dollars)



EXPENDITURES IN 1985 BY SOURCE OF FUNDS
(In millions of US dollars)



ARAB STATES

▲ SIDFA duty station
■ JPO duty station

medium-scale industries, and a survey was carried out on the development potential of home industries in Darful. An example of human resources development activities is a specially designed training programme in corrosion control under which four engineers, together with a consultant, will design and conduct a training programme in corrosion control for 16 technicians in Democratic Yemen during 1986. The purpose of the project is to tackle the serious corrosion problems in water treatment and steam generation plants caused by climatic conditions. UNIDO assistance was also requested by Democratic Yemen in marketing of cotton cloth, for which improvements of pattern design and the training of local designers were required.

64. Within the framework of TCDC activities, preparatory assistance missions took place in connection with a regional project aimed at the establishment of domestic and international subcontracting exchanges. At the regional and interregional levels, consultancy services and training in advanced R + D in the field of metrology are the objectives of a project which was implemented in co-operation with Latin American countries. Under this project consultancy services and training were provided to the packaging industry of Arab States and a seminar-cum-study-tour to Argentina and Brazil for participants from nine Arab countries was implemented. Participants in the seminar had the opportunity to study and discuss packaging industries and technologies with South American industrialists and researchers. Seminars and courses on packaging were also held in a number of Arab countries within the framework of a training-oriented Arab regional packaging centre project, and advantage was taken of the technical infrastructure of the Moroccan Packaging Institute, that had been established through UNIDO assistance.

65. Assistance in accelerating the development of small-scale industries was approved in 1985 for Bahrain, while an exploratory mission carried out at the beginning of the year in Egypt was concerned with identifying small- and medium-scale industries capable of becoming suppliers to the automotive industry. Under the SIS programme, assistance was given in solving problems of the Egyptian footwear industry.

66. In the field of engineering industries major trends observed in the Arab States were the strengthening of capabilities of specialized engineering institutions and the introduction of integrated repair, maintenance and inventory control programmes with emphasis on computer application and spare parts production. High-level advisory services on the establishment of an electrical energy research centre in Iraq and the promotion of dry battery manufacture in Egypt are examples of the assistance provided. In Algeria two projects were initiated: one on the assessment of the repair and maintenance capabilities of selected industries including recommendations for a remedial plan, and another on the manufacture of agricultural machinery. Small, private engineering units near Baghdad (Iraq) were assisted under the SIS programme with the purpose of identifying common deficiencies and developing measures to overcome them. Assistance was also given to two Iraqi textile enterprises in the introduction of computerized maintenance management systems.

67. Chemical industries activities focused on the acceleration of the industrial utilization of non-metallic mineral resources for the manufacture of low-cost building materials and in other industries. Special efforts have also been made

to promote the integrated utilization of non-metallic minerals in agriculture and for environmental protection. Examples are assistance in pollution control in the brick and tile industry in Iraq and advisory services to a ceramic factory in the United Arab Emirates. In line with the aim of the Arab States to achieve self-sufficiency in the fertilizer and pesticide production essential for their agricultural development, a number of projects were approved in 1985. These include, for example, a regional project on the review and appraisal of an opportunity study of nitrogen-phosphate-potassium fertilizer production in Arab States and a national project to be financed from the IDDA allocation on updating studies for the establishment of a pesticide formulation plant in the Sudan.

68. As a result of the Petrochemical and Polymer Consultation Week held in Saudi Arabia in 1984,⁹ technical assistance was requested for the development of downstream petrochemical industries in Saudi Arabia. Subsequently, an expert was sent to the country to identify potential downstream petrochemical processing projects including such production lines as plastics, synthetic fibres and synthetic rubbers. In the plastics industry a project was approved under the programme for IDDA on strengthening the capabilities of the Egyptian Plastics Development Centre in assisting neighbouring countries.

69. In chemical industries the bulk of assistance provided by UNIDO to the Arab States was related, however, to the development of the pharmaceutical industries in support of national health care programmes. Increased emphasis was placed on the strengthening of national institutes engaged in biotechnology and, along these lines, two projects were approved in 1985. One is to provide assistance to the Egyptian National Centre for Genetic Engineering and Bio-technology and the other is to assist the newly created bio-technology centre in Sfax (Tunisia).

70. In the field of metallurgical industries under the regional programme for upgrading of technical skills of manpower of the Arab iron and steel industry, three seminars were held during 1985 in Algiers and Annaba (Algeria) for representatives of member countries of the Arab Iron and Steel Union. The seminars concentrated on computer application, personnel management and maintenance management in the steel industry. UNIDO also participated in the Second International Arab Aluminium Conference, held in Egypt in October 1985, where a paper was presented on UNIDO technical co-operation activities in the aluminium industry. Furthermore, two documents—"Guidelines for processing aluminium semi-fabricated products" (UNIDO/IO.619) and "Study on the establishment of laboratories for aluminium semi-fabricated products" (UNIDO/IO.621)—were distributed during the Conference. The development of downstream aluminium industries, as elaborated in the UNIDO papers, was of particular interest to Arab countries which are increasingly utilizing aluminium products in their construction and packaging industries. Assistance was also provided to the General Pipe Company at Benghazi (Libyan Arab Jamahirya) in improving the operation of three steel pipe and tube plants.

71. Assistance in the preparation and evaluation of pre-feasibility and feasibility studies played an increasingly important role during 1985. Studies

⁹*Ibid.*, para. 285.

prepared using the UNIDO methodology included the establishment of a heavy equipment and boiler manufacturing industry in the Arab countries, undertaken jointly with the Arab Industrial Development Organization and a cost-sharing project with the Government of Bahrain, aimed at identifying project proposals and elaborating feasibility studies of promising products. In compliance with resolution 14 on technical assistance to the Palestinian people, adopted at the Fourth General Conference of UNIDO, a study was also undertaken on the establishment of an industrial development bank to serve the needs in the West Bank and the Gaza Strip. Also in line with recommendations by the Board, a group training programme for Palestinians in policy and consultancy activities in small-scale industries enterprises was organized at the International Centre for Advanced Technical and Vocational Training at Turin.

ASIA AND THE PACIFIC

72. The value of projects executed by UNIDO in Asia and the Pacific in 1985 amounted to \$30.4 million which constituted a decrease of \$0.8 million or 2.6 per cent as compared to technical assistance delivery for the region in 1984. A breakdown of technical assistance delivery, by source of funds and project component, is given in tables 9 and 10 below.

73. The continued economic progress achieved by the countries in the Asian and Pacific region, while remarkable, is not without problems, some of which are persistent. External factors cause instability, some of the difficulties being volatile exchange rates, continued weakness of primary commodity prices and lack of access to foreign markets for the export of manufactured goods. Though interest rates declined, they still remain at levels high enough to exert a

TABLE 9. 1985 TECHNICAL CO-OPERATION EXPENDITURE
IN ASIA AND THE PACIFIC, BY SOURCE OF FUNDS

Source of funds	1985	
	\$ thousand	%
Regular programme	607	2.0
UNDP		
IPF and cash counterpart	28 022	92.2
SIS	566	1.9
Special programme resources and special measures	16	—
Subtotal	28 604	94.1
UNDP-administered trust funds	197	0.7
Other funds		
Other trust funds	468	1.5
UNIDF	4	—
UNFEDAC	—	—
Non-UNIDO funds	521	1.7
Subtotal	993	3.2
TOTAL	30 401	100.0

TABLE 10. 1985 TECHNICAL CO-OPERATION EXPENDITURE IN ASIA AND THE PACIFIC, BY PROJECT COMPONENT

Project component	1985	
	\$ thousand	%
Project personnel	10 398	34.2
Subcontracts	2 935	9.7
Fellowships and training	4 559	15.0
Equipment	12 038	39.6
Miscellaneous	471	1.5
TOTAL	30 401	100.0

negative effect on many countries. There are also considerable differences in the level of development among the countries of the region. Industrial growth has varied in different areas owing to the very large size and heterogeneous nature of the region. In most countries, internal factors also contributed to the need for adjustments in the industrial sectors.

74. In Malaysia, a long-term project aimed at assisting the Malaysian Industrial Development Authority in the preparation of a medium- and long-range plan for industrial development for the years 1986 to 1995 was completed in 1985.¹⁰ The positive impact and momentum generated in Thailand by a project on industrial restructuring¹¹ continued: the structure, pace and pattern of growth of three leading industrial subsectors (textile, iron and steel, and machinery) were critically analysed, and strategy and policy measures for the required structural adjustment were recommended. The project thus contributed to the Government's drive for structural adjustment and strengthening of the industrial sector within the framework of its industrial restructuring programme. The outputs of the project have been utilized by the Interministerial Committee on Industrial Restructuring and the National Economic and Social Development Board in formulating the country's sixth 5-year economic and social development plan for the period 1987 to 1991.

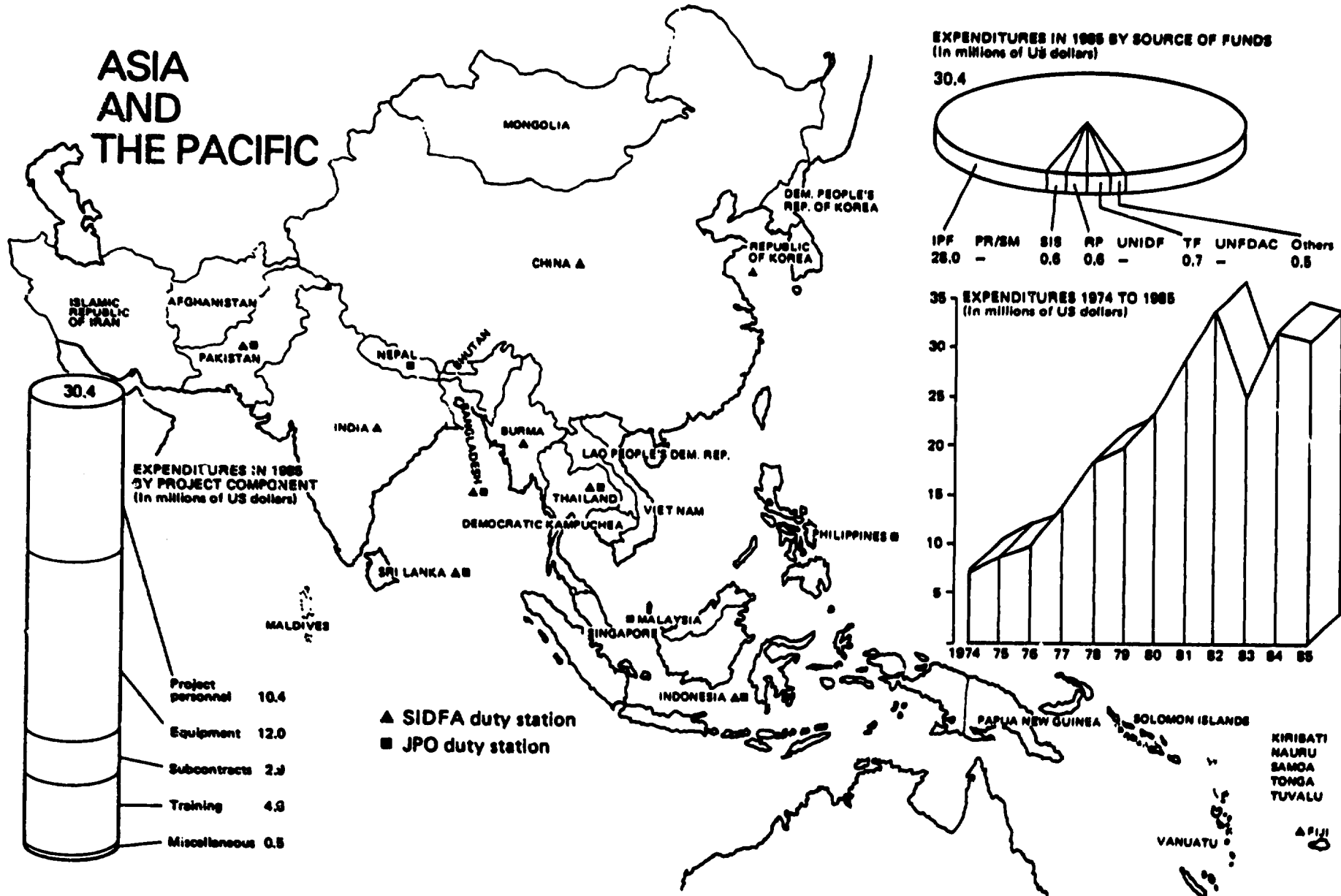
75. Within the framework of an inter-agency agreement between UNIDO and the Department of Technical Co-operation for Development of the United Nations, UNIDO assisted the Government of Afghanistan in executing and monitoring annual industrial plans and in formulating the industrial sector chapter of the country's new 5-year development plan. Within the project, training workshops and in-plant training programmes were conducted in industrial planning and development. The project as a whole fell in line with technical co-operation as envisaged under the Substantial New Programme of Action for the 1980s for the Least Developed Countries.

76. In 1985 requests increased for assistance through short-term advisory services that address specific problems and meet the specialized, modern technology requirements of small- and medium-scale industries in some Asian countries. Using advanced technologies, small- and medium-scale industries have good prospects for exporting finished products and becoming suppliers to

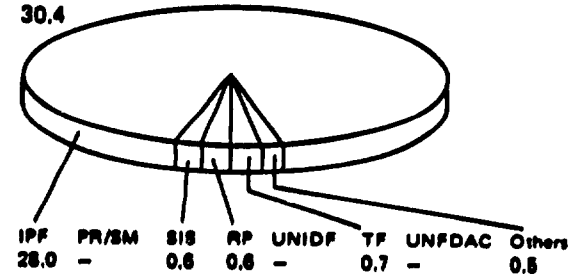
¹⁰*Ibid.*, para. 102.

¹¹*Ibid.*, para. 104.

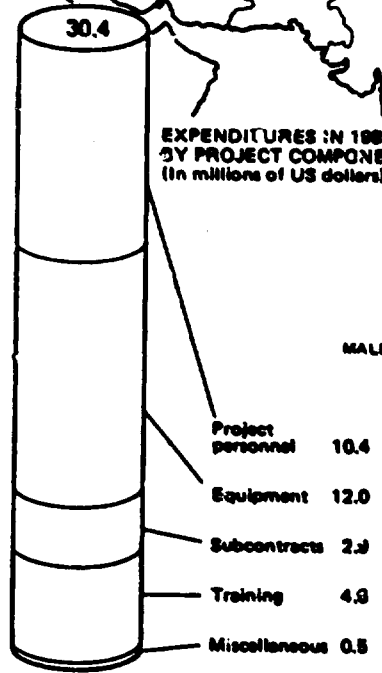
ASIA AND THE PACIFIC



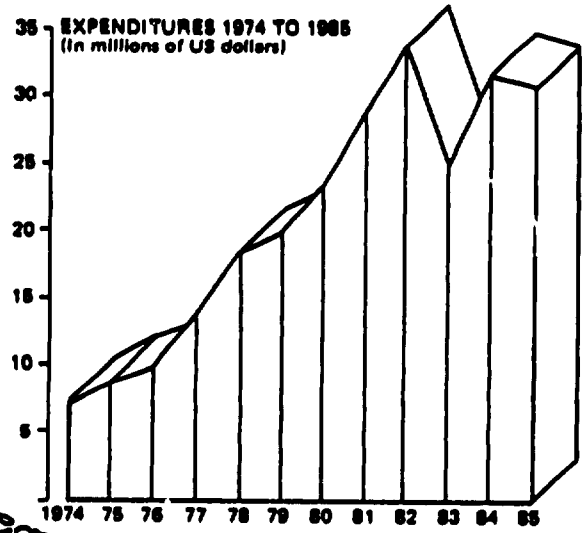
EXPENDITURES IN 1985 BY SOURCE OF FUNDS
(In millions of US dollars)



EXPENDITURES IN 1985 BY PROJECT COMPONENT
(In millions of US dollars)



EXPENDITURES 1974 TO 1985
(In millions of US dollars)



▲ SIDFA duty station
■ JPO duty station

large industries within and outside the respective country. In this context, modern small- and medium-scale industries operate in a highly dynamic business, technology and market environment. Consequently, technical co-operation activities of UNIDO relating to advisory services are being reoriented from the traditional forms of long-term assistance to highly sophisticated, short-term assistance. A project aimed at fostering local entrepreneurship capabilities in the small industry sector of Sri Lanka and assistance provided to the Small and Medium Industry Promotion Corporation in the Republic of Korea are examples that reflect this trend. For Burma, a project was approved in 1985 that provides short-term specialized technical expertise for the rehabilitation and relocation of industrial co-operatives in Rangoon, while a regional project covering five South-East Asian countries will assist in introducing innovations to handicraft production.

77. A special programme for the development of small industries in the Pacific island countries was initiated, with the objective of consolidating and optimizing the effectiveness of technical co-operation inputs to the subregion by pooling different sources of assistance. A regional project provided specialized short-term expertise aimed at supporting and complementing national industrial development efforts and other ongoing national projects in Papua New Guinea, the Federated States of Micronesia, the Solomon Islands and Vanuatu.¹² This network of mutually supportive technical co-operation inputs at the regional and national levels will be expanded to include other Pacific island countries.

78. As regards standardization, quality control and metrology, UNIDO activities in the region continued to be directed towards the development of national institutions in Bangladesh, Democratic People's Republic of Korea and Indonesia. These projects are especially important for those countries because metrological and standardization activities will ultimately result in improving the quality of products, which is essential for exports.

79. The metallurgical industries sector of the region calls for increasingly sophisticated assistance. Projects in this field included: improvement of metallurgical products through surface finishing and treatment in the Democratic People's Republic of Korea; a study of resource recovery and utilization of metallurgical wastes in China; a techno-economic study on the establishment of a large-scale processing facility for aluminiferous ores (alunites) in the Islamic Republic of Iran; and a study on the construction of an experimental demonstration unit for high purity aluminium production in India.¹³

80. A significant trend in several countries of Asia and the Pacific, especially in those with more advanced technological infrastructure, is the strengthening of specialized engineering institutions in the automotive, machine-tool, electronics and energy sectors. Preparatory assistance was provided to the Indian Emission Control Laboratory for Automotive Engine, a Pakistan machine tool plant and a Bangladesh diesel plant in strengthening the physical facilities, in particular equipment instrumentation and precision/high technology hardware

¹²*Ibid.*, para. 79.

¹³*Ibid.*, para. 210.

and software, as well as in training of technical personnel. Implementation started of a large-scale project, approved in September 1985, on the establishment of an electronics service and training centre in India. The objective of the project is to assist the Government of India in the development of an industrial base for advanced technologies in the production of electronics through the establishment of an industrial electronic manufacturing complex supported by the Services and Training Centre at Ramnagar in Uttar Pradesh.

81. Building up of national capabilities in industrial project preparation, appraisal and promotion has also been given specific attention in projects initiated in 1985. In line with this trend was the aim to assist industrial entrepreneurs, at both national and regional levels, in strengthening their capabilities to establish new industries. Regional institutions were approached to secure their co-operation and co-sponsorship in UNIDO pre-investment programmes. Short-term technical assistance was provided to the Asian Committee on Industry, Mineral and Energy in project identification, preparation and promotion for participants from member countries of the Association of South-East Asian Nations (ASEAN). In Thailand, a project on improving an industrial water supply system was evaluated with UNIDO participation and recommendations were made as regards its technical, economic and financial aspects. Based on the evaluation, the Government decided to change over the present water supply system for industry from ground to surface water. UNIDO will continue to provide assistance to this project in 1986 in the evaluation of bids and in negotiations with interested overseas investors. In Mongolia, UNIDO conducted a COMFAR workshop in September/October 1985, preceded by a seminar on industrial project preparation, evaluation and financing. Thirty professionals from several Mongolian institutions received training at the workshop and many of them will be able to train other national staff. Based on the success of these training activities, the Mongolian authorities decided to extend into 1986 a project on application of micro-processor systems to feasibility analysis and reporting. Seminars on industrial projects preparation and evaluation were held in Burma and Bangladesh.

82. Another significant trend observed in 1985 was the increasing number of requests, particularly from Pacific island countries, for assistance in identifying alternate sources of energy with a view to utilizing local resources. Thus a project was started to develop the ample mini-hydropower capacity of the Solomon Islands with the aim of reducing that country's dependence on imported diesel oil. The manufacture of efficient wood-burning stoves will be introduced in Samoa through a project approved in 1985.

83. Of main concern to the countries of the region is the efficient utilization of energy resources by industry. Effective energy management was the subject of a regional energy management course held at Melbourne (Australia) in October 1985 for 11 energy conservation specialists from nine Asian countries. The course, financed from a special-purpose contribution by the Government of Australia, was conducted by 16 Australian experts. Participants became acquainted with the operations and activities of the Energy Management Centre of the Gas and Fuel Corporation of Victoria, received training in energy auditing and gained practical experience at three nearby factories (see para. 154 below).

84. The need continued for improving management-related skills as reflected in requests received for assistance. An example is a large-scale project in India which aims at enhancing management and productivity of the cement industry through assistance to the Cement Research Institute. The project calls for the services of a large number of short-term technical experts and for assistance in the use of a computerized process control system, along with software packages for training and application in cement plants. In Bangladesh, assistance is provided in a project designed to improve the organization and operation of the Chittagong dry docks. In 1985 particular emphasis was given to a training programme, including seminars and workshops, on industrial management development. A seminar held in China on industrial consultancy involved high-level Spanish consultants and 53 Chinese participants, who discussed general consultancy problems and specific issues related to China. A seminar on project management was conducted for 48 participants in the Democratic People's Republic of Korea, dealing specifically with investment cycles, technical assistance project identification, design and monitoring. Effective basic training material was developed at the seminar which can be utilized in other developing countries.

85. The training activities in Asia and the Pacific were mainly concerned with institution building and special emphasis was placed on the use of audio-visual aids. Under its "centres of excellence" programme, UNIDO provided additional assistance to the National Small Industries Extension Training Institute at Hyderabad (India) by upgrading the Centre's video facilities and by training personnel in their use. Assistance was also provided in the computerization of the Institute. As in the past, in line with TCDC endeavours, fellows from other developing countries were trained in India. The Hindustan Authorities Ltd., a public enterprise which has been a pioneer in the manufacture of antibiotics, hosted in its training centre a group training programme for 20 participants from the region on the subjects of quality control and assurance in the pharmaceutical industry. Training was provided to nationals from various countries in the region under the UNIDO regular programme for technical co-operation in a variety of subjects, including optical engineering, technology management, metrology, and chemical analysis of ores and minerals.

EUROPE

86. The value of UNIDO technical assistance delivery to Europe in 1985 amounted to \$3.1 million, constituting a decrease of \$0.6 million or 16 per cent over the figure for 1984. A breakdown of technical assistance delivery, by source of funds and project component, is given in tables 11 and 12 below.

87. As in the past, the developing countries of Europe, generally in possession of the technical know-how required for their industrialization progress, requested UNIDO assistance in specific areas of sophisticated technology of relevance to their socio-economic development. Given the development needs of the region, projects are often seen as a means to provide catalytic inputs into larger intergovernmental undertakings and, regardless of their size, to include arrangements for the transfer of benefits to other developing countries through TCDC mechanisms.

TABLE 11. 1985 TECHNICAL CO-OPERATION EXPENDITURE IN EUROPE, BY SOURCE OF FUNDS

Source of funds	1985	
	\$ thousand	%
Regular programme	39	1.3
UNDP		
IPF and cash counterpart	2 701	87.5
SIS	192	6.2
Special programme resources and special measures	—	—
Subtotal	2 893	93.7
UNDP-administered trust funds	—	—
Other funds		
Other trust funds	29	1.0
UNIDF	125	4.0
UNFDAC	—	—
Non-UNIDO funds	—	—
Subtotal	154	5.0
TOTAL	3 086	100.0

TABLE 12. 1985 TECHNICAL CO-OPERATION EXPENDITURE IN EUROPE, BY PROJECT COMPONENT

Project components	1985	
	\$ thousand	%
Project personnel	689	22.4
Subcontracts	445	14.4
Fellowships and training	710	23.0
Equipment	1 198	38.8
Miscellaneous	44	1.4
TOTAL	3 086	100.0

88. In line with the fast-emerging trends and efforts in the region for strengthening the structure and efficiency of the industrial sector and its competitiveness in export markets, a project on industrial rationalization became operational in Cyprus during 1985. The purpose of this project is to formulate a plan and a strategy for restructuring the industrial sector; accordingly Cypriot industrial and trade policies will be reformulated or reoriented and policy instruments polished, bearing in mind the impact of the proposed customs union of Cyprus with the European Economic Community (EEC) on the economy of Cyprus and particularly on its industrial production and exports. The present status and structure of key industrial subsectors and of manufactured outputs have been carefully studied and the issues of harmonization of the country's industrial and trade policies within the context of the proposed customs union between EEC and Cyprus examined.

89. In the European region, during 1985, the strengthening of institutional infrastructure concentrated on areas of organization and operation of

standardization, quality control and metrological activities. Portugal continued to receive assistance in support of its manufacturing industries and in Turkey an industrial metrology and calibration laboratory was established at the Basic Science Research Institute of the Turkish Scientific and Technical Research Council located at Gebze.

90. In Europe, more than in other regions, recognition is being given to the importance of preparing bankable industrial investment projects based on sound market, technological, financial and economic data. Professional expertise was accordingly made available to install the COMFAR system and to train the users of the system in workshops held in Austria for Bulgarian participants and in Yugoslavia. UNIDO also presented the new COMFAR multilingual versions at special meetings held at Belgrade (Yugoslavia), Berlin (German Democratic Republic), Cologne (Federal Republic of Germany), Copenhagen (Denmark) and Madrid (Spain).

91. Special attention was devoted to the issue of industrial energy conservation as a means of achieving significant savings. The preparatory phase of a project on European co-operation in industrial energy conservation¹⁴ culminated with a regional meeting held in Vienna in July 1985. The participants, who represented seven European countries, the Economic Commission for Europe and UNDP, approved a follow-up project which has since become operational. In the latter part of 1985, five sectoral group meetings took place in Czechoslovakia, Hungary, Romania and Yugoslavia, which dealt with energy conservation in the chemical, building materials, iron and steel and food-processing industries and in the energy-generating sectors. At the meetings, agreement was reached on the establishment of sectoral work programmes and on project activities for 1986, which include information exchange, organization of specialized workshops and seminars, and provision of services on a subcontract basis.

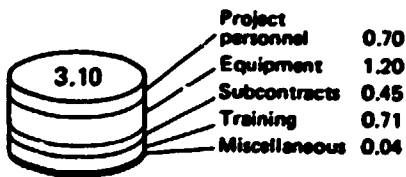
92. Because of the relatively advanced level of technology in the European region, projects often have a significant potential for regional and interregional activities. A demonstration of that potential could be observed during the First Expert Group Meeting on Computerized Maintenance System in Metallurgy held in Czechoslovakia at the beginning of 1985. The meeting was a follow-up to a successful project implemented in that country. Another example is the co-operation offered to developing countries by the Institute for Inorganic Chemistry of the Hungarian Academy of Sciences in testing of raw materials. In Romania a project was approved to put into operation advanced electronic quality control laboratory equipment.

93. For European countries receiving assistance from UNDP, significant emphasis continued to be placed on sophisticated technology and computer application. Modern testing technology, such as field data acquisition, simulation and testing, was introduced to improve the performance of tractors in Romania. As in previous years, assistance continued to be provided in computer aided design (CAD) and computer aided manufacturing (CAM). Bulgaria is traditionally the largest recipient of UNIDO assistance in engineering industries because the country has an effective institutional

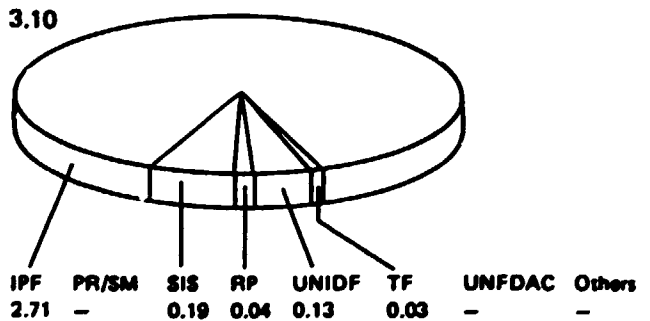
¹⁴*Ibid.*, para. 96.



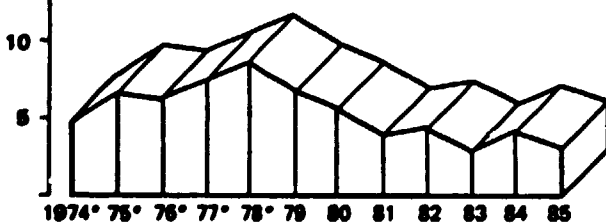
EXPENDITURES IN 1985 BY PROJECT COMPONENT
(In millions of US dollars)



EXPENDITURES IN 1985 BY SOURCE OF FUNDS
(In millions of US dollars)



EXPENDITURES 1974 TO 1985
(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.

infrastructure. The findings of a UNIDO project on the development of new scientific instruments and automated production planning and management carried out at the Automated Production Instrument Centre in Bulgaria are now being disseminated among other developing countries.

94. In Malta, the year under review witnessed the completion of a project through which UNIDO provided consultancy services during the construction and start-up phase of the Grand Harbour Grain Terminal. The Terminal was handed over to the operating company in December 1985 but UNIDO involvement will continue by supplying relevant expertise to the technical management of the Terminal and its grain marketing operations. As regards secondary wood processing, assistance was provided to Turkey to improve the training facilities at Gazi University by upgrading and modernizing the University workshop and training its technical trainers in the use of modern woodworking equipment.

95. Activities in chemical industries concentrated on four subsectors in Europe: basic chemicals, pulp and paper, petrochemical downstream industry, and environmental control. SIS funds were utilized for effective, timely assistance to requesting countries. Projects were implemented in Portugal for the restructuring of a pulp and paper company and in Yugoslavia for improving the productivity of a pulp and paper complex. Advisory services were provided in Turkey to improve salt production, while Yugoslavia was assisted in developing the production of polypropylene and polyamide fibres and Romania in the manufacture of radial car tyres and tubeless radial truck tyres. Industrial pollution control and industrial safety programmes in the region have been encompassing a wide range of activities, including investigation and testing of low- and non-waste technologies in Czechoslovakia and the establishment of an air pollution warning network in an industrialized urban area in Romania.

96. Human resource development for industry was given attention in 1985, through tailor-made assistance to several institutions in European countries under the UNIDO regular programme for technical co-operation. The Foreign Investment Institute in Portugal received training assistance in foreign investment evaluation, and the Turkish Sugar Institute in beet-sugar production technology. The Institute of Mechanization, Faculty of Technical Sciences, at the University of Novisad (Yugoslavia) was helped, through fellowship training, to update the knowledge of its staff in computer application in the design and analysis of mechanical systems.

C. Implementation by field of activity

97. The technical assistance provided by individual branches and sections in the Division of Industrial Operations in 1985 is treated in the paragraphs that follow. As a great many of the projects under implementation are of an "ongoing" or continuous nature and have therefore been covered to a greater or lesser extent in previous *Reports*, no more than an outline is provided here, with appropriate references to those earlier *Reports*. It should be borne in mind

in reading this part of the *Report* that even though projects may be mentioned under very specific "activity" headings—e.g. metallurgical industries—their implementation cuts across administrative lines to bring into play the economic and technical experience of not only the entire Division of Industrial Operations, but of UNIDO as a whole. Thus, individual branches or sections of the Division provide inputs to and benefit from the activities of, for example, the System of Consultations and the Investment Co-operative Programme—not to mention Programme Development and Evaluation.

98. Technical co-operation projects under implementation in 1985 and the regional distribution of technical assistance delivery during the year by field of activity are listed in tables 13 and 14 below.

INDUSTRIAL PLANNING

99. In 1985, technical co-operation expenditures under the heading industrial planning amounted to \$7.3 million. Some 80 per cent of the total implementation was financed from UNDP resources. A total of 91 projects were implemented or under implementation.

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

TABLE 13. TECHNICAL CO-OPERATION PROJECTS UNDER IMPLEMENTATION IN 1985, BY FIELD OF ACTIVITY AND SIZE OF PROJECT

Field of activity	Number of projects/Amount			Total
	<\$150 000	\$150 000- \$1 000 000	>\$1 000 000	
Industrial planning	56	26	9	91
Institutional infrastructure	78	55	19	152
Factory establishment and management	22	19	9	50
Training	201	24	4	229
Feasibility studies	52	25	7	84
Agro-industries	105	53	14	172
Metallurgical industries	93	47	13	153
Engineering industries	91	63	29	183
Chemical industries	210	105	32	347
Other ^a	189	40	4	233
TOTAL	1 097	457	140	1 694

^aNot implemented by the Division of Industrial Operations.

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

(Percentage)

Field of activity	Africa	Americas	Arab States ^a	Asia and the Pacific	Europe	Inter-regional/global	Total
Industrial planning	63.2	21.2	2.1 (1.9)	12.1	0.5	0.9	100.0
Institutional infrastructure	53.7	19.6	2.4 (7.1)	16.2	5.8	2.3	100.0
Factory establishment and management	62.7	1.7	8.4 (9.3)	26.3	0.9	—	100.0
Training	34.7	0.8	3.5 (1.1)	2.2	4.1	54.7	100.0
Feasibility studies	45.5	3.7	11.2 (3.6)	37.0	0.3	2.3	100.0
Agro-industries	23.4	30.0	3.7 (1.7)	34.8	2.1	6.0	100.0
Metallurgical industries	27.3	25.2	1.6 (7.9)	40.3	5.4	0.2	100.0
Engineering industries	18.7	9.4	3.8 (3.4)	63.3	4.1	0.7	100.0
Chemical industries	47.5	6.1	0.8 (25.8)	35.9	4.2	5.5	100.0
Total technical co-operation expenditure	39.4	12.7	3.0 (9.7)	32.2	3.3	9.4	100.0

^aFigures in parentheses relate to African Arab States and are already included under Africa.

101. Owing to the present widespread economic crisis and the debt burden borne by the majority of developing countries, a large number of these countries are paying increased attention to medium- and long-term industrial planning. UNIDO played a significant role in assisting an increasing number of developing countries in their planning and programming efforts. The aim of this assistance was to establish priority development targets, and to review, through innovative approaches, the situation of the industrial sector, while, at the same time, paying specific attention to the rehabilitation and modernization requirements of existing industries.

102. In Cameroon, the long-term objective of an ongoing project¹⁵ is to assist the Government in promoting an integrated industrial development strategy and policy based on the optimum use of the country's agricultural potential and its natural resources (wood, petroleum aluminium and iron ores). The immediate objectives of the project are to contribute to the preparation of the sixth 5-year plan for the period 1986 to 1991 and to develop, for the consideration of the Government, alternative long-term development paths and the requisite conditions. The project includes 55 subsectoral studies: 22 are the responsibility of UNIDO and 33 have been assigned to other institutions (government organizations providing multilateral and bilateral assistance). In 1985, UNIDO completed 20 subsectoral studies.

¹⁵ID/B/340, chap. III, para. 103.

103. UNIDO assisted the Malaysian Industrial Development Authority in the preparation of a medium- and long-term industrial master plan for the period 1986 to 1995.¹⁶ The project was successfully completed in 1985 and the industrial master plan was accepted by the Prime Minister and the Cabinet. The industrial master plan for Malaysia consists of plans for 12 key industrial subsectors; each plan clearly defines the strategy, target, priorities and supporting policies and policy measures for a subsector. Key issues and factors that have a direct bearing on the promotion of industrial development have also been thoroughly studied and presented in the plan. As part of this project, assistance is being given to the Government in designing a work programme and strategy for the implementation of the master plan.

104. In a relatively small project in Honduras, UNIDO assisted in preparing the industrial portion of the national economic development plan for the years 1987 to 1991, and helped conduct industrial subsector development workshops. These workshops contributed significantly to the development of a national consensus and spirit of co-operation among private and public industrial employers, industrial employees and the Government.

105. UNIDO contributed in 1985 to the formulation of a national industrial policy in Venezuela through the recruitment of national and international experts. The project aims at developing a consensus among private and public enterprise management, industrial employees and the Government. Industrial subsector working groups were formed that elaborate industrial policy suggestions for use by the Ministry of Development in making decisions on industrial policy.

106. An innovative project on environmental planning became operational in 1985 in which the services of the International Institute of Applied Systems Analysis (IIASA) at Laxenburg (Austria) were contracted by UNIDO. IIASA will provide to India the necessary know-how for developing a nation-wide environmental protection and monitoring system. In an additional case study the Doon Valley will be investigated with emphasis on pollution created by industry.

107. Within the framework of an inter-agency agreement between UNIDO and the United Nations Department of Technical Co-operation for Development on the development of planning capability projects, UNIDO assisted the Government of Afghanistan, in particular the Department of Industries, Energy and Communications of the State Planning Committee, in the execution and monitoring of the annual industrial plans and in formulating the industrial sector chapter of the country's new 5-year development plan. In collaboration with the Ministry of Mines and Industries of Afghanistan, pre-investment studies on a number of potential projects were prepared and strategy and policy measures for the promotion of those projects were considered. A number of training workshops were conducted and in-plant training took place on the subjects of industrial planning and development. The project concluded its activities in December 1985, and a new phase of the project is under consideration. This project was in line with technical co-operation envisaged under the Substantial New Programme of Action for the 1980s for the Least Developed Countries.

¹⁶*Ibid.*, para. 102.

108. Industrial planning projects in Latin America also addressed the definition or implementation of industrial policy in the region. One project in Bolivia, with a great variety of inputs, reflected the economic emergency situation of the country: there is an urgent need for short-term consultancy to tackle industrial operational problems as well as for occasional convertible currency to provide auxiliary material or small equipment for import-substituting industries.

109. In 1985, UNIDO assisted a number of developing countries in establishing and strengthening industrial planning institutions. In Sierra Leone, the establishment of an industrial development department in the Ministry of Trade and Industry was accomplished. The functions of departmental divisions were outlined and lines of communications and authority were proposed, including job descriptions for individual officers. A manual that describes the operations of the activities of the divisions was prepared, circulated and discussed. The capabilities of the professional staff were upgraded through appropriate fellowships and in-service training and the function of institution building was accompanied by direct support activities. In Algeria, assistance was given to the Institut supérieur de gestion et de planification in the regulation and management of the industrial public sector.

110. In Ghana an ongoing project continued to define a new structure for the Ministry of Science and Technology; emphasis was placed on the creation of a planning cell. The project is to be enlarged in order to strengthen the planning and programming functions of the Ministry. Additional inputs are expected from the World Bank within the framework of its Industrial Sector Adjustment Credit.

111. A project in Thailand aimed at strengthening financial planning services¹⁷ contributed to the work of the Centre for the Integrated Plan of Operation, and the National Economic and Social Development Board. The objective of the project is the implementation of the country's Eastern Seaboard Development Programme. Apart from assisting in financial planning and control, project activities were diversified and produced visible results. These included a development and financial planning model, improvement, updating and computerization of the financial data base and analytical studies of the Eastern Seaboard master plan.

112. In the context of the ongoing global industrial restructuring process, UNIDO assisted an increasing number of Governments in reviewing and revising their industrial strategies and policies. This assistance required close co-ordination with the financial and technical assistance provided by other multilateral and bilateral organizations, in particular the World Bank. For example, in Senegal UNIDO assisted the Government in preparing an action programme for restructuring and developing its industrial sector. The programme will be presented to a consultative meeting of donor countries. Co-operation was also pursued with the World Bank to assist the Governments of Cape Verde, Côte d'Ivoire and Guinea in the planning and development of their industrial sectors. In Guinea, the assistance provided by UNIDO in co-operation with the United Nations Department of Technical Co-operation for Development consisted of formulating a new industrial development strategy

¹⁷*Ibid.*, para. 110.



Inspection of medicine samples at the Royal Drugs Research Laboratory, Kathmandu (Nepal)

along with an interim recovery programme. The reports prepared on this subject were highly appreciated by the Government, UNDP, the United Nations Department of Technical Co-operation for Development and the World Bank.

113. A new industrial rationalization project became operational in Cyprus. The salient feature of this project is the formulation of a plan and strategy for restructuring the industrial sector. The project is expected to bring into effect greater inter- and intra-sectoral integration, as well as the reorientation or reformulation of the Government's industrial and trade policies and policy instruments. The possible impact of the proposed customs union of Cyprus with the European Economic Community (EEC) on the Cypriot economy and industrial production and export is a factor which has been examined and given prime consideration in implementing this project. Technical assistance rendered during 1985 within the project dealt with key industrial policy issues in connection with the country's preparation for accession to the proposed customs union (see para. 88 above).

114. In Thailand, as a sequel to the positive impact and momentum generated by the first part of an industrial restructuring project,¹⁸ the second part was

¹⁸*Ibid.*, para. 104

implemented in 1985. The project greatly intensified and consolidated the Government's drive for structural adjustment and contributed to the strengthening of the industrial sector within the framework of the industrial restructuring programme of Thailand. A critical analysis was made of the structure, pace and pattern of growth of three leading industrial sub-sectors—textile, iron and steel, and mechanical and electrical machinery—and strategy and policy measures were recommended to bring about the required structural adjustment. Likewise, recommendations were made as regards concepts and techniques, a system of industrial projection and forecasting, and the subsequent measurement of industrial efficiency and productivity. In all these measures the situation and requirements of the country were taken into account. The results of the project have been utilized in Thailand by the Interministerial Committee on Industrial Restructuring, and by the National Economic and Social Development Board in formulating the sixth 5-year economic and social development plan, for the years 1987 to 1991.

115. The national workshops on industrial strategy within the framework of the programme for the Industrial Development Decade for Africa were a great success in many countries. For the first time, the possibility was given to institutions and representatives of national institutions and to the public and private sectors of industry to discuss main problems affecting their industrial development and to propose strategy and policy recommendations for further development. Six national workshops were organized in 1985 for Benin, Burkina Faso, Mauritania, Niger, Sierra Leone and Uganda.

116. At the subregional level in the framework of the programme for IDDA, UNIDO assisted subregional organizations in the formulation and monitoring of industrial programmes for the northern, western, central and eastern and southern African subregions. These programmes had been originally formulated during IDDA subregional expert group meetings held in 1983 and 1984. UNIDO also assisted in strengthening the industrial planning systems of the Economic Community of West African States (ECOWAS), the Economic Community of the Great Lakes Countries (CEPGL) and the Preferential Trade Area for Eastern and Southern Africa (PTA).

117. UNIDO assisted a number of Governments to prepare their national programmes for the development of the capital goods industry in an effort to restructure the industrial sector and improve its efficiency and competitiveness through the absorption, application and development of modern technology. In Venezuela, for example, a UNIDO project to assist the National Programme for the Development of the Capital Goods Industry¹⁹ played a key role in defining the development policy for the sector. It also created a subcontracting exchange and a technological information centre and established "concertation nuclei" among purchasers and producers to promote the national production of equipment and purchase of equipment by large enterprises in the public and private sectors. The "nuclei" are operating in the petrol, electrical, and telecommunications sectors and in basic material processing. Finally, the project identified investment potentials for telecommunications, basic industry, tropical agriculture and food-processing equipment.

¹⁹*Ibid.*, para. 106.

118. A similar project was launched in Colombia that actively promotes the establishment of "concertation nuclei" between producers and purchasers of equipment in the mining, petrochemical and telecommunications sectors. The project also assisted in the collection of a stock of information on technology and the establishment of an information centre that serves producers and purchasers of equipment. Technical support at the subsectoral and factory level has been also supplied by the project.

119. UNIDO continued to assist African subregional organizations in developing industrial integration projects. Within the framework of the programme for IDDA, UNIDO assisted the West African Economic Community (CEAO), ECOWAS, the Central African Customs and Economic Union (UDEAC), CEPGL, PTA and SADCC as well as the Mano River Union in formulating and monitoring industrial subregional programmes. A mission to the CEPGL countries was undertaken to prepare a draft programme for the industrial development of the CEPGL countries to be proposed for adoption by the conference of heads of States of this organization. The pertinence of these activities, which aim at raising agricultural productivity by providing industrial inputs to the agricultural sector (fertilizer, pesticide, agricultural machinery, glass containers, iron and steel) prompted decision makers of those organizations to allocate, in some instances, funds to carry out the required studies. However, the bulk of UNIDO technical co-operation in the field of planning was directed to the preparation of market and prefeasibility studies for selected multinational industrial projects.

120. African countries that received increased assistance in support of their agricultural development were Benin and Niger. While the regional programmes tend to produce inputs needed to increase agricultural productivity and to modernize other key sectors of the economy, the national programmes aim mainly at achieving self-sufficiency in food and, at the same time, developing local markets through the processing of agricultural raw materials.

121. A workshop was organized for English-speaking African countries by UNIDO and counterpart agencies under the programme prepared by the joint UNIDO/USSR Working Group on Industrial Planning. The main objective of the workshop was to contribute to the promotion of IDDA by strengthening and improving industrial planning systems in African countries. The 17 participants of the meeting formulated a series of recommendations for strengthening industrial planning skills.

INSTITUTIONAL INFRASTRUCTURE

122. In 1985, technical co-operation expenditures under the heading institutional infrastructure amounted to 9.8 million. Some 80 per cent of the total implementation was financed from UNDP resources. A total of 152 projects were implemented or under implementation.

123. Technical co-operation activities developed and implemented by the Institutional Infrastructure Branch covered a broad range of integrated multi-branch and multi-disciplinary programmes covering small- and medium-scale

industry development; rural industrial development; institutions for industrial research and for industrial information; and quality control, standardization and metrology; as well as special support programmes including international subcontracting, assistance to industrial fairs, chambers of commerce and industry; entrepreneurship development and target-group oriented activities.

124. As regards small- and medium-scale industry development, UNIDO renders assistance at the policy-making, the institution-building and the entrepreneurial level. Projects at the policy-making level contribute, among others, to the design of development plans and strategies as well as to the formulation of legal instruments and tax and investment incentives. An example of this type of activity is the ongoing project in Mexico on a strategy for the development of the local small- and medium-scale industry sector.²⁰ As a result of work carried out by UNIDO, which included advisory services, assessment of the needs and surveys on the performance of Mexican small- and medium-scale industries, a presidential decree was promulgated in 1985. The decree is an important legal instrument for the promotion and co-ordination of inputs for the development of that sector. Efforts are being made to ensure the application of this legal instrument at both the national and regional level and in specific subsectors. Within this framework, study tours were arranged for Mexican counterparts to enhance subcontracting exchanges, government procurement of raw materials, and entrepreneurship development with target groups.

125. Advice on appropriate policy measures and strategies for small industry development was also provided to Congo, India, Mauritius, Yemen and Zambia. In Zambia, where UNIDO guidance at the policy level had resulted in the establishment in 1982 of the Small Industries Development Organization (SIDO),²¹ the emphasis of UNIDO assistance shifted in 1985 to institution-building aspects that concentrated on strengthening the capacity of SIDO in providing extension services to small- and medium-scale industries.

126. Projects at the institution-building level deal with transferring expertise and improving capacities to enable institutions engaged in the promotion of small industry to provide a wide range of technical services and facilities for the development and upgrading of such industries. Thus, in 1985, assistance in establishing and strengthening the institutional basis for small- and medium-scale industry development was provided to Cameroon, Ethiopia, Greece, Honduras, India, Niger, Senegal, Solomon Islands, Thailand, Tunisia and Vanuatu.

127. In Ethiopia, assistance continued to strengthen the activities of the Handicraft and Small Industry Development Agency (HASIDA).²² Expertise, training and equipment were provided to the HASIDA central workshop and to pilot industrial co-operatives which developed prototype tools and implements for use by Ethiopian artisans. Further assistance was given to the Office de promotion de l'entreprise nigérienne (OPEN) in enhancing its capacity to service small- and medium-scale industries, in providing support to the

²⁰ID/B/320, chap. III, para. 128; ID/B/340, chap. III, paras. 126 and 129.

²¹ID/B/320, chap. III, para. 129; ID/B/340, chap. III, paras. 128 and 132.

²²ID/B/320, chap. III, para. 126.

establishment of new production units (e.g. a biscuit factory), as well as in providing extension services to existing industries (e.g. a match factory, a lime kiln, mechanical workshops, bakeries). The project included a large training component: on-the-job training for OPEN extension service officers was provided by experts and a study tour programme for 12 OPEN officials and private entrepreneurs was implemented.

128. In Senegal, assistance continued to the Société nationale d'études et de promotion industrielle (SONEPI) whereby the project focused on the decentralization of SONEPI to reinforce its regional offices in the southern and north-eastern parts of the country. In each of the three regional offices (located at Zinguinchor, Kaolack and Matam), the pilot mechanical workshops established on existing industrial estates became operational in 1985. In Tunisia and Cameroon, assistance to the Centre national des études industrielles and the Centre d'assistance aux petites et moyennes entreprises, respectively, focused on strengthening the capabilities of these institutions in identification of industrial project and preparation of feasibility studies.

129. At the entrepreneurial level, direct assistance was provided to small industrial enterprises within the framework of projects implemented in the Dominican Republic, Indonesia, Jamaica, Kenya, Niger, the Philippines, Solomon Islands, Sri Lanka and Vanuatu. An illustrative example of such assistance is a project in Jamaica that provides assistance in national planning and development of handicrafts, and which culminated in the establishment of a company for manufacture and marketing handicraft products. The company is of crucial importance to both the economic and cultural aspects of Jamaican handicrafts development: through extension services several hundred people, especially in rural areas, received assistance in improving their products and production processes, and, as a result, their income increased. In Indonesia, ongoing assistance at the policy-making level to the Directorate General of Small Industry, Department of Industry,²³ was supplemented by direct assistance to small-scale entrepreneurs. This assistance concentrated on one specific industrial branch, namely modernization of electric and electronic small-scale industries (in particular manufacture of transformers) with the result that local small-scale industries were able to meet the qualitative demands of the local market. It proved possible to substitute local products for imports, namely transformers, to a value of \$1 million per year.

130. A regional project on small-scale industry and entrepreneurship development for South Pacific island countries was initiated in 1985 to support, through short-term specialist assistance, national efforts in the industrial development of participating South Pacific island countries. The project addresses the needs at many levels, including advice and support to government agencies on matters of policy and industry sector management; assistance to government agencies in project identification, formulation, feasibility, assessment, appraisal and evaluation; and direct assistance to entrepreneurs in specific subsectors as determined by the Governments through technical, management, and marketing expertise and through in-plant training, seminars and workshops.

²³*Ibid.*, para. 127.

131. UNIDO intensified its programme for entrepreneurship development and job creation by promoting and institutionalizing support schemes which cater for the particular needs and requirements of especially identified human resource groups. For example, target-group orientation is geared towards effectively involving people in industrialization by harnessing the idealism, experience and inventive energies of groups of population such as women and youth as well as the rural population so that they can better assume leadership roles and act as productive agents of change. Thus, the creation and expansion of small production units by individuals identified as having potential entrepreneurial characteristics are considered an important measure of ensuring a continuous supply of entrepreneurs imbued with developmental concerns who will respond to social problems posed by lack of remunerative jobs and the lack of opportunities for full productive employment of people. To ensure success in such endeavours, UNIDO responded to requests for assistance to local and international agencies in conducting action-oriented research and formulating pilot projects that nurture entrepreneurial potential through appropriate programmes. Funds are being negotiated for such pilot projects to be undertaken in Kenya, Sri Lanka and the Caribbean and Southern African regions. Further promotional efforts were made at international workshops in New Delhi which dealt with problems of mobilizing resources and fostering entrepreneurship among specific target groups—unemployed graduates, returning migrant workers, school-leavers and out-of-school youth, and population groups that may have been marginalized from industrial development. One of these workshops dealt specifically with the issue of women entrepreneurs.

132. In rural-oriented industrialization programmes, Governments can also play a major role in influencing the promotion of small-scale industries in meeting basic needs and thus bringing about a gradual improvement in the quality of rural life within a framework of integrated rural development. It is along these lines that UNIDO puts greater emphasis on rural industries. In most developing countries these are likely to deal with production based on agricultural inputs and include: industrial enterprises with forward linkages with agriculture; production of consumer goods and provision of services for rural communities (these are particularly important as they are highly labour-absorptive, and facilitate entry into markets with relatively low entrepreneurial requirements); processing of agricultural products for both local and regional markets; production of building materials from locally available resources for improving housing conditions in rural areas; and promotion of artistic craft products for both national and international markets.

133. To achieve a balanced industrialization between urban and rural areas, UNIDO technical assistance endeavours not only to strengthen institutional infrastructure capabilities for the promotion of small- and medium-scale industries in towns (other than the capital), but also to assist in the identification of industrial units, the examination of their feasibility and their subsequent implementation. Such activities were carried out in 1985 in Argentina, Burundi, the Comoros, Liberia, Madagascar, Namibia, Rwanda, Turkey, the United Republic of Tanzania, Zaire and Zambia.²⁴ UNIDO provided to the Village

²⁴ID/B/320, chap. III, para. 129; ID/B/340, chap. III, para. 132.

Industry Service assistance in policy, strategy and programme development, and in the training of instructors who, with a mobile training unit, currently conduct demonstration and training sessions in food processing and wood-working. The project was financed from sources allocated to the programme for IDDA. Also in connection with IDDA, UNIDO studied the feasibility of setting up poultry farms and meat- and egg-processing plants in rural areas in Namibia.

134. The development of the small- and medium-scale industry sector is enhanced through production order subcontract for national or foreign firms. The UNIDO subcontracting programme aims at generating increased industrial production and employment, at increasing the rate of utilization of installed manufacturing capacities, and at upgrading the quality of the final products. In that context, programme assistance was provided to Peru to develop further the Lima Subcontracting Exchange, which is currently operating successfully, and to establish two new subcontracting exchanges in the metalworking industry at Arequipa and Trujillo. A regional project aimed at establishing domestic and international subcontracting exchanges in seven Arab countries (Algeria, Egypt, Iraq, Jordan, Morocco, Syrian Arab Republic and Tunisia) was initiated in 1984 and fully implemented in 1985.²⁵ The project provided assistance of a preparatory nature to assess, in the light of the conditions prevailing in each of these countries, the possibility of setting up or developing national subcontracting programmes and a regional Arab programme. Within the same project a study tour was organized on the occasion of the First International Exhibition of Automotive Components at Tunis (Tunisia), in December 1985. The participants in the study tour recommended that a large-scale regional programme should be carried out for the development of subcontracting in the Arab region.

135. UNIDO activities related to international industrial fairs were enhanced in order to enable representatives of developing countries to participate in selected international industrial fairs and in technical seminars and study visits organized by the host countries and UNIDO on the occasion of the fairs. The programme provides a useful framework for the transfer of appropriate industrial technology to small- and medium-scale industries in developing countries. Other advantages of the industrial fairs activities include the promotion of international co-operation and partnership agreements among industrial institutions and enterprises, and the upgrading of the capabilities of developing countries to export industrial products. At the Fourth Technology for the People (International Technology and Licensing) Fair held at Budapest (Hungary) in August 1985, UNIDO sponsored the participation of 20 representatives from 13 developing countries, six of which were exhibitors. On this occasion, UNIDO and Hungarian institutions organized an international workshop and visits to plants manufacturing food-processing, quality control and dairy equipment.

136. A new approach was applied in 1985 to activities related to product adaptation for export. With the aim to provide technical assistance to manufacturers of selected products in developing countries in adapting and upgrading their export products so as to meet the required standards, trade

²⁵ID/B/340, chap. III, para. 137.

promotion agencies and chambers of commerce and industry were approached in several industrialized countries. In response, some countries have expressed interest in the approach, and pilot programmes are under negotiation between the United Kingdom of Great Britain and Northern Ireland and Sri Lanka as well as between Australia, New Zealand and the Pacific island States. Recommendations were made for a long-term strategy for the development of industrial design and preparation of full-scale institutional assistance to the Korea Design and Packaging Centre in the Republic of Korea.

137. Multi-branch industrial research and services institutions play a crucial role in the establishment and development of small- and medium-scale industrial enterprises, in the development of indigenous R + D capabilities and in the facilitation of the process of technology acquisition, transfer and development. UNIDO continued, therefore, to provide assistance to a number of such institutions in China, Guyana, Libyan Arab Jamahiriya, Mexico and the United Republic of Tanzania.²⁶ The capability of the Tanzanian Industrial Research and Development Organization (TIRDO) to provide direct assistance to industries in solving their most urgent problems was further strengthened. Energy audits carried out by the Engineering Department of TIRDO in 34 industrial enterprises were appreciated by the Government and the World Bank. Its well-functioning extension services combined with industrial information services provided important support to local industries, particularly those in the small- and medium-scale sector. TIRDO is now recognized as a key institution fully competent in matters concerned with energy conservation in the United Republic of Tanzania.²⁷

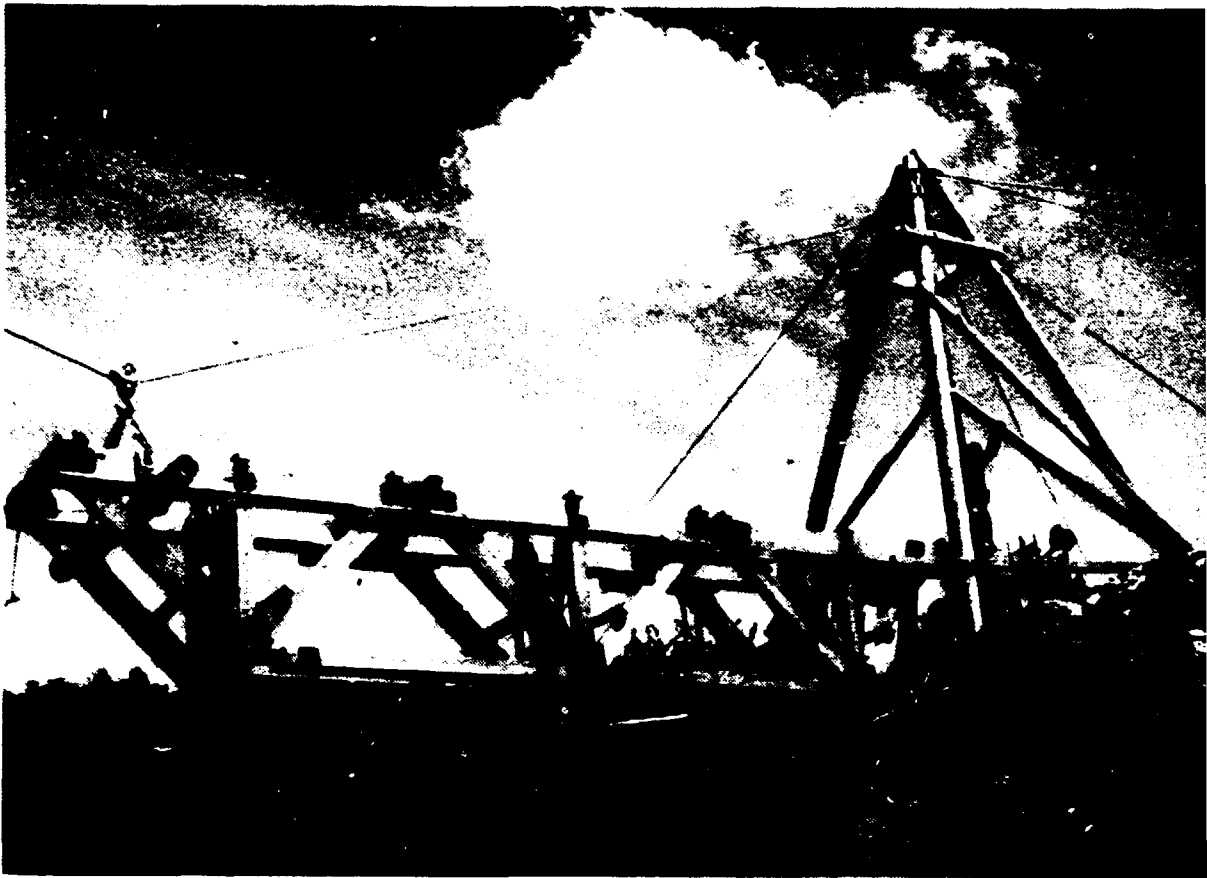
138. Progress was achieved in a project assisting the Institute of Applied Science and Technology in Guyana to develop indigenous R + D capabilities and to provide extension services to local industry. Emphasis was placed on developing the ceramics and mineral technology programme which currently offers direct support to local plants. The Government of Guyana has recognized the substantial contribution of the Institute towards solving the overall industrialization problems of the country and plans to provide further support.

139. Assistance in the field of industrial information encompassed establishing and strengthening national information centres, regional networks and information services for specialized engineering and development centres. Special attention was given to institutions that provide support to the development of small- and medium-scale industries. Moreover, UNIDO ventured into relatively sophisticated areas of information, such as computerization of information services, creation of regional networks and linking national information systems with the UNIDO Industrial and Technological Information Bank and other information sources via satellite. Assistance to the Industrial Information Service in Angola continued,²⁸ which now extends regular information services to private and public enterprises. This service centre is viewed as a successful example for similar initiatives in African countries and its facilities will be used to train African information officers attached to UNIDO projects.

²⁶*Ibid.*, para. 118.

²⁷ID/B/320, chap. III, para. 117; ID/B/340, chap. III, para. 118.

²⁸ID/B/320, chap. III, para. 119; ID/B/340, chap. III, para. 120.



Launching a pair of trusses during the construction of a low-cost modular prefabricated wooden bridge (Honduras)

140. UNIDO continued to support the organization and operation of standardization, quality control and metrology activities in developing countries at the national, regional and interregional levels. Projects aimed at assisting the establishment, development and strengthening of the above activities were implemented in Bangladesh, Brazil, Democratic People's Republic of Korea, Democratic Yemen, Ethiopia, Guinea, India, Iraq, Jamaica, Nepal, Nigeria, Oman, Pakistan, Peru, Portugal, Saudi Arabia, Sri Lanka, Turkey, Viet Nam, Zambia and Zimbabwe and at the regional level in Africa and Latin America.²⁹ Assistance also included quality assurance, certification marking, testing and testing laboratories and laboratory accreditation. Whenever necessary, the UNIDO programme for the development of national institutional infrastructure for standardization, quality control and metrology was applied within the framework of a national system or network, by linking and co-ordinating these activities with other programmes supporting the industrial development of the countries concerned.

141. An important element in the support of effective industrialization is metrology. National metrology programmes provide national reference standards of the highest precision and accuracy in length, volume, mass, time and frequency, as well as calibration services to industries for the continuous

²⁹ID/B/340, chap. III, para. 121.

control of the precision of measuring and testing of instruments. Such national metrology systems also facilitate commercial transactions of goods and act as technical and scientific bases for the formulation of standard specifications and quality parameters.

142. A project to provide assistance to the African Regional Organization for Standardization was successfully implemented within the framework of the programme for IDDA. UNIDO assistance with regard to standardization, quality control and metrology contributed substantially to the economies of participating developing countries through efficient utilization of raw materials, increased productivity, reduction of production and distribution costs, improvement of quality, safety and reliability of industrial goods and products leading to an increase in export trade, and the overall protection and well-being of consumers. Emphasis is being increasingly placed on the continuous improvement of quality.

FACTORY ESTABLISHMENT AND MANAGEMENT

143. In 1985, technical co-operation expenditures under the heading factory establishment and management amounted to \$3.9 million. Some 93 per cent of total implementation was financed from UNDP resources. A total of 50 projects were implemented or under implementation.

144. Some financial constraints encountered in 1984 were no longer apparent in 1985. Many projects approved in early 1985 and others approved late in 1984 became operational during the year under review. This fact enabled the Section to meet its target by increasing technical co-operation delivery in computer systems, energy management and conservation and industrial consultancy.

145. In 1985 trends continued to reflect the need for improved management related skills. The need for increased assistance in the development of consultancy skills and rehabilitation of industrial enterprises was also noted. Basic concerns addressed were unsatisfactory industrial performance, failure to take best advantage of available resources and limited contribution to self-reliance. Interrelated external and internal problems negatively affected the utilization of installed capacity; the need for urgent remedial action in performance improvement and overall revitalization became increasingly apparent. These developments have led to a more intensive search for the necessary resources, both internal and external, as well as to a more effective use of those resources. A greater number of training seminars were carried out in the review period. Three seminars were held on energy-related matters, industrial consultancy and general management. Besides the immediate impact of such seminars, their role in promoting inter-country and inter-institutional co-operation should be underscored. Efforts continued in 1985 to involve universities in support activities to industry. A new approach is the development of specific programmes for export production management. A number of new project concepts covering all the activities of the Section were also developed. In 1985 increased disbursement was noted in subcontracting and equipment components, mainly in computers and energy. Efforts were made to ensure that equipment not only performed the appropriate function but also

served to train a large number of national specialists. The trend towards more short-term expertise continued, which, while being more cost-effective, requires careful planning at the field level.

146. Under a project aimed at improving the efficiency of public sector industries, recommendations were made to the Government of the Sudan to alleviate rehabilitation problems encountered by industrial enterprises in basic industries. The measures proposed should lead to a more comprehensive overview of the industrial sector, including utilization of contributions from donor countries under the solidarity programme. This project also played an important role during 1985 in providing consultancy services to industrial enterprises. As it involved staff of Sudan's Industrial Research and Consultancy Centre, national consultancy capabilities were enhanced. In Zaire a project continued aimed at improving the financial management of enterprises was being improved.³⁰ An interesting feature of the project in Zaire is the way in which rehabilitation of factories was approached; a review was made of all the organizational and managerial problems of the large factories in the country (steelworks, agricultural equipment, mineral processing) which has already led to a much better definition of the production problems. Consultants are now making an in-depth diagnosis of these problems which will form the basis of specific rehabilitation programmes.

147. Activities of a rehabilitation or diagnostic nature also began under a multi-disciplinary project that provided assistance to African countries through the provision of short-term technical advisory services in different subsectors. On the basis of a UNIDO project which provided assistance in industrial reactivation in Central America, the United States Agency for International Development earmarked \$1.5 million out of a \$50 million loan to the Central American Development Bank for its unit responsible for industrial rehabilitation, which is acting as counterpart to the project.

148. In Malawi, advice was given on and recommendations made for strengthening the institutional capacity of the Ministry of Trade, Industry and Tourism. This, *inter alia*, included a structural adjustment plan for the industrial development section of a project providing industrial advisory services.³¹ Under the same project, inter-country seminars were conducted on production management with the purpose of developing techniques for cost reduction. These seminars were, in turn, supported by an overall senior management seminar. The production management seminars proved to be successful and quite popular. The concepts developed at the seminars were applied at the enterprise level by the national staff and international experts.

149. The need to improve production performance and related activities prevailed. In Somalia a project continued to provide assistance to the Ministry of Industry in improving the performance of industrial enterprises,³¹ whereby technical co-operation was aimed at improving the production performance of public enterprises through the installation of preventive maintenance systems and through new engineering innovation and adaptation. This proved to be helpful in a situation where foreign exchange for the purchase of spare parts

³⁰*Ibid.*, para. 144.

³¹*Ibid.*, para. 143.

and imported raw materials was limited. Assistance was extended to the establishment of an industrial legislation framework aimed at generating interest in industrial investment and attracting foreign investment.

150. In Ethiopia assistance in industrial project development continued to gather momentum in 1985. Assistance is provided to the Ministry of Industry, sectoral corporations and individual enterprises, and covers the whole managerial and institutional industrial infrastructure of the country. The fact that the project is managed by a national project director and supported by a national project officer, allows for much greater operational flexibility and quick decision-making. Appropriate planning of activities and extensive preparatory work have led to a high level of implementation in this project. In addition, a training component of considerable importance was also included in the project. UNIDO and UNDP organized a seminar for the Government of the Democratic People's Republic of Korea that covered industrial project management, technical co-operation project management, project formulation and evaluation. The background material provided to the Government has been further elaborated at UNIDO Headquarters to provide a basis for similar seminars in other countries.

151. A large-scale project on productivity enhancement started in 1985 in India with the purpose of strengthening the capability of a cement research institute in production enhancement. The objective of this project is to improve productivity and raise the technological level at which the various units of the cement industry—an industry of vital importance to national development—are operating in India. General performance of the industry will be upgraded through improved management modernization programmes. About 30 experts in various aspects of productivity improvement will be involved. A computerized process control system with the necessary software packages for training purposes and application to cement plants is to be delivered during the implementation of the project.

152. In Europe, a project to promote regional co-operation in energy conservation³² started in the middle of 1985 after completion of the preparatory phase of assistance. The project document was signed in Vienna in July 1985 during a first regional technical meeting. The first round of sectoral group meetings to discuss problems of energy conservation in the most energy-intensive industries of the participating countries was held in Czechoslovakia, Hungary, Romania and Yugoslavia. Experience gained through this programme of co-operation will be used in future regional projects.

153. Also in the field of energy conservation, projects continued in the Philippines, the Republic of Korea and Sri Lanka where assistance concentrated on services to industry in energy management and conservation to establish or strengthen capabilities of national institutions that are responsible for energy management. These services included energy auditing of industrial enterprises, organization of seminars and workshops and preparation of manuals on energy conservation. The manuals, of which two were produced in the Philippines and two more are under preparation, are already proving to be of considerable value and interest to other energy-related projects.

³²*Ibid.*, para. 145.

154. Under a UNIDF special-purpose contribution provided by the Government of Australia, a regional energy management course was held at Melbourne (Australia) in October 1985. Eleven energy conservation specialists from nine Asian countries and 16 Australian experts contributed to lectures and on-site work. The management of the seminar was subcontracted to the Energy Management Centre of the Gas and Fuel Corporation of Victoria (Australia). Participants had the opportunity to become acquainted with the operation and activities of a successful energy management centre. The course also encouraged the training of energy conservation specialists in energy auditing in their home countries, and initiated an exchange of experience in energy conservation among the participating countries. Three factories provided the venue for the practical application of subjects discussed. Subject to availability of funds, follow-up work will be undertaken, including a survey of training needs in the participating countries.

155. One of the main activities undertaken in 1985 continued to be industrial consultancy projects. A project providing preparatory assistance to the development of an Asian regional network for industrial consultancy should lead to a full programme of activity in 1986. Even at the preparatory stage, the impact of the project was felt at the national level in some countries, e.g. in Bangladesh, a national project was formulated that will maintain links with the regional project. A similar project is also envisaged for Africa and preparatory activities and exchanges of views with the African Association of Consultants have already been held in that respect.

156. Short-term industrial consultancy services continued to be undertaken in Egypt³³ under a project whereby managerial and production capacities of public or private corporations have been strengthened by a pool of international experts. Manufacture of electric motors, dry batteries and chemicals, in particular pesticides, were some of the subsectors covered. In Pakistan, under a project aimed to develop consultancy capacities, the Investment Advisory Centre of Pakistan was assisted through the provision of *ad hoc* consultancy services in finance, marketing, chemicals and mechanical engineering. Under another project in Pakistan, similar assistance was provided to the Federal Chemical and Ceramics Corp. Ltd. in developing a corporate plan; services will also be provided in a project on marketing and energy savings management.

157. In China a consultancy seminar was held with the help of a UNIDF special-purpose contribution provided by the Government of Spain. Under the project, high-level Spanish consultants delivered lectures and discussed with Chinese specialists consultancy in general and particular problems encountered.

158. Interest continues to grow in the use of micro-computers as a management tool to increase productivity in industrial enterprises. Price reductions in computer hardware and the introduction of user-friendly computers together with the easier provision of applied software, have encouraged their use not only by larger firms but also by smaller industrial enterprises. Some obstacles, such as lack of qualified staff and limitations in telecommunications facilities for data transmission, have still to be overcome.

³³*Ibid.*, para. 157.

Through the promotion of management awareness, and support in establishment of computer-based management information systems, UNIDO is having some success in overcoming these obstacles. During 1985, assistance was provided to Cuba in a project for the improvement of industrial management through computer support where a team of four experts worked for one month to introduce computer-aided management tools in a pharmaceutical plant producing antibiotics. These management tools included the introduction and modification of production and quality control programmes to be applied using a micro-computer. The plant has already improved its efficiency through these efforts. It is planned to use the results of this project as a case study in other countries where similar problems exist. Follow-up to this project on a larger scale has already been requested. The first phase of a UNIDO/IIASA project designed to produce computerized decision aids for industrial management,³⁴ ended with the creation of STRATEGEM I as one of three management games for use in developing countries. The second workshop on dynamics simulation and operation gaming as teaching and research tools was held in Hungary. Sessions to introduce STRATEGEM I were held in Costa Rica, Cuba and Kenya.

159. Based on the model of the Barbados project completed early in 1985, activities will be increased in the Caribbean region to improve management through computer support. These activities will involve review and analysis of the information needs of various development corporations of the region, revision of management system plans, design and implementation of systems components and holding of training programmes. There is an increasing interest in projects dealing with the application of computers in industrial management, as evidenced by requests from the British Virgin Islands, China, Suriname and Thailand.

TRAINING

160. In 1985, expenditures for fellowships and training components in all technical co-operation projects implemented by UNIDO amounted to \$13.5 million. Of that total, \$8.3 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, which received substantive backstopping from the Training Branch, amounted to \$5.8 million. Some 15 per cent of this implementation was financed from UNDP resources. A total of 229 projects were implemented or under implementation in 1985.

161. The UNIDO fellowship programme responds to an important need of developing countries to have tailor-made training programmes for managerial and technical personnel of industrial projects. Fellowships and study tours continued therefore to be an effective component of the technical co-operation activities of UNIDO. The number of individual training programmes initiated in 1985 was 35 per cent higher than in 1984 (1,725 compared with 1,278), while the number of placement arrangements by host countries was 30 per cent higher (2,815 in 1985 compared with 2,166 in 1984). Of these placements, 727

³⁴*Ibid.*, para. 148.

or 25.8 per cent were arranged in developing countries, thus contributing to technical co-operation among developing countries (62.2 per cent increase over 1984). A total of 315 or 18.2 per cent of the candidates came from least developed countries (88.6 per cent increase over 1984) and 207 or 12 per cent (46.8 per cent increase over 1984) were female. The trend towards study tours for high-level industrial personnel continued upward. Other important recurring activities of the Training Branch are group training programmes and the strengthening of training infrastructure.

162. In line with the recommendations of the Fourth General Conference of UNIDO emphasis was placed on accelerated human resource development for industrialization, in particular policies and strategies for human resource development at the national and enterprise levels. An example of such activities is the training programme in management of human resource development for industry held in the Union of Soviet Socialist Republics. Also in that context a workshop on the role of women in industry was organized in Buenos Aires (Argentina) by the Argentinian Association of Training and Development and co-sponsored by UNIDO and the International Research and Training Institute for the Advancement of Women (INSTRAW). The workshop was a follow-up of the 1984 workshop for women entrepreneurs organized in Vienna by UNIDO and INSTRAW, aiming at the design and development of a modular curriculum for training of female industrial managers.³⁵

163. A national scheme for the development of human resources in the industrial sector was initiated in Mozambique. The scheme provides for a series of training programmes to be organized in Mozambique and abroad. Some 90 participants took part in the 1985 programme, which covered policies governing training in general, the organization of training, training of trainers, training abroad and training at the plant level. It also provided an arrangement for technical co-operation among developing countries in that Brazil provided consultants and trainers for training activities in Mozambique and made training facilities available to Mozambicans in Brazil.

164. Special emphasis was given to training geared to the promotion and development of small- and medium-scale industries. Among the most important activities was a seminar on financing small- and medium-scale enterprises, organized with the Central African Customs and Economic Union (UDEAC) and held at Libreville (Gabon). The recommendations for a subregional programme made by the participants in the seminar were reviewed and endorsed by the Heads of States and Governments of the six UDEAC countries in a plan of action adopted at their meeting in December 1985. The plan of action relates not only to financing and follow-up of projects but also to the training and assistance needed for the promotion and development of small- and medium-scale enterprises, including the development of national consultancy capabilities. The plan of action also aims to establish subregional technical co-operation for the formulation of a coherent community policy for the development of this sector of the economy.

165. Related to the UDEAC seminar were supporting activities organized by the Association of African Development Finance Institutions in co-operation

³⁵*Ibid.*, para. 173.

Chapter III

with UNIDO and the World Bank. One of these activities, carried out under arrangements for technical co-operation among developing countries, was a workshop held at Cairo (Egypt) for chief executives of development banks of English-speaking countries; another was a seminar on training of trainers for finance institutions organized by UNIDO in co-operation with AADFI within the framework of IDDA and held at the Centre africain et mauricien de perfectionnement de cadres at Abidjan (Côte d'Ivoire). The professional staff of development finance institutions were provided with opportunities to examine the issues of resource mobilization and training policies and programmes and were made aware of the need to be better equipped to appraise projects, including those for small- and medium-scale industries. Training in the processing of industrial projects and project promotion and identification, supervision and follow-up formed an important part of these activities.

166. Under another project, a mobile team of trainers operated in the Comoros, Madagascar and Mauritius training managers of small- and medium-scale enterprises in overall management techniques. Encouraging results emanating from the project bode well for a continuation and expansion of this kind of activity. A group training programme in the field of policy and consultancy activities in small-scale industries was also organized for the Palestinian people and held at Turin (Italy) in co-operation with the International Centre for Advanced Technical and Vocational Training. In Niger a survey was carried out of training needs of 40 industrial enterprises. Some 150 participants took part in subsequent training programmes on industrial management.

167. A series of training programmes were organized in the food industry sector within the framework of the programme for IDDA, as a means of combating malnutrition and health hazards. The training programmes covered, *inter alia*, the important activity of conservation of food products. A particularly successful programme in that connection was a course on modern packaging techniques held in Morocco and Italy. Another important training programme, with courses held in Egypt, France and Ireland, addressed the maintenance of refrigerators and deep-freezer equipment. Other courses related to the food-processing industry were held in China, German Democratic Republic, Romania, Union of Soviet Socialist Republics and Yugoslavia. UNIDO evaluated the training capacities and capabilities of the Food Technology Institute (ITA) in Senegal in the drying and freezing of fish. In parallel, a survey was carried out to identify the training needs in this industrial subsector in Burkina Faso, Côte d'Ivoire, Guinea, Mali, Mauritania, Niger and Senegal. The survey will be followed up in 1986 by two group training programmes, one on the training of trainers for ITA instructors and the other for technical and managerial personnel.

168. The activities of a large-scale project in Bolivia for the establishment of a training centre for meat- and dairy-processing industries (see chap. II, para. 11 (d)) will be extended to include fruit and vegetable processing. This centre is also expected to serve member countries of the Andean Group in the future.

169. As part of a technical co-operation project related to the agricultural machinery industry, a working group was hosted by the Government of

Argentina to review the findings of a survey conducted by UNIDO to identify training needs in this field and to develop a framework for a comprehensive approach to meeting those needs. The working group marked a culmination of several years' effort during which training needs and existing training capabilities had been reviewed in a representative group of developing countries. A series of recommendations for future action was agreed upon, in particular with regard to the strengthening or the establishment of institutional training capabilities and the optimal use of existing resources in developing and industrialized countries in that respect. Within the framework of IDDA a regional project for the establishment of training facilities and capabilities in the design and production of agricultural machinery and implements covering Cameroon, the Sudan and the United Republic of Tanzania was completed. An in-plant group training programme on agricultural machinery also took place in China.

170. To assist in the building and strengthening of training capabilities and capacities in the sugar industry a survey was carried out to assess the training needs in Ethiopia and Zimbabwe while a group training programme on chemical control of sugar plants and sugar manufacturing technology was carried out in Mauritius. In the textile industry an assessment of training needs was carried out in Kenya not only with the aim of strengthening national training capacities and capabilities but also to identify possibilities for regional training programmes.

171. Industrial maintenance was given highest priority during 1985. Training materials were developed and of particular importance was the preparation of a training manual for instructors of seminars on industrial maintenance in developing countries and the design and development of a modular approach for courses in maintenance. In addition to courses on industrial maintenance (Cameroon), maintenance of bio-medical and laboratory electronic equipment (Hungary) and condition-based maintenance and technical diagnostics of machines (Yugoslavia), important components in maintenance and repair were also included in the programmes mentioned in paragraphs 172 and 173 below.

172. Two group training programmes were once again organized in co-operation with the Union of African Railways within the framework of the Transport and Communications Decade for Africa, i.e. one programme on maintenance and repair of railroad equipment for French-speaking countries in Belgium and Côte d'Ivoire, and a similar one for English-speaking countries in the United Kingdom of Great Britain and Northern Ireland. An interregional training programme in the field of maintenance and repair of small- and medium-sized ships was held in Belgium. Other group training programmes were held on the maintenance, repair and overhaul of diesel engines in China and on diesel engines in Czechoslovakia.

173. In Democratic Yemen, a special programme was undertaken to control corrosion in water treatment and steam generation plants, a very serious problem caused by the climate in that country. Under the project, four Yemeni engineers attended a specially designed training programme which qualified them as corrosion control engineers. As a follow-up to this project, the four engineers, together with the consultant, will design and conduct in 1986 a local training programme on corrosion control for 16 local technicians.

174. Technical co-operation among developing countries (TCDC) is reflected in activities related to "centres of excellence" and in the placement of fellows. Through the exchange of experiences among participants, there is also an element of TCDC in every group training programme whether it is organized in developed or developing countries. To foster TCDC in Africa in the field of industrial training, six Governments have agreed to form national committees to take part in the African Association for the Exchange of Industrial Interns for Technical Experience. Also under the "centres of excellence" programme, UNIDO provided additional assistance to the National Small Industries Extension Training Institute (NSIETI) at Hyderabad (India) in completing their video facilities, in training personnel for the use of these facilities and in computerizing the NSIETI Documentation Centre.

175. Other activities aimed at TCDC included a project assisting the UDEAC Institut sous-régional multisectoriel de technologie appliquée, de planification et d'évaluation des projets which proved to be a unique instrument to foster subregional co-operation in Africa: in December 1985 the Heads of States and Governments of the UDEAC reiterated their full support to the continuation of this project (see paras. 45 and 164 above). In the iron and steel industry subsector, following a decision by the Heads of States and Governments of the PTA member countries at Bujumbura (Burundi) in 1984, an assessment was conducted of the training needs of the member countries of the Preferential Trade Area for Eastern and Southern Africa (PTA). On that occasion, the Government of Zimbabwe offered the training facilities at ZISCOSTEEL for the purpose of holding regional training programmes in the field of iron and steel.

176. A successful seminar on curriculum development for training industrial public enterprise managers in Latin America was carried out in Buenos Aires (Argentina) in co-operation with the Centro Interamericano de Administración y Desarrollo and the Centro Interamericano de Capacitación para Administración Pública of the Organization of American States. The training programme in the field of energy management for least developed countries under TCDC arrangements was repeated in the Philippines.³⁶ This programme fostered both regional and interregional co-operation among developing countries.

177. The fourteenth issue of the *UNIDO Guide to Training Opportunities for Industrial Development* (PI/97) as well as the *UNIDO Industrial Training Offer Programme for 1986* (PI/98) were published and distributed on a world-wide basis (more than 10,000 copies each).

FEASIBILITY STUDIES

178. In 1985, technical co-operation expenditures under the heading feasibility studies amounted to \$5.3 million. Some 80 per cent of the total implementation was financed from UNDP resources. A total of 84 projects were implemented or under implementation.

³⁶*Ibid.*, para. 169.

179. The objective of the Feasibility Studies Section to promote a standardized methodology for the preparation and evaluation of pre-investment studies has met with a lively response and resulted in a further increase of requests for technical assistance. Activities cover assistance in the preparation and evaluation of specific pre-feasibility and feasibility studies and the development and advancement of a related UNIDO methodology including the Computer Model for Feasibility Analysis and Reporting (COMFAR). Long-term assistance is also provided to project preparation centres, industrial development banks and national consulting firms by establishing industrial advisory units as well as the development of human resources through training workshops and seminars.

180. The setting up of industrial advisory units attached to a substantive ministry, agency or industrial development bank is an efficient way of strengthening national capabilities in the identification, preparation, evaluation and selection of investment projects. Close and early co-operation between promotional agencies, ministries, development financing institutions, consulting firms and the project sponsors are a prerequisite to leading any pre-investment work to successful investment and operations. In the course of 1985 assistance was provided to 18 institution-building projects, some of which have achieved notable results.

181. A large-scale project in Indonesia to provide assistance in the identification, preparation and implementation of investment projects in selected regions had, by the end of its first five-year phase in December 1985, resulted in the establishment and operation of 13 factories and the development of eight projects up to the bankable stage.³⁷ The project received increased support from the Government, particularly in 1985, and the private sector and the state banking institutions contributed significantly to the above achievements. Industries that were developed through the project include rattan furniture, fish processing, foundry products, pumps, switchgear as well as aluminium sheet and foil. Among the three downstream timber-processing projects in Indonesia one dealt with the manufacture of wooden boats based on a plywood kit system developed by UNIDO experts. UNIDO was able to organize financing of a pilot shipyard from local banks and the Netherlands Financing Company for Developing Countries. As a direct result of this activity the Government of the Netherlands has agreed to finance a feasibility study on boat building in Indragiri Jaya.

182. Within the same project close working contacts were established in 1985 with Indonesian state banks through the organization of a seminar where senior bank staff were trained in modern techniques of project preparation and evaluation including the application of COMFAR. In view of the positive outcome of this seminar the State Industrial Development Bank, and the State Venture Capital Bank, have agreed to second staff to the UNIDO project team where they will jointly prepare and evaluate project proposals derived from a common project pool. In addition, contacts were established with the Asian Development Bank for financing the production of wooden boats and for equity participation in a fish canning enterprise.

³⁷*Ibid.*, para. 182.

183. A pilot project for the industrial expansion of north-eastern Thailand came to an end in 1985. During the implementation of the project, which was carried out in accordance with the national industrial policy directed towards the setting up of new industries in outlying regions, assistance was provided to more than 30 private entrepreneurs in establishing new industries and improving the operations of existing ones. On the basis of the achievements of the project, and an in-depth evaluation of the same, the Government decided to apply the methodology developed by UNIDO in project identification, preparator., evaluation and implementation in other parts of the country.³⁸

184. In Ethiopia assistance to the Development Projects Study Agency (DPSA) of the National Commission for Central Planning, entered its second phase. This large-scale project continued to assist in strengthening DPSA's project appraisal capabilities. During the second phase DPSA will also offer services in project preparation as well as in training staff members from other national institutions, including banks, in project preparation and appraisal. As part of the activities of the project, a seminar was conducted for the Agricultural and Industrial Development Bank. In the future, DPSA will also concentrate on investment promotion activities in order to facilitate a more efficient linkage between the pre-investment phase and actual investment. Another large-scale project in Ethiopia successfully assisted the Industrial Projects Service (IPS), a national consulting house within the Ministry of Industry. This project aims at strengthening the professional capabilities of the IPS in project preparation and implementation. Feasibility studies have been elaborated by IPS for 13 national corporations for new investments and for the rehabilitation of existing plants. In this connection training activities were undertaken in Ethiopia in co-operation with international consulting firms and institutions for the purpose of further upgrading the skills of IPS staff in pre-investment work.

185. The two projects in Ethiopia have successfully adopted UNIDO methodologies in project preparation and appraisal. COMFAR is fully operational both in DPSA and IPS and the computer model has contributed greatly to standardizing national project preparation and appraisal methodologies. UNIDO methodologies are now in use at all levels in Ethiopian institutions and have contributed significantly to the improvement of investment decision-making. As a consequence of the timely and successful implementation of these projects, DPSA invited UNIDO to undertake part of a government-executed project by preparing techno-economic pre-feasibility studies to investigate the possible manufacture of automotive components and establishment of mini-hydro power stations in Ethiopia. DPSA also requested UNIDO to undertake 50 opportunity studies in agriculture, chemical and engineering industries utilizing an International Development Association credit line allocated to DPSA.

186. Two new institution-building projects were approved in 1985 for implementation in Zambia. The projects are expected to contribute to the standardization of national project preparation and appraisal methodologies following the UNIDO approach and to provide sound pre-investment studies for the selection of viable projects, particularly from the national economic point of view. One of the projects aims at strengthening the professional

³⁸*Ibid.*, para. 183.

capabilities in project appraisal at the **Zambian National Commission for Development Planning (NCDP)**—the government agency responsible, *inter alia*, for approving investment projects for external funding—by applying the standard pre-investment methodologies developed by UNIDO. The second project is aimed at reinforcing the project preparation and appraisal capabilities of the **Industrial Development Corporation (INDECO)**, a national holding company. INDECO has received multi- and bilateral technical assistance in the preparation of feasibility studies for new investments as well as for rehabilitation of its subsidiaries. At the same time INDECO strives to become self-sufficient in this field and intends particularly to undertake rehabilitation feasibility studies that will subsequently be financed by the World Bank. The two projects in Zambia have facilitated a close interrelationship and practical linkage between INDECO and NCDP: investment proposals are prepared by INDECO and submitted to NCDP for final appraisal; both make use of UNIDO methodologies and COMFAR. Thus a sound investment scheme is being developed to attract funds from national and international sources including the World Bank.

187. Assistance continued to be provided to the **Ministry of Industry and Electricity of Saudi Arabia**³⁹ in carrying out its responsibilities of promoting industrialization, in both the public and private sectors. UNIDO participated in this project from its initial stages, when a feasibility study was prepared for the manufacture of 3,000 trailer axles, until the stage when a medium-term loan from the **Saudi Industrial Development Fund** was applied for. The **Arabian Axle Manufacturing Company (AAMC)**, which owns the plant, has been given support by the **Arab Industrial Investment Company (AIIC)**, an intergovernmental organization of Arab States located at Baghdad (Iraq), the objective of which is to promote engineering industries in the Arab region. In addition to AIIC, shareholders of AAMC include a number of leading Arab companies in trailer assembly and manufacture. At a recent tripartite review meeting the **Deputy Minister of Industry and Electricity of Saudi Arabia** expressed his satisfaction with the implementation of the project and with the work of the experts attached to it and revealed his intention to request additional long-term experts and short-term consultancy services.

188. Although UNIDO efforts to strengthen the national capabilities of developing countries in project preparation have led, in the past, to the establishment of many project preparation centres, the development of links between pre-investment work and finance for industrial investment projects still needs improvement. During the past two decades, national development financing institutions have made great efforts to finance industrial enterprises. Aid-giving institutions and international financial intermediaries prefer to channel investment funds through those national development banks which meet international criteria for the preparation and evaluation of industrial feasibility studies. For that reason, UNIDO has, in 1985, increasingly provided technical co-operation to the banks. Requests were received from the development banks of Fiji, Kenya, Zambia and Zimbabwe, the **Regional Development Bank of Pakistan**, the **Social Security Bank of Ghana** and **Nacional Financiera S.A. of Mexico**. These and many other banks, such as the **Saudi Industrial Development Fund**, the **Islamic Development Bank** and the

³⁹*Ibid.*, para. 188.

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Yugoslav Bank for International Co-operation are interested in applying COMFAR in their project appraisal work and have already installed the system or intend to do so soon. Close co-operation has continued with the West African Development Bank at Lomé (Togo) in the field of pre-investment.

189. During 1985 the Feasibility Studies Section participated in annual meetings of the regional associations of development financing institutions of Africa, held at Pointe Noire (Congo) and of Asia and the Pacific, held at Istanbul (Turkey). UNIDO also actively participated in a seminar on project appraisal convened by the German Foundation for International Development and the African Development Bank at Feldafing (Federal Republic of Germany).

190. During the year under review assistance in the preparation and evaluation of UNIDO pre-feasibility and feasibility studies played an increasingly important role in the work of the Section, which is acting as the focal point of the Division of Industrial Operations in this activity. The Section is currently involved in some 50 pre-investment studies at different stages of progress dealing with 23 countries. The systematic screening of any given investment project at the earliest stage of preparation has helped to reduce the large number of general requests to more concrete proposals for technical co-operation. Furthermore, the pre-condition for UNIDO financing of pre-investment studies, whereby a project sponsor is identified who is ready to co-finance the studies, is being increasingly applied. The result is the elimination of project ideas with low investment potential. Experience shows that pre-investment studies prepared within this framework, using the UNIDO methodology and calculating all investment data with the help of COMFAR, are meeting project appraisal criteria of international, regional and national development banks and investors.

191. A UNIDF special-purpose contribution of \$440,000, pledged at the Fourth General Conference of UNIDO, was received in 1985 from the Government of the Netherlands for the purpose of financing pre-investment studies. Together with a similar contribution received from the Government of the Federal Republic of Germany, UNIDO was able to dispose of special funds, which provide an important element of flexibility and independence from other sources of funding in the preparation of pre-investment studies. As experience has shown that UNDP funds, owing to over-programming of the indicative planning figure, are usually not available in sufficient amounts for *ad hoc* pre-investment studies, it is hoped that more donor Governments and organizations will contribute to this pre-investment programme in 1986 and thus bring more industrial proposals to fruition.

192. Under the special-purpose contribution provided by the Government of the Netherlands, pre-investment studies are being carried out in Benin (packaging plant and mini-steel plant), Burkina Faso (pesticides), Guinea-Bissau (flour mill) and Indonesia (wooden boats). The contribution from the Government of the Federal Republic of Germany is being used to finance projects in Barbados (fish processing), Guinea (mini-hydro electric power stations), Jamaica (furniture) and Nepal (ceramics).

193. Eight opportunity, pre-feasibility and feasibility studies were undertaken and finalized in 1985 for the Directorate of Planning at Antananarivo (Madagascar). All these studies were conducted by local consulting firms, sometimes assisted by international experts. The project under which the studies were carried out contributed greatly to the overall improvement of the decision-making process as far as investment planning is concerned.⁴⁰

194. In 1985 UNIDO, under the terms of a large-scale project, further advanced the implementation of feasibility studies for four industrial projects requested by the Government of Burma that are related to the International Drinking Water Supply and Sanitation Decade. Opportunity studies and support (market and technical) studies on the production of plastic appliances, plastic pellets, cement mini-plants and steel pipes were finalized. It appears that the results of these studies are promising and that subsequent full-fledged feasibility studies planned for 1986 will lead to actual investments. Some bilateral donors have already expressed their interest in providing funding for the investments.⁴¹

195. A financial evaluation was carried out for the Chemical Industries Branch of a pre-feasibility study on the production of synthetic oil from coal in India. This project represents an investment potential of \$2.3 billion. The evaluation led to a complete reformulation of the financial and economic analysis of the project and to a change in project financing, thus allowing a much clearer idea of the profitability of the project. In Chad⁴² implementation of a large-scale project continued with the preparation of a pre-feasibility study and a geological survey for a cement plant in Mayo-Kebbi producing 100,000 tons per year. The study will be finished and submitted to the Government in late 1986. In Mongolia a pre-feasibility study for the erection of a mini-steel plant was conducted in co-operation with the Metallurgical Industries Section. Some centrally planned economy countries have already expressed their interest in financing the proposed investment.

196. In early 1985 COMFAR was released for use on personal computers. Consequently, the number of users of the UNIDO software increased more than fourfold. By the end of 1985 the COMFAR system was being used by nearly 70 companies, consulting firms and finance institutions in 36 countries, including 12 industrialized countries, where it serves mainly projects and management training for developing countries. COMFAR can be successfully applied in countries with different socio-economic systems. Great efforts were made to assist developing countries in the appropriate use of mini-computers, and especially to ensure competitiveness in modern investment decision-making through the application of a modern and universally applicable computer software programme. Expertise was made available to install COMFAR and to train users in developing countries. Thirteen COMFAR seminars were conducted of which eight were within ongoing projects (China, Guyana, Iraq (2), Madagascar, Mongolia, Mozambique, Zambia) and five as individual projects (Bulgaria, Cuba, Germany, Federal Republic of, the Sudan, Yugoslavia). The seminar in the Sudan was financed from a trust-fund contribution of the Sudan Rural Development Company.

⁴⁰*Ibid.*, para. 186.

⁴¹*Ibid.*, para. 78.

⁴²*Ibid.*, para. 25.

197. COMFAR is available against a licence fee but is free of charge for government institutions in the least developed countries.

198. COMFAR development in 1985 resulted in multilingual versions for dialogues and reporting in English, French, German and Spanish. In co-operation with the International Institute for Applied Systems Analysis (IIASA) a version of COMFAR in the Cyrillic alphabet for dialogues and reports in Russian was also finalized. During 1985 it was possible to finance COMFAR development entirely from incoming licence fees. The new multilingual versions were presented at the Hannover Fair, Federal Republic of Germany, at the Fourth All Africa Trade Fair, held at Lomé (Togo), at meetings of the regional associations of development financing institutions of Asia and the Pacific at Istanbul (Turkey) and of Africa at Pointe Noire (Congo) and Lusaka (Zambia), as well as at special meetings held at Bangkok (Thailand), Belgrade (Yugoslavia), Berlin (German Democratic Republic), Brasilia (Brazil), Cologne (Federal Republic of Germany), Copenhagen (Denmark), Madrid (Spain), Mexico (Mexico) and Port-of-Spain (Trinidad and Tobago).

199. COMFAR has become an important tool for project preparation, evaluation and appraisal, and for training in the financial analysis of investment projects in accordance with the methodology of the UNIDO *Manual for the Preparation of Industrial Feasibility Studies*. It is being increasingly used for negotiating investment contracts, funding packages and joint ventures. This new UNIDO approach based on the use of COMFAR has proved successful for the entire spectrum of pre-investment activities, including investment follow-up control and has led to a number of requests for technical co-operation in institution building, seminars on project preparation and evaluation and assistance in the preparation of feasibility studies and the implementation of investment projects.

200. Altogether 39 training seminars on industrial project preparation, evaluation and financing were organized in the period 1980 to 1985 by UNIDO in 29 countries with different socio-political systems. More than 1,100 staff members from consulting firms, development banks and ministries from developing countries participated in this training programme which was considered to be successful and will be further expanded. In 1985 training seminars were conducted as individual projects in Bangladesh and Togo, and as part of the activities of ongoing technical co-operation projects in Burma, Madagascar and Mongolia. For the fourth time an interregional seminar, co-financed by the Polish Government, was held at Warsaw (Poland), in co-operation with the Central School of Planning and Statistics, for 28 participants from developing countries. Also in co-operation with and jointly financed by the Government of Poland, a first seminar on transfer of technology and project preparation was held at Warsaw for 16 participants from Africa. Within the framework of IDDA, a six-week training programme on project preparation, evaluation and financing was organized jointly with the Economic Community of Great Lakes Countries (CEPGL) at Gisenyi and Kigali (Rwanda). Altogether 22 participants were trained in modern methods and techniques of project preparation and evaluation. Emphasis was placed on the practical aspects of preparing feasibility studies and the practical application of

UNIDO software to project preparation and appraisal. In that context, several case studies based on conditions prevailing in those countries and provided by the secretariat of CEPGL were used for pedagogical purposes.

201. In 1985 UNIDO, in co-operation with the National Electrification Administration of the Philippines, prepared a Manual for the Preparation of Feasibility Studies for Small Hydro-power Plants which was presented in June 1985 at the Seminar on Small-scale Hydro-power held at Klekken (Norway) organized jointly by the United Nations Department for Technical Co-operation and Development, the Norwegian Water Resources and Electricity Board and UNIDO. This manual, which is based on the UNIDO *Manual for the Preparation of Industrial Feasibility Studies*, is adjusted to the needs for the planning of small-scale hydro-power stations and incorporates the COMFAR system for financial analysis. A pre-feasibility study for the installation of mini hydro-power stations is being prepared in Guinea where the concept of the manual will be tested.

202. By decision GC.1/Dec.29 on the integration of women in industrial development the General Conference of UNIDO at its first session requested that UNIDO pre-investment study programmes be enlarged to pay greater attention to the social, cultural and economic costs and benefits that investment projects have on the role of women in the national economies concerned. As a first step in this direction, two women lecturers have made a substantial contribution to the training workshops on project preparation, evaluation and financing and on COMFAR.

AGRO-INDUSTRIES

203. 1985 technical co-operation expenditures under the heading agro-industries amounted to \$9.9 million. Some 45 per cent of the total implementation was financed from UNDP resources. A total of 172 projects were implemented or under implementation.

204. Projects in agro-industries covered the following subsectors: wood products and wood processing; textile production and garment making; food-processing and packaging; leather and leather products; and rubber products. Projects in this field contribute to a better utilization of natural resources, particularly of agricultural origin, and aim at producing goods to satisfy the basic needs of the developing countries' populations. In many cases the goods are also intended for export and, therefore, contribute significantly to the countries' foreign exchange income. The importance of agro-industries for developing countries in general and their rural areas in particular is emphasized by UNIDO because in many of these countries the majority of the population is involved in agricultural production and agro-based industry activities.

205. Technical co-operation projects in the wood industry continued to be relatively small in size and short in duration. Emphasis was placed on the use of timber in construction and an expert group meeting was held on this subject in Vienna in December. A training course on the use of coconut wood in

construction was held in the Philippines, which enabled 16 participants from nine developing countries to study the technology developed by the host developing country. An associate expert was attached to the UNDP/FAO/ECA/UNIDO Africa Forest Industries Advisory Group⁴³ project to promote the use of plantation timber in construction. Prefabricated wooden bridges were built in Dominica and Ecuador and several bridge projects continued and were begun during the year in Bhutan, Bolivia, Chile, Honduras, Nicaragua and Peru.

206. In non-structural uses of wood, a large project to assist Viet Nam in the production of textile loom shuttles was initiated by a preparatory mission which defined priorities for activities in four related fields. In Latin America UNIDO assisted in the creation of a congress of furniture manufacturers' federations. A second training workshop on production management in public sector mechanical wood-processing industries was held in Yugoslavia in April 1985.⁴⁴ Under an ongoing large-scale project assistance continued to be given to a pilot furniture plant in the Lao People's Democratic Republic.

207. Technical assistance to the development of the textile and garment production industry continued to be provided to institutions and centres of development in Bangladesh, Egypt, Sri Lanka and the Syrian Arab Republic. At the plant level, assistance continued to be provided in India and the Republic of Korea as well as in Bangladesh, Egypt, Montserrat and Viet Nam where projects were completed in 1985. In the United Republic of Tanzania, a three-month training programme in garment manufacture was held for women from the Pan African Congress (PAC). The training programme is expected to lead to a follow-up project for the benefit of PAC.

208. Preparatory missions to formulate large-scale textile projects were carried out in Bangladesh for the strengthening of the College of Textile Technology, in China for the establishment of a garment technology centre, and in India for assistance to the Indian Jute Industrial Research Associations. Preparatory work was also carried out for UNDP pipeline projects in Bangladesh and India. Short-term projects were implemented under the SIS programme, e.g. in Brazil to provide advisory services to centres of technology. In the United Republic of Tanzania, under a project financed by the Voluntary Fund for the United Nations Decade for Women, assistance was provided to the Kurasimi Women Tailoring Society in selecting and ordering equipment required for strengthening garment manufacture.

209. Inputs were provided by the Agro-Industries Branch to a workshop on the restructuring of the Mexican textile industry, which was organized by the Division for Industrial Studies and held at Mexico City (Mexico) in November. The Branch was also involved in the preparation of the background papers for and the discussions at the Expert Group Meeting on Women in the Agro-Industries which took place in Vienna in October 1985 (see chap. V, para. 196). In that context, an analysis was undertaken of the trends in technological development and employment of women in the textile industry in developing countries and the prospects for the future integration of women at all levels in this sector.

⁴³*Ibid.*, para. 191.

⁴⁴ID/B/320, chap. III, para. 201.

210. In the field of food-processing, activities of UNIDO continued to expand in Latin America with projects in Argentina, Bolivia, Brazil, Ecuador, El Salvador, Mexico and Peru. The need for agro-industry and food-processing development is increasing in Latin America and two requests for regional projects were received to assist in the establishment of a technical information bank and to support co-operation among the food research and development centres.

211. Co-operation with the United Nations Fund for Drug Abuse Control continued in Peru to develop the food industry as a support to the programme of drug plantation eradication. In that connection, a new project to assist in the establishment of a high-production cocoa-processing plant is in the final stage of negotiation and is expected to start in 1986.

212. Other projects under implementation in 1985 in the field of food processing dealt with an industrial bakery in Mozambique, a soya milk processing plant in El Salvador and demonstration plants for the processing of cassava, onions and tomatoes in Niger and for cassava processing in Sierra Leone. Assistance was also provided to the Cuban Research Institute for Sugar Cane Derivatives in processing sugar cane by-products, through ensilage, into animal feed.

213. Installation of a rice bran oil extraction plant with a 40 tons/day capacity was completed in Bangladesh. The project, at a value of \$3.8 million, was financed by the United Nations Capital Development Fund and UNIDF. The plant's first full load trial runs were successfully carried out; in that connection, rice-bran oil refining technology was reviewed and improved, and processing guidelines were prepared for global distribution. Attention was also drawn to the need for improved rice milling and rice-bran stabilization techniques in the publication *Rice Bran—An Underutilized Raw Material* (ID/320).

214. In a project which began in 1983, UNIDO continued to provide consultancy services for the construction, test runs and performance guarantee operations of the Grand Harbour Grain Terminal in Malta. A global project dealt with process development work for the production of vegetable oil and protein animal feed components from rubberseed. Based on the situation in Sri Lanka, this research work showed favourable development prospects for rubber plantations and the animal feed and vegetable oil producing industries in that country. Expert assistance was provided to the Centre de recherche agro-alimentaire at Lubumbashi (Zaire), where definitions for processing technology were prepared and economic evaluations were carried out for various food industries including the production of soup cubes, tomato paste, fruit and vegetable preservation and packaging.

215. Technical co-operation in the field of leather and leather products continued to take place in Brazil, China, Costa Rica, India, Kenya, Pakistan, the Philippines and the United Republic of Tanzania. A quality control laboratory project in Kenya and a tannery effluent treatment project in Brazil entered the second phase of implementation during 1985. UNIDF special-purpose contributions became increasingly important to work in the leather subsector. In particular, successful projects in China, Costa Rica and the

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Philippines have attracted favourable interest from donor countries for second-phase financing. Preparatory missions to formulate large-scale leather and leather products development projects were conducted in Burma, Indonesia and Madagascar, and an expert was fielded in 1985 to advise on the establishment of a leather quality control laboratory in the Dominican Republic. A preparatory mission was also sent to Burma to formulate a large-scale project for the establishment of a development centre for rubber technology.

216. As a follow-up to recommendations made by the Third Consultation on the Leather and Leather Products Industry held in April 1984, at Innsbruck (Austria), a project was launched to assist the integrated development of the leather and leather products industry in selected African countries which included the preparation, in an African country, of a model study for the manufacture of footwear components. The results of research undertaken under this project were examined by the eighth meeting of the UNIDO Leather and Leather Products Industry Panel held in Vienna in November 1985, and will constitute the main background papers for the African regional consultation meeting on the leather and leather products industry, scheduled for 1986. A rehabilitation study financed by the World Bank was carried out in the United Republic of Tanzania. It is expected that the results will be used for the improvement of the leather subsector in that country.

217. Most of the technical co-operation related to the packaging industry in 1985 was concerned with strengthening the technological facilities in packaging research and development institutions. During the year, projects were concluded in Jamaica⁴⁵ and Mali;⁴⁶ technical assistance in packaging technology was extended to other countries and at the same time preparatory work was undertaken with regard to a number of projects in Africa, the Americas and Asia. Major projects implemented in Brazil, Cuba, Jamaica and Turkey consisted of technical assistance intended to develop the local capacity of training and quality control in the manufacture and conversion of packaging materials, as well as in the analysis of package performance with regard to contents, markets and distribution systems. High-level expertise was provided in specific fields of packaging according to national priority requirements. Fellowships were organized and carried out in co-operation with some of the more advanced research centres in the world. Prototypes of modern testing apparatus for quality control of packaging materials and packages were delivered in connection with the establishment or upgrading of specialized laboratories.

218. At the regional level, the main technical assistance activities as regards packaging continued to focus on the Arab States. Within the framework of a project sponsored by UNIDO and the Arab Industrial Development Organization aimed at the establishment of an Arab regional packaging centre, seminars and training courses took place at Dubai (United Arab Emirates), Casablanca (Morocco) and Tunis (Tunisia) and a study tour was organized for participants from Arab countries to a packaging exhibition, advanced packaging industries and research centres in Scandinavia.

⁴⁵ID/B/340, chap. III, para. 200.

⁴⁶*Ibid.*, para. 201.

219. As part of the activities carried out under a UNDP-executed multi-purpose project aimed at providing consultancy services and training at the regional level, UNIDO organized a seminar-cum-study tour of packaging managers from Arab countries to Argentina and Brazil which allowed joint discussions of packaging problems in the light of Latin American experience; packaging industries, research institutions and industrial associations were visited and participation in round-table discussions were held in Buenos Aires, São Paulo, Campinas and Rio de Janeiro.

METALLURGICAL INDUSTRIES

220. In 1985, technical co-operation expenditures under the heading metallurgical industries amounted to \$7.2 million. Some 78 per cent of the total implementation was financed from UNDP resources. A total of 153 projects were implemented or under implementation.

221. In the year under review technical co-operation activities within the Metallurgical Industries Section continued in the field of extractive, process and physical metallurgy covering the production of light and heavy non-ferrous metals (aluminium, titanium, copper), the iron and steel industry (conventional routes and direct reduction of iron ores), ferrous and non-ferrous foundries and other metal transformation and forming processes (rolling, forging, heat treatment, extruding, welding), and the strengthening and establishment of laboratories, institutes or centres for metallurgical research and development.

222. The bulk of technical co-operation was related to the planning, establishment or expansion of metallurgical plants. Another priority area continued to be the provision of expertise to improve plant operations and performance as well as quality of output. Projects aimed at the establishment and/or expansion of metallurgical R + D units also continued to receive high priority. A number of projects focused on improving local capabilities in the evaluation, concentration and beneficiation of ores and minerals. Metallurgical investigations and testing were carried out at the laboratory and pilot plant scales to establish the characteristics of raw materials and test their processing into added-value agglomerates and metal products for national use and export. Projects of this nature were under implementation in Chile, China, Cuba, India, Iran (Islamic Republic of), Jamaica, Mozambique, Sri Lanka and Viet Nam. The introduction of scrap collection and processing also received high priority. Scrap is usually available in large quantities and if properly collected and processed, it provides valuable raw material for use in foundry and steel plants. Projects of this kind were under implementation in Angola and Mozambique.

223. UNIDO continued to promote the transfer of sophisticated technology, such as the production of de-ironed refractory-grade bauxite in Greece; the bacterial leaching of copper ores in Chile and Peru; the production of super purity aluminium in India; the production of special alloy steels in Pakistan; the electro-refining of copper by the method of periodic reversible current for

Feru; the manufacture of magnetic materials for use in the electronic industry in Viet Nam; the processing of silica raw materials to silicon wafers for use in energy generation programmes in Pakistan; surface finishing and anti-corrosion treatment of metals in the Republic of Korea; testing of alternative raw materials for aluminium production in the Islamic Republic of Iran; and the introduction of special heat treatment techniques in China.

224. Special emphasis was placed on projects related to the development of the iron and steel industry. A project that covered comprehensive techno-economic evaluation for the establishment of a mini steel plant in Mongolia opened the door for the transfer of technology to small-scale steel production in this country. As an outcome of this project the establishment of a plant was recommended which would produce 100,000 tons of steel per year, based on domestic scrap, limestone and power utilization. The plant will be an asset in feeding the growing steel market in Mongolia. Follow-up assistance in the implementation of this project is expected to be provided within the next IPF country programming cycle. In Bolivia the formulation of technological process routes for iron and steel production based on available iron ores and natural gas was completed and is expected to lead to significant capital investment by the country in the near future for the establishment of a sponge iron/steel industry.

225. Laboratory bench-scale investigations of the production of sponge iron for steel-making based on iron ores and coals of Viet Nam⁴⁷ were completed with encouraging results and pilot plant tonnage scale tests are now being implemented which should lead to the establishment of a sponge iron plant. The tonnage scale tests for Viet Nam are carried out in India at the Pilot and Demonstration Plant for the Production of Sponge Iron established through a UNDP/UNIDO regional project. Under the same regional project, pilot plant tonnage scale investigations on Nepalese ores and coals will be taken up in the near future. Iron ores and coals from Niger will also be tested in India during 1986.

226. The Iron and Steel Institute in Argentina⁴⁸ reached a stage of total self-reliance and technological self-sufficiency thanks to technology transfer and equipment application in highly sophisticated fields. The project, which has proved very valuable for the economic and industrial recovery of the country, is now heading for its second phase.

227. The industrial sector in Paraguay is participating dynamically with the project related to the technological strengthening of the metallurgical industry⁴⁹ and its counterpart institute. The steel casting capacity of Paraguay which hitherto was practically unutilized, will be insufficient within the next 12 to 18 months to satisfy the demand for steel castings that has been identified by the project. To meet the demand contacts are being set up with Argentina and Brazil under TCDC arrangements.

228. Assistance was started to the General Pipe Company located at Benghazi (Libyan Arab Jamahiriya). The aim of the project is to improve the operation of three plants that produce steel pipes and tubes. It is expected that an

⁴⁷*Ibid.*, para. 206.

⁴⁸ID/B/320, chap. III, para. 227.

⁴⁹*Ibid.*, para. 243; ID/B/340, chap. III, para. 232.



Participants using a personal computer during a workshop at Ulan Bator (Mongolia) on the application of the Computer Model for Feasibility Analysis and Reporting (COMFAR)

increased number of experts under a trust-fund arrangement will be provided in 1986, when the new Misurata steel plant will become operational. In Sri Lanka an expert provided recommendations on improvements in steel pipe production at the Ceylon Steel Corporation. UNIDO experts also advised the Democratic People's Republic of Korea on the improvement of low alloy and steel production operations.

229. Based on equipment and expertise supplied under a project aimed at assisting the iron ore and scrap processing industry in Angola,⁵⁰ the first scrap processing plant was commissioned during 1985, thereby providing necessary raw material for the local steelmaking industry. The plant will serve as a model for the establishment of other units in the country, saving foreign currency hitherto spent on imported scrap or billets. Because of the successful implementation of the project, follow-up assistance was approved by UNDP.

230. High-level technical assistance was provided to the Zimbabwe Iron and Steel Company (ZISCOSTEEL),⁵¹ which is the leading iron and steel plant in south-east Africa. Improved electrical maintenance of ironmaking, steelmaking

⁵⁰ID/B/320, chap. III, para. 223; ID/B/340, chap. III, para. 213.

⁵¹ID/B/340, chap. III, para. 217.

and rolling mill equipment led to increased productivity of the plant. Given the successful implementation of the project, UNDP has approved a request by the Government of Zimbabwe for further UNIDO assistance for the provision of automation of the bar rod rolling mill at ZISCOSTEEL.

231. Under the second phase of a project related to the strengthening of national capabilities in steel industry development in Mozambique,⁵² technical assistance was provided in the assessment of bilaterally prepared reports, proposals and offers for the establishment of a large-scale iron and steel plant and a training and information centre. Technical advisory services were also provided to the newly established Unidade de Direccao da Metalurgia in Mozambique, which covers all existing metallurgical and metalworking enterprises in the country.

232. After successful completion of projects related to the introduction of managed maintenance in the East Slovakian Steelworks at Kosice (Czechoslovakia), a follow-up project operational since 1984 established a National Technical Consultancy and Training Centre,⁵³ which has become a basis for regional and interregional activities. The first expert group meeting on computerized maintenance system in metallurgy was held in Czechoslovakia from 28 January to 1 February 1985. The Czech counterpart expert at the National Technical Consultancy and Training Centre made a preliminary assessment of the need for establishing computerized maintenance systems in Mexican iron and steel plants, as a result of which a request for a large-scale project is expected. An intercountry programme for managed maintenance systems in metallurgy and foundry industry at the Egyptian Iron and Steel Company in Helwan⁵⁴ also progressed in 1985 and the Egyptian counterpart carried out a number of regional activities including the provision of training to Ethiopia, Kenya, the Sudan and Zimbabwe. Continuation of this TCDC activity has been secured through the approval of a multi-fund follow-up project. The objective is the establishment of a regional centre at Cairo which will provide demonstration and training to other African countries as part of the implementation of the programme for IDDA.

233. A large number of projects which were under implementation in 1985 related to the development of the light and heavy non-ferrous metals industries and particularly those in industries related to bauxite/alumina/aluminium. For example, a pilot and demonstration plant for bauxite processing⁵⁵ was inaugurated in Jamaica on 28 June 1985. The project was financed by the United Nations Financing System for Science and Technology for Development and implemented by UNIDO. The plant makes Jamaica the first developing country with pilot testing facilities for full-range testing of the Bayer alumina production process. On the occasion of the opening of the plant a bauxite demonstration workshop was held from 28 June to 6 July 1985, which was attended by 40 participants. With this well-equipped pilot plant Jamaica will be in a position to launch a programme of South-South co-operation and has already offered assistance in testing bauxites from other developing countries on a bilateral basis or under the auspices of UNIDO.

⁵²*Ibid.*, para. 213.

⁵³*Ibid.*, para. 216.

⁵⁴ID/B/320, chap. III, para. 225; ID/B/340, chap. III, para. 216.

⁵⁵ID/B/320, chap. III, para. 235; ID/B/340, chap. III, para. 211.

234. An interim report related to the possible utilization of aluminiferous ores (alunites) as raw materials for aluminium production in the Islamic Republic of Iran, completed in 1985, showed promising results. The project will pave the way for the possible industrial utilization of locally available alunites, with the aim of providing enough aluminium raw material for the present expanding smelter industry. The report will be followed up by laboratory and pilot scale investigations and a detailed techno-economic project feasibility study for large-scale industrial processing of alunites to alumina.

235. Under a project begun in 1983, a series of promising tests were carried out on Greek diasporic bauxites⁵⁶ with the aim of developing a commercial process to reduce iron content and thereby obtain a better-refined bauxite. This material is pure enough to be utilized by ceramic refractory manufacturers to produce bricks and other products for applications in high temperature metallurgical procedures.

236. In the past two years, based on recommendations by UNIDO experts and sub-contractors, useful contacts have been established that led to co-operation between Mozambique and India. Mozambique plans to establish an aluminium smelter,⁵⁷ using available hydro-electric power, with alumina to be supplied by India and the aluminium product exported to India. Contacts between the two countries were intensified during 1985 when Mozambican experts took a study tour of India to take part in detailed negotiations and finalize an adaptation report for the establishment of an aluminium smelter in Mozambique. The proposal is now under active consideration by the Government of Mozambique.

237. A techno-economic study was carried out for the construction in India of an experimental demonstration unit for production of high purity aluminium.⁵⁸ Detailed drawings of the plant were produced and specifications of equipment were prepared, leading to the recommendation to establish the demonstration unit within an existing smelter. Apart from paving the way for the introduction of this new technology on an industrial scale in India, the unit will also create economic benefits for the country, including the elimination of imports of high purity aluminium.

238. Within the framework of the Joint UNIDO/Hungary Aluminium Industry Programme, Hungarian experts prepared two training kits—one on energy conservation and the other on environmental aspects and protection in the bauxite/alumina industry. The kits, which contain slides and a 60-minute video-film, are loaned upon request to bauxite institutes or similar bodies in developing countries.

239. As regards heavy non-ferrous metals, a large-scale sophisticated project in Chile⁵⁹ began in 1985, which involved many local scientists and technologists in an integrated multi-discipline approach aimed at developing an improved bacteria-based leaching operation to treat the country's copper sulphide ores.

⁵⁶ID/B/340, chap. III, para. 207.

⁵⁷ID/B/320, chap. III, para. 234.

⁵⁸ID/B/340, chap. III, para. 210.

⁵⁹*Ibid.*, para. 212.

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This project has important long-term implications because it will provide an alternative to the readily extractable oxide ore deposits that are now being depleted. In continuation of the successful technical services provided to the copper industry in Peru,⁵⁹ transfer of high-level expertise related to bacterial leaching of copper ores started; it offers good prospects of rationally utilizing lower grade ores.

240. Due account was also paid to the question of retaining a sound environment in industrial areas. Work continued in Chile on the project related to handling and recovery of mineral residues⁶⁰ which aims at determining the physical characteristics of tailing ponds of copper industry residues. It is anticipated that a follow-up project to deal with the practicability of commercial extraction of the more valuable elements of the waste material will be conceived; the plan would have important environmental implications for the country.

241. A techno-economic study on pilot demonstration testing of the use of bauxite residues of the Shangdong alumina plant in China⁶¹ showed that the red mud available there can be economically processed into building materials. The study recommended the establishment of a plant that could produce 100 million bricks and 2 million tiles in a year. It is anticipated that the project will soon lead to an investment decision. Another project in China is oriented towards the study of resource recovery and utilization of wastes in metallurgical and other industries in Shanghai. Particular emphasis will be placed on the possibility of establishing iron oxide waste industrial processing operations.

242. A number of projects in 1985 dealt with the strengthening or expansion of metallurgical technology centres, laboratories, and R + D institutes. Projects of this nature were under implementation in Argentina, China, Cuba, Czechoslovakia, Hungary, India, Jamaica, Republic of Korea, Mexico, Mozambique, Nigeria, Paraguay, Peru, Viet Nam and Yugoslavia.

243. The first phase of the establishment of an integrated mineral beneficiation pilot plant in Cuba made remarkable progress during 1985. Excavation work on the site has been completed and the project has reached the equipment procurement stage. Technology is being acquired on a global basis to provide crushing, screening, wet and dry grinding, drying, washing, flotation and laboratory support services. The pilot plant is expected to open in mid-1987 when the second phase of the project will commence. The second phase will aim at utilizing the procured equipment and developing appropriate technologies for processing complex minerals from small- and medium-scale deposits. A new project for the establishment of an integrated mineral beneficiation pilot plant was also started in Pakistan.

244. The Surface Treatment Centre in the Republic of Korea⁶² provides sophisticated technology services, including applied research. Laboratory equipment for sputtering and chemical vapour deposition was secured and

⁵⁹*Ibid.*, para. 232.

⁶¹*Ibid.*, para. 211.

⁶²*Ibid.*, para. 228.

training programmes were organized, which enabled the Centre to carry out independent R + D work and provide consultancy services to the metal and surface treatment industry in that country.

245. The establishment of the aluminium institute for R + D in Titograd (Yugoslavia)⁶³ made further progress and different kinds of research programmes dealing with aluminium metal and its end products are now being undertaken with the aid of the sophisticated equipment delivered through the project.

246. A project in China related to assistance in hot processing technology brought about further progress including the transfer of technology from the Heat Treatment Department of the University of Birmingham (United Kingdom), in highly sophisticated heat treatment techniques for heavy-duty castings and machine parts. A detailed study on the effect of rare elements on highly alloyed steel castings was conducted under UNIDO auspices. The outcome of the study prompted China to request follow-up assistance in the establishment of a heat treatment centre in Shanghai.

247. Special attention was accorded in 1985 to the strengthening of the foundry industry sector, particularly to the improvement of foundry operations and overall plant performance, when emphasis is placed on quality control requirements. The Workshop and Demonstration of Appropriate Technologies and Equipment for the Metallurgical and Metal Processing Industries for African Countries (AFROMET 85), organized by UNIDO and the Polish Chamber of Foreign Trade, was held at Katowice (Poland), from 25 to 29 August 1985. These dates coincided with the holding of the Silesian International Trade Fair of Mining, Power Industry and Metallurgy (SIMMEX 85) and gave the 18 participants from 12 African countries the opportunity of visiting the SIMMEX fair. Follow-up technical assistance activities are being undertaken by the Polish metallurgical enterprises "Hutmaszprojekt".

248. In a project aimed at strengthening the Centre for Maintenance and Repair of Equipment at Conakry (Guinea) a new Chief Technical Adviser, United Nations Volunteers and several experts were fielded and a large-scale overseas training programme for the staff of the Centre was initiated in all fields of workshop operations. The progress of the project has been severely curtailed because the United Nations Capital Development Fund was not in the position to release approved revolving/working capital funds for the Centre and for the establishment of a planned small pilot foundry. This shortcoming led to greatly reduced economic activities within the pilot centre. The laboratory centre for foundry and metallurgical testing⁶⁴ set up with UNIDO assistance in Morocco started full operation and is expected to become financially self-sustaining during 1986.

249. A foundry performance improvement programme was carried out for the National Engineering Corporation in the United Republic of Tanzania and identified the conditions for the production of ductile iron castings; large-scale production of such castings is expected to be introduced in the near future for

⁶³ID/B/320, chap. III, para. 233; ID/B/340, chap. III, para. 208.

⁶⁴ID/B/320, chap. III, para. 243.

the first time in the country. In Nicaragua, an assessment report of the state of art of the foundry industry was carried out and training started of counterpart staff in improved foundry operations.

250. A large amount of assistance under various projects was provided to Somalia to modernize the Foundry and Mechanical Workshop. It was possible to mobilize financial resources through a rational combination of funds from UNDP, UNIDO and IDDA, and a UNIDF special-purpose contribution by the Government of Egypt. The project aims at upgrading of skills, introduction of new products and adaptation of new technologies. In line with TCDC activities, expertise was provided by Egyptian experts.

251. Direct technical assistance was rendered by UNIDO staff members, in the form of technical advisory missions related to iron and steel industry development and establishment of metallurgical technology centres. Such missions covered, among other countries, Bolivia, Mongolia, Trinidad and Tobago, Viet Nam and Zambia.

ENGINEERING INDUSTRIES

252. In 1985, technical co-operation expenditures under the heading engineering industries amounted to \$13.9 million. Some 90 per cent of the total implementation was financed from UNDP resources. A total of 183 projects were implemented or under implementation.

253. The technical co-operation activities in the field of engineering industries continued to place emphasis on critical areas that contribute to the promotion of overall technical and economic development. Accordingly, the major areas which continued to receive a high priority were: industrial production; industrial technology; energy-related industrial technology; and development of human resources. The six main subsectors receiving assistance were: agricultural machinery and implements; electronic and electrical machinery and products; computer and computer-related equipment; metalworking and machine tools; land-based or water-borne transport equipment; and energy-related equipment. As in the past, most of the technical co-operation activities fell within the first three categories.⁶⁵

254. Technical co-operation in engineering industries was aimed at generating the developing countries' own capabilities and resources. Careful attention was therefore given to the development of existing infrastructure and the increased use of available and potential resources. In addition, the activities continued to focus on the creation or improvement of new and existing production capacities and diversification of products. Priority was given to production technology, repair and maintenance, engineering design and development, capacity utilization, quality control, tool engineering and material engineering.

255. Efforts continued to be directed at the further development of the capability in developing countries to apply engineering techniques to irrigation

⁶⁵ID/B/340, chap. III, para. 235.

machinery, drilling equipment, hydropower equipment, grain storage equipment for the energy sector (especially hardware for energy savings), equipment for energy conservation, and equipment for alternative sources of energy, with a view to increasing energy utilization efficiency.⁶⁶

256. Within the framework of the programme for IDDA, emphasis was given to technical assistance for the integration of agricultural machinery with the engineering and capital goods sector, the promotion of rehabilitation and upgrading of multi-purpose plants, the development of an engineering design and adaptation capability, the application of R + D to manufacturing, the development of subregional and regional programme networks, and the promotion of TCDC/ECDC programmes. Efforts continued to strengthen the activities of the African Regional Centre for Engineering Design and Manufacture (ARCEDEM), located at Ibadan (Nigeria)⁶⁷ and to reinforce the UNDP/United Nations Capital Development Fund (UNCDF) co-operative programmes in selected developing countries of Africa, with special reference to industrial inputs for agriculture, irrigation and drinking water supply equipment, and simple production techniques.

257. Projects related to agricultural tools, implements, equipment and machinery continued to focus on repair and maintenance, the production of spare parts, manufacture of tools, animal-drawn equipment, hand pumps and simple processing machinery, improved utilization of installed capacities and training. Activities in these areas were guided by the deliberations and recommendations of an expert group meeting on guidelines for the import, assembly and manufacture of agricultural machinery and training held in Vienna, from 9 to 12 September, and a working group meeting on integrated training programmes in agricultural machinery industries held at Rosario (Argentina), from 9 to 14 December. In addition, technical co-operation activities were linked with the UNIDO System of Consultations, as well as with sectoral studies in the field of agricultural machinery industry. In the year under review UNIDO continued to promote and implement projects in developing countries, which were based on the integrated approach to the development of agricultural machinery industry and related sectors of the economy with a view to utilizing fully existing facilities and installed capacities. Project proposals using this approach were prepared for the Governments of Algeria, Benin, Nepal, Somalia and Uganda. At the regional level UNIDO continued its support to the Regional Network for Agricultural Machinery in Asia and the Pacific.⁶⁸

258. An important activity was the upgrading of physical facilities, technical skills and work programme at the institutional level in the production of agricultural machinery. In 1985, UNIDO assisted Bangladesh, China, Hungary, India and Poland in strengthening their research and design capabilities in the agricultural machinery industry. A UNDP-financed project was completed on agricultural machinery testing and technical services to industry in which assistance was provided to the China Agricultural Machinery Testing Centre. The Centre tests and evaluates agricultural machinery on a national scale

⁶⁶*Ibid.*, para. 236.

⁶⁷*Ibid.*, para. 237.

⁶⁸*Ibid.*, para. 241.

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complementary to the work of the 26 testing and evaluating stations located in the provinces, towns and independent regions. The Centre also monitors the stages of the manufacturing process of new agricultural machines, in that it evaluates prototypes and pilot equipment, distributes standards, and checks regularly the production quality of several mass-produced models.⁶⁹

259. In Togo further assistance was given to a project to develop the series production of agricultural machinery and implements.⁷⁰ Additional consideration was given to product diversification with prototype development including hand pumps manufacturing. The project was extended until 1986 and additional funds were allocated by UNCDF to purchase equipment and raw materials. An in-depth evaluation mission undertaken in December 1985 gave an opportunity to assess the results achieved so far and to make recommendations for future activities. In Haiti, activities have progressed in the development of prototypes and the adaptation of agricultural implements, which was based on the experience from African countries.⁷¹ This equipment is being tested and improved and manufacture in series is planned. In Lesotho, the project for the manufacture of agricultural tools progressed rapidly in 1985. The project supplied a large quantity of agricultural equipment to customers, many of them from neighbouring countries. In Senegal a programme on the operation and maintenance of motor-driven irrigation pumps of the Société d'aménagement et d'exploitation des terres du delta du Fleuve Sénégal et du Faldmé was further defined and training was extended in order to strengthen the central workshops while small workshops were also established along the Senegal river. An in-depth evaluation mission was conducted, which led to a reorientation of some of the activities of the programme.⁷²

260. The fields covered by technical co-operation in electronics and high technology varied from industrial robot systems to standard electronic components, with equal emphasis on hardware and software. Development of institutional technical capabilities and training were the priority aspects.

261. Technical assistance in electronic and electrical machinery continued to focus on design and development, testing and quality control, maintenance and repair and extension service to industry. In Bulgaria, further results were brought forth in the development of new scientific instruments and production planning and management at the Automated Production Instrument Centre (APIC).⁷³ A new system has been introduced which provides for higher productivity and higher quality of printed circuit boards and a computer-based system to aid in the management of small factories and production planning is nearing completion. The experience gained by APIC during the implementation of the project is already being applied in other developing countries, e.g. training in instrumentation was provided to a number of fellows from India. This activity is considered very useful and is recommended for continuation in the future as one of the UNIDO training activities. In India, establishment of the Instrument Design and Development Centre at Haryana was completed.

⁶⁹*Ibid.*, para. 240.

⁷⁰*Ibid.*, para. 237.

⁷¹ID/B/320, chap. III, para. 257.

⁷²ID/B/340, chap. III, para. 239.

⁷³*Ibid.*, para. 243.

The Centre has received sophisticated electronic, microcomputer and optical equipment, as well as technical assistance from electronics and optics experts. Several members of the Centre have successfully completed study programmes in industrialized countries and will become part of the Centre's cadre which provides assistance to small electrical instrument firms in designing new products or improving old ones. At Hanoi (Viet Nam) activities under a large-scale project have been strengthened. Through this project UNIDO is assisting the Government to establish a centre for maintenance and repair of a large variety of electronic and optical instruments, as well as refrigeration equipment. The centre has already started to provide inspection services for scientific, industrial quality control and electro-medical instruments.⁷⁴

262. A multi-disciplinary project to improve testing and evaluation facilities at the National Test House in Calcutta (India) is continuing.⁷⁵ Activities under the project focused on improvement of techniques for testing plastic materials, analysis of pollutants in water and air, high-voltage testing and testing and analysis of pesticides. A number of laboratories were equipped with modern testing equipment and a training programme in the testing activities has been completed. The National Test House established co-operation with other leading organizations in India dealing with the development and introduction of industrial quality control standards.

263. With the gradual industrialization of developing countries, environmental protection is considered more and more important. Therefore, a project in China dealing with development and testing of electrostatic precipitators is of valuable experience. Through that project, a laboratory in the Zhuji Electrostatic Precipitator Research Institute has been established to provide possibilities for simulating the operation of electrostatic precipitators under various conditions. A large number of new electrostatic precipitators have been designed by the Institute and introduced in many industrial enterprises.

264. A small-scale project was initiated to assist the Government of Rwanda to increase the efficiency of the country's co-operative radio factory. A project also commenced in Iraq that provides high-level advisory services for the establishment of a specialized centre for electric energy research. In Egypt, a project has started that provides short-term technical assistance in expanding in quality and quantity the production facilities of dry batteries.

265. In Bulgaria, activities continued on the development of programmable industrial robots, simple robots for training and software tools for industrial control. Emphasis was also placed on the development of teaching aids and tools for training personnel in the operation of robot controlled equipment. A mobile robot has been developed recently for these purposes. By utilizing the results achieved during the implementation of this project, the staff of the Institute of Industrial Cybernetics and Robotics (Sofia) is currently involved in design and development of a pilot production facility, for which the Government allocated additional funds, where new principles of production control automation will be tested. Assistance was also provided in supplying training and computer peripherals to enhance the computer aided design and

⁷⁴*Ibid.*, para. 242.

⁷⁵*Ibid.*, para. 246.

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the computer aided manufacturing capability of the Machine Tool Research Institute at Sofia.

266. A project in China on the training and development of microcomputer systems applications has been progressing well. The project team provides support to industry in various applications of microcomputers. A process control microcomputer system is being designed for the Sichuan Medical Factory to improve the efficiency of the factory and to control the quality of tetracycline which is produced there. Disk drives for microcomputers have also been designed and the results will be transferred to industry. Chengdu Institute of Radio Engineering, where the project is established, is already providing support to industry by offering training in microcomputer applications. The total number of trainees from industry has already reached more than 100; emphasis will be placed on improving the quality of training provided.

267. A new large-scale project for the establishment of an electronics service and training centre at Ramnagar in the State of Uttar Pradesh (India) was approved in September 1985 and project activities have begun. The objective of the project is to assist the Government of India in the development of an industrial base for contemporary production processes and technologies in electronics by establishing an industrial electronic complex supported by a service and training centre. The centre will be involved in production and assembly techniques of electronic products, such as printed circuit boards, wound components, testing and quality control and maintenance and repair.

268. A large-scale project in India on semiconductor devices and electronic sub-systems for transportation⁷⁶ went into operation in November 1984 and is making good progress. The project aims at promoting the utilization of electronic systems for transportation by increasing the operational efficiency of electric vehicles and achieving self-reliant product development capacity in this field. The semiconductor devices and electronic sub-systems of the project will be used primarily for electric road vehicles, such as tram-cars, trolley buses and railway locomotives. The equipment provided by UNIDO and UNDP has been procured and commissioned on schedule and additional equipment, procured with Government funds, has arrived. Specialists in all four technical areas of the project—power electronics system, power semiconductor devices, hybrid integrated circuits and monolithic integrated circuits—rendered their services to the Central Electronics Engineering Research Institute in Pilani, Rajasthan. Eight engineers from India received training in Europe and the United States of America during 1985. Links with industry are being progressively strengthened. The project may soon provide a good example for developing high technology with greater involvement of talent from a developing country.

269. In Bulgaria the implementation of a large-scale project on advanced manufacturing and engineering methods made further progress through the improvement of physical facilities at the CAD Computer R + D Laboratory in Sofia, the extension of the hardware and software components, the implementation of a subcontract, and the realization of a fellowship and study tour programme. The major part of the outputs were completed according to schedule and in some outputs there are new developments because of the

⁷⁶*Ibid.*, para. 244.

experience gained so far in the project, and new trends in science and technology. Technical co-operation activities continued in the Democratic People's Republic of Korea⁷⁷ in establishing a pilot plant to produce integrated circuits. The assembly and testing area of this plant were completed in 1985.

270. A project in China to develop the qualification and surveillance laboratory for consumer electronic products has promoted the production of high-quality and reliable electronic products to international standards through its services to national electronic industries. Several fellowship programmes were carried out to upgrade the knowledge of Chinese staff. Similar assistance was given to the Service Centre of Testing Technology in East China through fellowship training in computer application to analytical instruments and inorganic material analysis.⁷⁸

271. A project in India on development of microprocessor-based agro and dairy instruments continued.⁷⁸ Following a desk review of the project in March 1985, the implementation of this large-scale project has been extended for one year, until June 1986. A project aimed at strengthening the capabilities of the printed circuit board unit of the electronic and development centre at Gurgaon (India) includes the procurement and installation of equipment for the fabrication and testing of double-sided and multi-layer through-hole printed circuit boards, provision of expertise and training of Indian specialists abroad.

272. Because of special conditions, the design of mining machines (especially tunnelling machines) needs a systems approach which can be performed only by computerized analysis. In order to solve mining problems related to vibrations, cutting forces, strength and strains measurement, a project on dynamic testing of coal mining machines was elaborated in the Republic of Korea where the Government accords high priority to the improvement of mining equipment.

273. To meet the request of the Government of Bulgaria for a new measuring technique for machine-tool motions and positions that would save raw materials, it was decided to develop and introduce prototypes of incremental encoders based on analogue and digital techniques. The equipment was delivered and prototypes are under construction. The project will be completed in 1986. A number of small-scale projects dealing with the introduction of relatively new and advanced technologies to developing countries were implemented under UNIDF financing. Among them, a project in Bulgaria provides assistance in elaborating a modular design concept for the new generation of scientific instruments. Application of this approach will result in a decrease in the design and production costs of scientific instruments. A project in Romania dealt with metal spraying in the machine building industry and with the repair of machine parts that are subject to severe mechanical and heat loads.

274. Technical co-operation in the metalworking and machine tool sector concentrated on strengthening capabilities in design, tool engineering, production techniques and material engineering, and on training. The level of

⁷⁷ID/B/300, chap. III, para. 241.

⁷⁸ID/B/340, chap. III, para. 243.

technology varied from standard machine tools in small workshops to those which are numerically controlled.

275. A significant part of activities carried out in 1985 involved the batch production of simple metal products with emphasis on rural industrialization, as well as maintenance and repair. Further progress was achieved in Mali in the manufacture of manual water pumps of the type India Mark II. The yearly production rate of this competitive and highly reliable pump continues to be some 1,200 units.⁷⁹ Also in Mali a project continued for upgrading the maintenance and repair, and spare parts manufacturing capacity for industrial and transport equipment. A mechanical workshop in Cameroon has further assisted local small-scale industries in providing maintenance and repair services and spare parts production.⁸⁰ A new phase of this project is currently under consideration. A project in Madagascar continued to assist local industries in upgrading maintenance and repair capabilities and spare parts production know-how. National campaigns and seminars were conducted to demonstrate the importance of maintenance and sensitize local industries.⁸⁰

276. Activities were pursued in the development and promotion of tool engineering with emphasis on jigs, fixtures, tools, dies, moulds, as well as materials, heat treatment and spare parts production. In Trinidad and Tobago assistance to the Metal Industries Company (MIC) continued with a one-year extension of the project to develop tool and die production and engineering capabilities.⁸¹ During 1985 discussions continued with a view to broadening and diversifying the scope of activities of the MIC with a new UNIDO technical assistance project. A bearing test centre has been established in Hangzhou (China), which was equipped with the most current testing equipment designed to evaluate bearing noise and vibration. A project continued in Tunisia to provide training in fabrication of moulds for the production of plastic articles. Workshop equipment was installed to assist industries to develop prototypes of specific moulds. In Ethiopia, preparatory assistance was completed for the establishment of an engineering and design centre and a tool centre. It is planned to finalize the formulation of these important large-scale projects early in 1986 and start implementation in the middle of 1986.

277. Strengthening of engineering capabilities at the institutional and the plant levels is an important aspect of technical co-operation in metalworking and machine tools. In Iraq, the interim phase of assistance to the Specialized Institute for Engineering Industries will continue until 31 December 1986. This interim phase is being financed mainly through UNDP resources and the Government has begun contributing through cost-sharing arrangements. In this period stress is placed on strengthening and consolidating production engineering, inspection and quality control and introducing industrial engineering, computer aided engineering and low cost automation.⁸¹ A project began in India which aims to develop micro-precision engineering techniques. The project will strengthen the capabilities of two existing units of the Hindustan Machine Tools Company, i.e. the Horological Inspection Institute at Bangalore and the Precision Training Centre at Tumkur, through training and advisory

⁷⁹*Ibid.*, para. 239.

⁸⁰*Ibid.*, para. 236.

⁸¹*Ibid.*, para. 246.

services in modern technologies for the promotion of micro-precision engineering techniques in India. The Government has already taken action to provide the infrastructure and other facilities. Assistance from UNDP will be used to strengthen the existing facilities and lay a foundation for the transformation of these facilities into a national focal point. The project promotes the participation of women in the process of industrial development in rural areas by giving employment in watch assembly plants to women.

278. In the Democratic People's Republic of Korea, a large-scale project to provide the development of numerically controlled machine tools became operational after successful completion of the preparatory assistance phase. The project developed according to expectations with the help of experts who designed the numerically controlled machine tools and printed circuit board manufacture. In connection with the project, 28 people from the Democratic People's Republic of Korea took part in training in Poland and in the German Democratic Republic.⁸² Improved facilities were established at the National Institute of Design at Ahmedabad (India) to strengthen industrial design in wood, metal, printing, photography, ceramics, graphic design and film animation. The Institute started a programme for training fellows from Bangladesh, Indonesia, Pakistan, the Philippines and Sri Lanka.⁸³ Assistance continued to the Central Institute for Sewing Machines Development in India. A mission to evaluate the project was undertaken by a UNDP/UNIDO consultant in late 1985. As a result of the evaluation, the project objectives and outputs will probably be revised.⁸⁴ In Albania the preparatory phase of an electronics engineering project has been completed during which an assessment has been made of current and future requirements in the introduction of process control automation and automatization. A large-scale project is expected to be initiated soon.

279. Maintenance and repair and training involved many product groupings. In a UNIDF-financed project, the establishment of a pump repair section within an existing mechanical workshop and foundry at Mogadiscio (Somalia), was completed.⁸⁵ Technical assistance in the upgrading of a project on maintenance and repair at Conakry (Guinea) was implemented on schedule. However, the UNCDF-financed contribution to the project was frozen at the request of UNDP, subject to clarification of certain techno-economic queries. UNIDO anticipates that during 1986 the funds previously allocated will be released for implementation. In Hungary a project on the establishment of a training centre for the maintenance and repair of bio-medical equipment brought exceptionally practical results. The experience, skills, and versatility gained by the staff at the Centre during the project enables them to provide significant technical capacity. In the future, the training centre intends to enhance further Hungarian public health care through its training operations.

280. In Viet Nam two large-scale projects were under implementation on rehabilitation of sugar mills including local manufacture of spare parts and on the establishment of a maintenance and repair centre for rice mills.⁸⁶ The

⁸²*Ibid.*, para. 244.

⁸³*Ibid.*, para. 245.

⁸⁴*Ibid.*, para. 246.

⁸⁵*Ibid.*, para. 239.

⁸⁶ID/B/320, chap. III, para. 275.

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equipment for the two projects has been ordered and a subcontract concluded for the expert component of the sugar mill project. In Algeria, a project has been initiated to assess the maintenance and repair capabilities of selected industries and recommend a plan of action. In Iraq, small private engineering units in the Baghdad area were assisted through the Special Industrial Services programme to identify common deficiencies and develop a remedial plan. Assistance was also given to two Iraqi textile enterprises to introduce computerized maintenance management systems.

281. In the area of transportation engineering, which includes land-based as well as water-borne equipment, the emphasis has been to upgrade existing production and infrastructure facilities. The development of means of transport is vital for many developing countries since it facilitates communications and food supplies. The transport infrastructure stimulates industrialization and, being labour-intensive, contributes not only to the reduction of unemployment but also to upgrading of qualifications of indigenous specialists. Direct technical assistance was provided to many developing countries in various aspects of transport engineering, maintenance and repair problems. With respect to land-based equipment, the preparatory assistance phase was initiated for the establishment of a quality testing and service centre for the automotive ancillary and allied industries in Indonesia.⁸⁷ In India, a mission for preparatory assistance to the Emission Control Laboratory for automotive engines was completed and a large-scale technical assistance project is expected to follow shortly. A large-scale project, also in India, provided assistance in the establishment and operation of a fatigue testing laboratory⁸⁸ for the benefit of the automotive industry. Highly specialized expertise in instrumentation for acquisition of data on road loads was used by the Automotive Research Association of India. Sophisticated equipment was procured and seven Indian engineers underwent training in Europe and the United States of America during 1985. The Government of India entered into architectural and civil engineering contracts and undertook procurement actions for equipment to be supplied by local entrepreneurs. In Hong Kong further progress was achieved in a project to control motor vehicle emission.⁸⁹ In another project in Hong Kong it is intended to devise maintenance and inspection programmes for diesel motor vehicles, which will lead to administrative and regulatory measures to improve the air quality.⁹⁰ Expertise and test equipment has been provided by UNIDO to the Pakistan Automobile Corporation to assist local small-scale manufacturers in the production of automobile parts that were formerly imported. A network of transport service stations for motor vehicles was established in Bhutan.

282. UNIDO initiated technical discussions with the Union of African Railways and the Railway Union of Arab States as well as with the Association of Engineering Companies in Spain, Belgium and Norway with a view to developing co-operative programmes. A project to develop existing facilities for manufacturing railway wagons and railway equipment was established to provide assistance to the West African Economic Community.⁹¹

⁸⁷ID/B/340, chap. III, para. 248.

⁸⁸*Ibid.*, para. 249.

⁸⁹*Ibid.*, para. 251.

283. With respect to water-borne transport equipment UNIDO commitments should be seen in the light of the United Nations Convention on the Law of the Sea. Requests were received during the reporting period for assistance in shipbuilding, ship repair and marine engineering, with particular emphasis on the latter. These activities included the following: advising Governments on development programmes for their shipbuilding industry; giving technical and managerial advice to shipyards and port authorities; developing new technologies in ship and boat production; undertaking techno-economic studies or techno-economic evaluation of existing maritime facilities and of prospects for their rehabilitation or expansion.

284. Participants in a regional expert group meeting, organized by UNIDO in Mauritius, made a number of recommendations as regards the development of small-scale boat building and boat repair in the East African countries. An interregional project on marine technology for shipbuilding and off-shore technology was initiated jointly by UNIDO and the Government of Norway. In this context, a technical analysis and strategy on possibilities on the future development of water transport, shipbuilding and ocean engineering in developing countries and the role of UNIDO is under formulation.

285. Within the framework of the United Nations Transport and Communication Decade for Africa, UNIDO activities have given emphasis to the following aspects: promotion of African industry in transport and communication equipment, upgrading and rehabilitation of existing industries, production of spare parts, maintenance and repair, training and co-operation among African countries.

286. Energy-related activities covered energy production equipment, process engineering, energy conservation and hardware improvement for efficient utilization of non-conventional sources of energy. In Chile a project was initiated to assist the Government in using to its best advantage the economical operation and future expansion of its national system for the generation, transmission and distribution of electric power through the application of new digital control and protection techniques, the development of computer aided strategies for the reliable operation of the electricity system and training of technical personnel.

287. Further progress was achieved in the implementation of a project in Egypt, which aims at establishing and operating an industrial energy conservation centre in the Tabbin Institute for Metallurgical Studies. This Institute is responsible for the efficient use of energy in public and private industries. A mobile diagnostic unit (energy bus) equipped with measuring and metering devices and the completion of a related training seminar and demonstration can be regarded as a determining factor in the impact of the project. Techniques of energy conservation have been transferred to specialists from the industrial sector through the holding of workshops and laboratory demonstrations. Assistance to the Indian Institute of Petroleum has resulted in further progress in the development of internal combustion engines using methanol as fuel. Specific emphasis was placed on the hardware development of two-stroke spark ignition and the four-stroke compression ignition engines. Consideration was also given to tribological problems and to the effect of corrosion.⁹⁰

⁹⁰*Ibid.*, para. 253.

288. A study tour was undertaken by representatives of the University of Madagascar to obtain latest information on the utilization of renewable energy sources in various countries with the intention of installing prototype solar water heater systems and identifying sites for potential installations of small hydropower generation plants. In Jordan, progress continued on the design, prototype development and testing of solar water heaters, for industrial application.⁹¹ A project in the Asia and Pacific region continued to provide training in the manufacture and application of solar collectors, using selective absorption technology. This simple technology can be applied directly to the low-cost manufacture of solar collectors.⁹²

289. Further achievements were demonstrated in strengthening the regional research development and training centre for small/mini hydropower generation in China.⁹³ Additional training workshops and study tours were held and new equipment designed to test a remote control system for small hydropower plants has been installed. A project was initiated on the development of a mini hydropower generation plant for rural areas in Ethiopia. The objective of the project is to encourage rural industrialization using local manpower and manufacturing resources based on the development of mini hydropower. A project was also initiated in the Solomon Islands to assist the Government to formulate a programme to develop mini hydropower projects and reduce dependence on diesel power plants that use costly imported diesel oil.

290. Special efforts were made in 1985 to improve the quality and quantity of work in the field of engineering industries. It is to be noted, however, that in the year under review the trend in government execution of projects continued, particularly in heavy engineering. In this context, a number of projects were implemented under government execution in China and India. The detailed preparatory work, however, was done by UNIDO. From 1986 onwards—especially in the current UNDP country programming cycle—the contribution of UNIDO in the area of government-executed projects in engineering industries will be limited to those with a high degree of sophistication. If this trend continues and spreads to other developing countries, the implementation value of projects in the field of engineering industries will undoubtedly decline during 1986 and thereafter.

CHEMICAL INDUSTRIES

291. In 1985, technical co-operation expenditures under the heading chemical industries amounted to \$24.5 million. Some 53 per cent of the total implementation was financed from UNDP resources. A total of 347 projects were implemented or under implementation.

292. The activities of the Chemical Industries Branch concentrated, as in the past, on five broad subsectors: building materials and construction industries;

⁹¹ID/B/320, chap. III, para. 276.

⁹²*Ibid.*, para. 252.

⁹³*Ibid.*, para. 276.

petrochemical industries; fertilizers, pesticides and organic chemicals industries; pharmaceutical industries; and basic chemicals, environment, and pulp and paper.

293. During the year under review, activity in the building materials and construction industries focused on the acceleration of the industrial utilization of non-metallic mineral resources for the manufacture of low-cost building materials for housing, and their utilization in other industries such as glass, ceramics and chemical industries. A special effort was made to promote the integrated utilization of minerals, taking into consideration agriculture and environmental protection.

294. UNIDO played an active role in organizing the First World Congress on Non-Metallic Minerals in Belgrade (Yugoslavia), together with the Yugoslav Government and Industrial Minerals of the United Kingdom. Following the Congress a workshop was held at Pilsen (Czechoslovakia) by the UNIDO/Czechoslovakia Joint Programme for International Co-operation in the Field of Ceramics, Building Materials and Non-metallic Mineral-based Industries. UNIDO is also providing full support to the Joint Programme to expand its fellowship, training and raw materials testing activities.

295. The Ethiopian Mineral Resources Development Corporation continued to receive expertise from the UNIDO/Czechoslovakia Joint Programme in arranging agricultural field tests to investigate the economic viability of using locally available bentonite as a soil conditioner. The project has also established links with Egyptian institutions engaged in similar research activities.

296. During 1985 specific programmes continued to focus on the energy conservation and auditing requirements of the silicate industries, and programmes were developed that introduce good-housekeeping measures at the factory level for the saving of energy.

297. Promotion of brickmaking and low-cost building materials continued to be a significant area of activity, especially in Africa. A project that assisted the brick industry in Niger was completed in 1985 and the experience gained in soil stabilization during the project will be applied not only in Niger but also in other countries of the region such as Chad, Madagascar and the United Republic of Tanzania, where UNIDO initiated field activities in clay-based building materials in late 1985. A large-scale project on the development of low-cost building materials in Indonesia has resulted in several model production units, which are now demonstrating the production of clay roofing tiles and related products. Research and study continued on the physical and mechanical properties of various building materials, such as energy conservation in building operation; heat-insulation systems for external parts of buildings; and fly ash utilization in the production of light-weight concrete. UNIDO assisted in the strengthening of various research laboratories in China, Hungary and Yugoslavia.

298. A large-scale project for the establishment of a ceramic R + D laboratory in Sri Lanka progressed successfully.⁹⁴ After only two years of operation, the

⁹⁴ID/B/340, chap. III, para. 266.

laboratory is recognized as a leading institution in its field, and it is called upon to contribute to the development of the national ceramic industry as well as national industries based on non-metallic minerals. The success of the project was confirmed by an in-depth evaluation carried out in December 1985. A second phase of the project, also financed under UNIDF, will aim at strengthening the laboratory's capabilities in a more intensive relationship with end-user industries.

299. The project for assistance to the marble and stone industry in Ethiopia⁹⁵ was successfully completed in 1985: three marble factories in Addis Ababa (Ethiopia) were rehabilitated and production restarted, creating employment for 190 male and 40 female workers at the quarry and the factory site. Direct technical assistance was provided for the modernization of the lime and gypsum industries in Cuba and for the strengthening of the Cement Development Centre in China. Further study tours and training have been organized for officials and engineers from Bhutan and China, to become acquainted with the latest technology for cement production and process control. Assistance in the utilization of installed industrial capacity continued in the trust fund-financed projects in Egypt and the Libyan Arab Jamahiriya, where large-scale cement factories benefited from UNIDO expertise.⁹⁶ In 1985, emphasis was increasingly placed on the training of nationals who will take over from the international specialists. As a result of the experience gained, in-plant group training activities will be initiated in 1986 to reduce internationally recruited manpower by 20 per cent per year.

300. Activities undertaken by UNIDO in the petrochemical sector mainly involved the development of the main petrochemical downstream industries, e.g. plastics, synthetic fibres and rubbers. In particular, the use of plastics in agriculture and water management was encouraged in an effort to assist the developing countries to become self-sufficient in food production. Projects on major petrochemical complex optimization continued in India⁹⁷ and Egypt, and solutions were sought to problems of plant management and operation, energy and raw material utilization, and environment and quality control. Special attention was given to the further development of national plastics centres in India and Bangladesh, to improve their technical capabilities and to establish close co-operation with national petrochemical and plastics processing industries.⁹⁸ Co-operation is developed through the training of personnel from plants and companies, product testing and quality control, and introduction of new plastics materials. It is foreseen that the centres will serve as institutions providing training of specialists from other developing countries under TCDC arrangements. The establishment of a pilot plant to produce high-density polyethylene pipes for the supply of water is under implementation in Bhutan⁹⁹ and it will start operation in 1986.

301. A techno-economic study on the establishment of a plant for the production of alkyd resins, polyvinyl acetate dispersion paints and adhesives,

⁹⁵*Ibid.*, para. 270.

⁹⁶*Ibid.*, para. 271.

⁹⁷*Ibid.*, para. 283.

⁹⁸*Ibid.*, para. 284.

⁹⁹*Ibid.*, para. 285.

using up to 50 per cent of domestic raw material, was completed in 1985 in the Syrian Arab Republic. Implementation continued on a dyestuffs R + D project in China designed to contribute to the development of that sector of industry and extend the application of the dyestuffs produced.

302. As a result of the Symposium on the Petrochemical Industry held in Saudi Arabia in 1984,¹⁰⁰ technical assistance was requested by the downstream petrochemical industries in Saudi Arabia. An expert was sent to identify potential downstream petrochemical processing projects in plastics, synthetic fibres and synthetic rubbers. In November 1985, an International Conference on Man-made Fibres was held at Beijing (China) to demonstrate to developing country participants the outcome of the joint efforts of the Government, UNDP and UNIDO in establishing a synthetic fibre research centre in China. The Conference was attended by 320 participants representing 22 countries. The Government of China expressed its willingness to assist other developing countries in the advancement of their man-made fibre industry through the provision of experts and training.

303. A special-purpose contribution to UNIDF enabled UNIDO to field two experts to China to examine plastics waste and technology available for its recycling. Strong interest was shown in establishing a pilot plant for the recycling and utilization of plastics waste which would serve as a demonstration unit for China and other countries in Asia.

304. To assist African countries in improving the application of plastics in agriculture and water management, a regional project was established to strengthen the capabilities of the Plastics Development Centre in Egypt as a regional centre for Africa. A workshop on plastics in agriculture, held at Alexandria (Egypt), heralded completion of the project in 1985.

305. The production of liquid natural rubber in Côte d'Ivoire¹⁰¹ reached pilot plant operational level in a UNIDF project financed by a special-purpose contribution. An interregional project,¹⁰² also financed by a special-purpose contribution, on the development of industrial composite materials based on natural rubber made particular progress on the use of base isolation for earthquake protection for small buildings, with the aim of devising cheaper natural rubber bearings of special interest to developing countries.

306. Activities in the petrochemical sector also included three training courses on plastics technology, mould making and synthetic fibres, which are held annually in Vienna in co-operation with the Government of Austria. They were financed from special-purpose contributions and organized by various specialized institutes.

307. The main thrust of the UNIDO programme in the fertilizer and pesticides sector is geared to greater self-sufficiency in these two essential commodities for agricultural development, and to promotion of the use of indigenous raw materials for fertilizer and pesticides production. Examples of programme activity relate to the development of new technologies based on indigenous raw materials, e.g. fertilizer production from low-grade phosphate

¹⁰⁰*Ibid.*, para. 286.

¹⁰¹*Ibid.*, para. 290.

¹⁰²*Ibid.*, para. 291.

rock in India,¹⁰³ and to assist in technology selection and promotion of technical co-operation between developing countries, e.g. a study tour for Chinese experts to acquaint themselves with modern phosphate processing technology. Other examples include round-table discussions, held in November and hosted by the Government of Tunisia, on the development of phosphates and phosphate fertilizer industry in developing countries and provision of technical advisory services to the fertilizer industry, e.g. advice to the Homs (Syrian Arab Republic) fertilizer complex on product quality improvement and the organization of a laboratory for quality control and other supporting services.

308. Activities in the pesticide sector throughout 1985 comprised a well-balanced programme covering the promotion of R + D work on new pesticides in China;¹⁰⁴ the strengthening of facilities for toxicological evaluation in the Republic of Korea;¹⁰⁴ R + D in the formulation of pesticides in India;¹⁰⁴ the setting up of facilities for the manufacture of intermediate ingredients in Egypt; and the establishment of solid formulation facilities in Cuba.

309. In 1985 activities in the field of pharmaceuticals concentrated on augmenting the production of pharmaceuticals in developing countries in support of national health-care programmes. Increased emphasis was placed on the use of indigenous resources, such as medicinal plants and petrochemical by-products, the adaptation of technology for local production of pharmaceutical chemicals, the enhancement of preventive measures by promoting production of biologicals, and the strengthening of capabilities of national institutions to sustain R + D efforts and, in some instances, to serve as national drug control laboratories. All these activities conformed to the relevant WHO guidelines.

310. Project implementation continued on the industrial utilization of medicinal and aromatic plants located in Afghanistan, Mali, Nepal, Thailand and Turkey,¹⁰⁵ while a similar project in Cameroon¹⁰⁵ was successfully completed in 1985. In Nepal, implementation commenced on a second UNDP-funded project aimed at the commercial processing of essential oils and herbal preparations for local and international markets. The enhancement of the R + D competence of the Royal Drug Research Laboratory has now been accomplished¹⁰⁶ and, after a satisfactory technical review, UNDP has funded a further phase of the project. A pilot plant enabling local technology development is being installed and is expected to be completed during 1986. Pilot plants of a similar nature and serving similar purposes have already been installed in Burkina Faso, Rwanda and the United Republic of Tanzania and their start-up operations and trials will be fully under way in early 1986. Subsequent to an exploratory mission, a project for the processing of herbal medicines has now been initiated in Madagascar¹⁰⁶ and preparatory assistance was given to Viet Nam¹⁰⁷ in the development of a full technical co-operation programme for the production of local medicines.

¹⁰³ *Ibid.*, para. 282.

¹⁰⁴ *Ibid.*, para. 279.

¹⁰⁵ ID/B/320, chap. III, para. 303.

¹⁰⁶ ID/B/340, chap. III, para. 293.

¹⁰⁷ ID/B/300, chap. III, para. 268.

311. Technical assistance in the transfer of technology for the bulk production of essential ethnic drugs has remained a major activity. This type of assistance is aimed at the upgrading of national competence and R + D capability and the transfer of appropriate technologies. In Cuba, a multi-purpose plant for the bulk production of essential synthetic drugs¹⁰⁸ was inaugurated in March 1985 and extensive test-runs are in progress. Implementation of a similar project in Brazil¹⁰⁸ has been unavoidably delayed. Similar new projects of an exploratory nature were initiated in Zimbabwe, the Arab region and Morocco to assess the scope of future activities. A second project in Cuba is concerned with the transfer of technology for the manufacture of steroidal pharmaceuticals utilizing local resources.

312. In Guinea a pilot demonstration plant for the production of oral rehydration salts and intravenous fluids was being established under the auspices of IDDA, and in Mozambique preparatory assistance for the establishment of a pilot plant for pharmaceuticals was under implementation. Projects for the local production of oral rehydration salts in several countries of the African region¹⁰⁸ were expected to reach implementation stage during the year under review. In Nepal, a joint UNIDO/WHO project on primary health-care progressed well and was nearing completion at year end.¹⁰⁸

313. The third meeting of the Advisory Panel on Preventive Medicine was held in Bilthoven (Netherlands) to advise and guide UNIDO on its Programme on the Industrial Production of Biologicals (IPB).¹⁰⁹ The Panel reviewed and discussed the model programme for the production of vaccines in developing countries. Under the programme for IDDA, implementation of the model programme was initiated with the establishment of a pilot demonstration plant for vaccine production for Africa at Garoua (Cameroon). As a follow-up of the UNIDO/Hungary Joint Programme for Vaccine Production in Africa, rehabilitation of a BCG vaccine production laboratory was achieved in Madagascar.¹⁰⁹ Regarding production of biologicals, new projects on human plasma fractions and sterile enzyme preparations from animal sources were initiated in Mongolia.

314. A subregional R + D Centre for Biotechnology and Genetic Engineering has been created in Mexico¹¹⁰ with the participation of associated centres in the subregion. The Centre's activities will be linked to the Latin American biotechnology network, designed to maximize the national capabilities of its constituent member countries. The Centre is working towards the identification of national inputs and the preparation of a concerted programme of work.

315. In the area of biofuels and synthetic fuels, the main aim of UNIDO in 1985 was to support research and demonstration programmes for the development of alternative energy sources, such as those based on coal and agricultural residues. Continued support was given to the R + D efforts of a number of developing countries, e.g. Bulgaria, China, Republic of Korea, India and Poland,¹¹¹ which have rich coal resources and have launched major

¹⁰⁸ID/B/340, chap. III, para. 294.

¹⁰⁹*Ibid.*, para. 295.

¹¹⁰*Ibid.*, para. 296.

¹¹¹*Ibid.*, para. 277.

programmes to develop technologies to utilize coal as a source of energy in an efficient and environmentally acceptable manner. An example of a project successfully concluded is the assistance provided to the regional Research Laboratory in Hyderabad (India) in installing and commissioning a pilot pressure gasifier and in its instrumentation for R + D purposes.

316. Further emphasis was placed on the development of biofuels technology, including ethanol production from lignocellulosic materials in Brazil, India, and Romania,¹¹² and on thermochemical conversion technologies for the production of solid and gaseous fuels from wood waste and agricultural residues in Ethiopia, Paraguay, Philippines, Somalia, the Sudan, Zimbabwe and Uruguay.¹¹³ The projects mentioned in the African countries were financed under the programme for IDDA.

317. In the Philippines, the UNFSTD-financed project on sucro-based chemicals¹¹⁴ was approaching a successful conclusion, with the development of process technologies for citric acid, dextran and acetone/butanol. Arrangements are being made for further development and commercialization involving foreign partners.

318. In the area of basic chemicals, efforts continued throughout 1985 to promote the manufacture of salt in developing countries and UNIDO activities in that respect expanded further. In Niger¹¹⁵ women were instructed on how to use solar evaporating ponds to crystallize salt to replace the century-old method of evaporating water from salt brines in kettles using wood as fuel. In Jamaica¹¹⁵ production of 500 tons per year of salt started and the growing of artemia cysts in the water ponds provided additional income for the women's group in charge of the operation. The 500 tons per year sea-salt production plant on Christmas Island in Kiribati¹¹⁵ was also in full operation and techno-economic studies are under way to increase the production capacity to 15,000 tons per year. In Ethiopia a technical study on how to use the salt brines from two inland lakes was finalized.

319. Activities in the sector of pulp and paper concentrated on the utilization of non-wood fibre materials for the manufacture of pulp and paper, and no effort was spared to increase industrial production in this field. Assistance in trouble-shooting in paper mills was given to Yugoslavia, Turkey and Viet Nam. The project teams in Viet Nam restarted the operation of two paper machines which had been idle for many years, and these are now producing high-quality tissue products which hitherto had been imported. The paper mill in Uganda was equipped with spare parts and additional items of equipment to increase and improve paper production. In most of these projects, the training of personnel was included, either at home or abroad.

320. The Cellulose Research Unit in the Sudan is now well equipped and is contributing to the support of existing industry and study of future possibilities of pulp and paper-making. A technical workshop and a seminar were held in

¹¹²*Ibid.*, para. 275.

¹¹³*Ibid.*, para. 274.

¹¹⁴ID/B/300, chap. III, para. 259.

¹¹⁵ID/B/340, chap. III, para. 259.

Bangkok (Thailand) on the utilization of waste paper in pulp and paper-making and on comparative pulping processes, including the Monopulp Process, which were attended by over 40 participants from 10 Asian countries, who discussed ways and means of broadening pulp/paper production capabilities.

321. Environment-related activities included: preservation and improvement of environmental conditions; transfer of low and non-waste technology to developing countries; recycling of waste materials; industrial water development; monitoring and abatement of industrial pollution; management of hazardous wastes and materials, and the elaboration of industrial safety procedures. Industrial pollution control and industrial safety programmes encompass a great range of activities. With UNIDO assistance, methodologies on low- and non-waste technologies were being explored and tested in Czechoslovakia, air pollution monitoring/control instrumentation was being developed locally in Romania, and control of pollution was being undertaken on the eastern seaboard of Thailand. In India, the Pollution Control Research Institute at Hardwar¹¹⁶ has inaugurated its laboratories with an impressive range of pollution control equipment for water, air, waste and noise pollution. In Africa, the focal point of environmental programmes is the safeguarding of scarce water resources and prevention of water pollution. Three experts were sent to Burkina Faso to advise the Government on appropriate fiscal schemes for industrial water pollution abatement. In the Seychelles water pollution abatement and energy resources conservation were pursued through the collection, controlled burning and/or recycling of waste oil resources.

322. Co-operation continued with the United Nations Environment Programme, especially in implementing the Protocol for the Protection of the Mediterranean Sea against Pollution from Land-based Sources (17 signatory States). Co-operation in environment and industry also continued with the World Health Organization, the International Maritime Organization, the United Nations Educational, Scientific and Cultural Organization, several governmental and non-governmental organizations and research and industrial institutions.¹¹⁶

¹¹⁶*Ibid.*, para. 260.

Chapter IV

INDUSTRIAL STUDIES

GLOBAL AND CONCEPTUAL STUDIES

1. As in the past, the aim of global and conceptual studies is twofold: first, to lay the basis for future policy initiatives and second, to provide the necessary background material for the technical co-operation programme of UNIDO.

2. In 1985 UNIDO continued to prepare short-term forecasts providing industrial policy makers with a coherent picture of world industrial development. These are designed to assist policy makers in their decisions that take into account anticipated levels of world demand, changes in technology and competitiveness, as well as recent relative price trends. Therefore, in addition to analysing long-term changes in the structure of world industrial output, the UNIDO economic model system was expanded to include a wide range of sources of recent information (within UNIDO and without). These were used to estimate the level of economic activity in 150 individual countries and to spell out the related implications in terms of development potential for 28 industrial sectors identified by using the International Standard Industrial Classification of All Economic Activities (ISIC) three-digit-level breakdown. While such work does not remove uncertainty about the future, it is nevertheless hoped that placing national estimates in such a global context will contribute to consistent industrial policy-making in all countries.

3. *Industry and Development: Global Report 1985* (ID/333) was published in early 1985, and the next *Global Report*, for 1986, was being finalized as the year closed. That report will review developments in the world economy in 1985, assess recent developments in 28 industrial sectors in each of the developing regions and in the North and provide short-term forecasts (for 1986 and 1987) of output and employment for each industrial sector in the different regions. The report will analyse in detail the impact of manufactured exports from developing countries on employment in six industrialized market economies, and the major causes of decline in employment levels in the North. It is intended to publish the 1986 report before the second session of the Industrial Development Board.

4. In compliance with existing mandates concerning monitoring of the progress made in accelerating the industrialization process in developing countries¹ (conclusion 1983/2 adopted by the Board at its seventeenth session),

¹ID/B/340, chap. IV, para. 13.

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an analysis of Governments' responses to the three previous surveys was carried out before preparing a new questionnaire for submission to Governments. To supplement the information provided by Governments, the personal views of representatives of industry, financial institutions, universities and trade unions were sought with regard to the industrialization process in their respective countries.

5. Economic projections in the 1986 *Global Report* were the result of global modelling activities and data bank development. The input-output data bank of UNIDO will be updated in co-operation with the United Nations Statistical Office in New York (UNSO). Part of the input-output tables for developing countries (ID/325) was published in 1985. Further publications will follow in the framework of common projects with UNSO. The next one will be an analysis of the import requirements for exports of selected developing countries. Arrangements were made for the Eighth International Input-Output Conference to be held at Sapporo (Japan) in July/August 1986. A modified and simplified version (UNIDO/IS.514) was published of the IDIOM user's handbook for policy-oriented model structures² developed by UNIDO on the use of the IDIOM computer software programme-package to assist in industrial planning.

6. UNIDO continued to give attention to problems of co-operation between developing countries as well as to those of the least developed countries. In this regard, the Trade Impact Analysis Model (TIMOD) was completed (UNIDO/IS.523). The model describes the impact of changed bilateral export structure on production and imports and analyses the potential for intensifying South-South trade. Another model on obstacles to South-South trade (UNIDO/IS.584) was nearing completion by the end of 1985. A study on the mineral trade potential of the African least developed countries (UNIDO/IS.508) was completed, as was a study on the external debt problems of Africa (UNIDO/IS.585) which was prepared for a meeting of high-level experts on Africa's external debt in respect of the industrial sector held in May (Vienna). A study was begun on the impact of small economic size and high transport costs on the industrialization of African least developed countries.

7. A study that examines the interaction between agriculture and industry in the development process (UNIDO/IS.559) was completed, while a study on policy design and price reform in developing countries, a statistical analysis of the sources of change in manufacturing value added from 1963 to 1980, as well as studies on future energy requirements and on data handling methodology were nearing completion at the end of 1985.

8. A review was prepared of the work of UNIDO in the area of the social aspects of industrialization at the global and regional level during the period 1982-1984 (UNIDO/IS.534), and a report on the subject was submitted to the Industrial Development Board in May 1985 (ID/B/338 and Corr.1).

9. The journal *Industry and Development* continued to be issued on a quarterly basis. Articles published in 1985 focused, *inter alia*, on: how the present

²ID/B/320, chap. IV, para. 7.

international financial system hinders expansion of North-South and South-South trade; the increase in counter-trade as a result of foreign exchange difficulties in many developing countries; how Latin American steel, electronics and petrochemical industries could be affected by developments in those industries in the United States of America; the potential for South-South trade in the capital goods industries; and the relationship between industrialization and employment in the service sector in developing countries.

REGIONAL AND COUNTRY STUDIES

10. Regional and country studies are designed to meet two needs: the need to support through analyses and information industrial policy-making in developing countries, and the need to provide an analytical framework for technical assistance programming in UNIDO itself. Thus, studies constitute a valuable complement to the established pattern of UNIDO technical co-operation, as they represent both direct assistance to policy makers in developing countries, and a support service to other UNIDO divisions. In 1985, research in regional and country studies continued to be characterized by client-oriented action, short project duration, direct staff participation, and the maximum use of local expertise. In carrying out related research activities, joint development with clients (mostly Governments of developing countries) of the precise approach and direction of the studies, including their focus on industries of primary relevance to the respective country concerned, proved important. Research findings are generally presented to and reviewed jointly with government officials and industrialists nominated by the Government at a workshop organized by a research team of UNIDO staff and experts. The workshop serves not only to disseminate the findings but also to elicit an immediate response, thus providing guidance on the provision of later services especially with regard to longer-term technical assistance programmes.

11. Direct research services provided to national policy makers in individual developing countries include economic analyses and data on national and international industrial structures and their driving forces. Research services are also provided to countries on resources, their industrialization prospects and policy options. Research in 1985 included structural and policy analyses of Argentina, Haiti, Mexico, Morocco, Peru and Zimbabwe, while ongoing analyses include studies undertaken in response to requests received from the Governments of Guinea-Bissau and Mozambique. A study on industrial policy for Argentina was prepared on the basis of research work and a joint national policy workshop. The findings of research work undertaken on restructuring policies for the textile industry in Mexico were reviewed in a government/industry/UNIDO workshop during which policy options and follow-up technical assistance were outlined. UNIDO was represented by staff of the Regional and Country Studies Branch and the Agro-industries Branch. A comparative study on the role and pattern of industrial incentives was prepared and presented to the Government of Morocco. In Peru and Zimbabwe high-level government officials and industrialists met with UNIDO to conduct a review of structural and policy analyses. The research activities thus served both as a direct input to national policy-making and as a basis for subsequent detailed technical co-operation projects.

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12. Research support to regional and subregional economic groupings included analyses for the Preferential Trade Area in Eastern and Southern Africa and for the Southern African Development Co-ordination Conference (SADCC). Studies were prepared on prospects for co-operation in the textile industry in the Association of South-East Asian Nations (ASEAN); trends in the automotive industry and their implications and policy requirements for Latin America; and prospects and new measures for small-scale industry development in Asia and the Pacific region (UNIDO/IS.549). The question of the role of small-scale industries in industrial development is related to the wider subject of regional development and industrialization and a report issued on that subject highlights issues of industrial location and regional development processes. Under financing from the economic co-operation among developing countries (ECDC) component of the regular programme, a review of industrial policy pursued in East Asia was initiated. The study re-assesses the industrial development experience of some East Asian countries whose success was the subject of attention in the 1970s. It concludes that growth in those countries has been sustained and even improved since that time. Industrial policy objectives are discussed, in particular the export-oriented strategy frequently associated with the growth of the countries in question.

13. During the year under review liaison and close co-operation were maintained with the joint industry divisions of the four regional commissions. In Asia and Latin America, for example, research work and policy workshops were organized jointly with the regional commissions. At one meeting held at Seoul (Republic of Korea) on small-scale industry development, new forms of joint action were discussed through which small-scale industries could assume a new dynamic role in the industrial development process of many developing countries. At a meeting in Bogota (Colombia) in which Latin American policy makers and industrialists participated, the emerging pattern of production and trade in the automotive industry was reviewed. Experts at the meeting identified the constraints faced by Latin American countries in formulating policies towards a rationalization of the automotive industry; some commonality in policy approaches emerged.

14. Particular attention was given to research and studies on the African region. In addition to an increase in the number of African country studies as compared with 1984, a survey of the iron and steel industry for the Preferential Trade Area in Eastern and Southern Africa and a study on industry and the external debt in Africa were carried out. A paper on policies and measures for the promotion of industrial co-operatives in Africa was provided as an input to the Economic Commission for Africa (ECA) regional expert consultation on the role of rural co-operatives in the productive sectors in Africa, and an analysis of mineral-based resources in SADCC countries was finalized as a complement to an in-depth study of industrial co-operation prospects in those countries.

15. To facilitate the provision of information on structures and policies to client Governments, research was undertaken on key issues and national experience relating to the international restructuring process. Surveillance was directed towards trends and policies in selected developing countries, particularly in subsectors such as textiles, wood products and the leather industry in countries with either a developed market economy or a centrally planned economy.



Production of prototype agricultural tools from scrap metal at Bukavu (Zaire)

16. Increased emphasis was placed on research as a service in support of UNIDO technical co-operation activities. One service offered is the preparation of country industrial development reviews which provide information on the industrial sector in individual developing countries. In 1985, 15 country reviews were completed. A positive response to and interest in the reviews has been indicated not only by UNIDO officers dealing with operational activities but also by other international institutions concerned with industrial investment projects and technical co-operation. At the request of the Division of Policy Co-ordination, specific analyses of technical co-operation requirements of individual developing countries were initiated. Such analyses were carried out for Pakistan, Thailand and Viet Nam, and background information for technical co-operation was prepared for six other countries. This analytical framework for the operational work of UNIDO will continue to be expanded in the future.

SECTORAL STUDIES

17. The research publications of the Sectoral Studies Branch serve users within UNIDO and without. The systematic application of the established three-stage research approach³ increased the number of actual and potential

³ID/B/340, chap. IV, para. 29.

users of sectoral studies and greatly enhanced the validation of the resources used for the studies. As a first stage, analytical appraisals of industrial sectors are prepared and made available to developing and industrialized countries. They are used as a source of information and reference work by decision makers in Government and industry as well as by experts and researchers. They also serve as a background to the sectoral consultations and they are used in the development of some UNIDO programmes. The second stage of research entails the elaboration of strategies, policies and concrete measures that can be implemented by developing countries to promote specific sectors. While being the main input to the System of Consultations, this type of study also contributes to the programming and implementation of UNIDO technical co-operation activities. The third stage of research, which consists of practical testing or field application of research findings, is undertaken in close co-operation with the Division of Industrial Operations. The results of this testing or application are taken into consideration when proposing solutions to specific problems and developing new technical co-operation activities.

18. Among the studies carried out in 1984-1985 that have since led, or are expected to lead, to technical co-operation activities, are: (a) the studies on the methodology for managing and programming integrated food systems which was applied to the oils and fats production/consumption system in Peru (UNIDO/IS.569); (b) the technical and economic analysis of the manufacture of chloroquine phosphate (UNIDO/IS.518) and ethambutol hydrochloride (UNIDO/IS.588); and (c) manpower and training requirements in industry: a methodology applicable to the iron and steel sector (UNIDO/IS.544) at present being tested in two field projects. On the basis of an earlier study on mini-fertilizer plant projects (UNIDO/IS.416 and Add.1) four pre-feasibility studies will be initiated in selected African countries. A comprehensive programme of studies in support of technical co-operation in the biennium 1986-1987 has been developed in co-operation with the Division of Industrial Operations.

19. The main activity in the food sector was related to the improvement of the methodology for assessing and programming production/consumption systems (MEPS) and its application to the integrated development of agro-food industries. The use of MEPS in various applications was demonstrated to UNIDO staff. The results of the application of MEPS to a programme for the integrated development of the Peruvian oils and fats production/consumption system elaborated in Peru by UNIDO and by the Andean Pact Secretariat (UNIDO/IS.569) were the subject of two workshops, one in Vienna and one at Lima (Peru); a report of the Lima workshop was issued under the symbol UNIDO/IS.586. In the Lima workshop, government officials and representatives of the oils and fats industry from the Andean Pact countries were trained in the use of the methodology which they have since applied to an analysis of the role of food industries in food security systems. The proposed programme for the integrated development of the oils and fats production/consumption system of Peru is at present being studied by the Government. The study is also being used as a reference within the food security systems by the other Andean Pact countries. Work is continuing on the adjustment of MEPS so it can also be applied to least developed countries as a tool for decision-making and continuous programming of priority subsectors in food processing. One study on the potential contribution of agro-food processing industries to food security systems has been issued (UNIDO/IS.587) and

another study was completed on a methodological basis to determine the demand of food security and processed foods.

20. In co-operation with the United Nations Conference on Trade and Development (UNCTAD) a study related to tariff and non-tariff measures in the world trade of oilseeds, vegetable oils and related products was issued (UNIDO/IS.519). The statistical digest on vegetable oils and fats was revised and abridged versions of manuals for assessing and programming the integrated development of agro-industrial systems were completed for issuance in 1986.

21. The first phase of a typology of the fisheries industrial systems (FIS) of 64 developing countries was completed. The study was discussed at an expert group meeting in Vienna in December 1985. The typology will make it possible to identify different patterns and levels of development, enumerate the main factors for the progress of the fisheries industrial systems and propose development strategies for different types of countries. A survey of the fisheries industry in Latin America and Africa which was prepared on the basis of seven types of countries, will provide specific guidelines for the development of the industry and will be presented as the main background paper at the first Consultation on the fisheries industry to be held at Gdansk (Poland) in June 1987.

22. Work started on a study on regional co-operation among developing countries in the production of tanning chemicals.⁴ Country surveys in Africa revealed, however, that the lack of such chemicals is not a major bottleneck for the development of the leather industry. The work on this sector has therefore continued with emphasis on the improvement of the capacity utilization of the leather industry.

23. A study carried out in co-operation with the International Institute for Applied Systems Analysis on the effect of shipping costs on the location of wood-processing facilities will be issued at the beginning of 1986. The study analyses whether the competitive advantage in secondary processing is more likely to lie with the wood-processing developing countries or with the wood-consuming developed countries. Under a programme of co-operation with the Economic and Social Commission for Asia and the Pacific (ESCAP) a study was conducted on the development of the wood-processing industry in the ESCAP region and will be issued in early 1986.

24. Research continued on the preparation of a decision-making model for the selection of substances for production of pharmaceuticals by organic chemical synthesis. Techno-economic analyses of the manufacture of ethambutol hydrochloride (UNIDO/IS.588) and isoniazid (to be issued in early 1986) were completed; they identify possibilities for producing specific fine chemicals in developing countries. A techno-economic analysis was undertaken on acetylsalicylic acid which will be completed in 1986. A study on the market for pharmaceuticals, including a review of available statistics, trends and forecasts to 1990, was also completed and will be issued in early 1986.

⁴*Ibid.*, para. 32.

25. In line with the recommendations of the Fourth Consultation on the Fertilizer Industry at New Delhi, India, in 1984,⁵ research work continued on the opportunities for mini-fertilizer plants. A project on the preparation of pre-feasibility studies for the establishment of mini-fertilizer plants in four selected African countries was prepared and approved for funding from voluntary contributions. Owing to a reduction in consultancy funds, the work planned on guidelines for capital cost control in developing country fertilizer plants stopped. A study describing new technological trends in the manufacture of fertilizers, however, was initiated. The study on the production and use of pesticides in developing countries was continued and a document will be issued in 1986.⁶

26. Two studies were finalized for the Third Consultation on Petrochemicals held in Vienna in December: one dealt with prospects and strategies for the petrochemical industry in developing countries (UNIDO/IS.572 and UNIDO/IS.572/Add.1, statistical digest) and another dealt with new trends in petrochemical research and development (UNIDO/IS.576). The findings of these studies were reflected in recommendations of the Consultation⁷ relating to the following: a petrochemical data base; safety and environmental protection; development of downstream industries; exchange of experience in R+D and the organization of an expert group meeting on restructuring of the petrochemicals industry. The recommendations will be taken into account in planning future studies on petrochemicals. A model for the techno-economic evaluation of petrochemical processes was designed for use with personal computers and drafts of a users' guide and a systems development manual were prepared. Demonstrations on the use of the model were given to representatives from some developing countries. The study on the development of the petrochemical industry in Latin America was abandoned owing to a reduction in funds for consultants.⁸ Within a programme of co-operation with ESCAP, research was conducted on the petrochemicals industries in the ESCAP region (UNIDO/IS.563/Add.2). In co-operation with UNCTAD a study was undertaken on tariff and non-tariff measures in world trade of petrochemicals (UNIDO/IS.573).

27. In compliance with the recommendations of the First Consultation on the Building Materials Industry, held at Athens in March 1985,⁹ future UNIDO activities in this sector will focus on ways and means of increasing local production and of improving the effectiveness of building materials research institutes as well as on the application of new technologies to small-scale enterprises. A UNIDO guide to the manufacture of lime in developing countries and its use in industrial development was issued (UNIDO/IS.555).

28. Research continued in 1985 for scheduled completion in 1986 on studies describing the present conditions of the iron and steel industry in developing countries in the ASEAN region, Middle East, Western Asia and Africa. Work on the methodology for determining manpower and training requirements

⁵For the report of the Fourth Consultation on the Fertilizer Industry, see ID/314.

⁶ID/B/340, chap. IV, para. 36.

⁷For the report of the Third Consultation on Petrochemicals, see ID/340.

⁸ID/B/340, chap. IV, para. 38.

⁹For the report of the First Consultation on the Building Materials Industry, see ID/335.

continued¹⁰ and a second study on the subject will be issued early in 1986. The methodology was tested in co-operation with the Division of Industrial Operations in two field projects and a report will be issued in 1986. In a programme of co-operation with ESCAP, a study on the development of the iron and steel industry in the ESCAP region was completed (UNIDO/IS.563/Add.1). A paper on international trade in steel tubes and their raw material quality requirements (UNIDO/IS.515) was prepared as the UNIDO contribution to a seminar on the subject organized by the Economic Commission for Europe (ECE) at Helsinki (Finland). Statistical data and other information were collected and a preliminary analysis was made for a study on the non-ferrous metals industries.

29. A second world-wide study on the capital goods industry in developing countries (UNIDO/IS.530) was presented as a background document at the Second Consultation on that subject, held at Stockholm in June. Immediately after the Consultation, an expert group meeting¹¹ with participants from Africa met in Vienna to assess and analyse development possibilities for the capital goods industry in Africa. A document, to be issued as a sales publication in the Industrial Development Decade for Africa (IDDA) series, will include a chapter on the formulation of strategies and measures of action for the development of the capital goods industry in Africa. An analytical report was issued (UNIDO/IS.567) on the first expert group meeting on capital goods in Latin America held at Santiago (Chile) in December 1983 and organized jointly by the Economic Commission for Latin America and the Caribbean (ECLAC) and UNIDO. A second expert group meeting was held at Santiago in March 1985 where follow-up actions were agreed upon for the promotion of the electrical equipment industry in Latin America. Studies begun in 1985 and to be finalized early in 1986 include those on food-processing machinery and on the development of capital goods in Arab countries. Research is continuing on ship repair and maintenance as well as on the electric power equipment sector in developing countries.

30. Within the framework of a UNIDO/ESCAP programme on industrial progress of selected sectors, a preliminary analysis of the capital goods industry in South-East and East Asia was made (UNIDO/IS.563). Within the same programme, studies were also carried out in the ESCAP region on the wood-processing, petrochemical and iron and steel industries (see paras. 23, 26 and 28 above). A synthesis paper (UNIDO/IS.577) on the situation of selected industrial sectors in the developing countries of the ESCAP region was presented to a joint UNIDO/ESCAP workshop at Bangkok (Thailand) in July.¹² As a follow-up it was agreed, *inter alia*, to organize a joint UNIDO/ESCAP seminar on computer numerically controlled machine tools.

31. The latest structural changes within the agricultural machinery industry in Latin America were dealt with in document UNIDO/IS.581, while an analysis was made of the multipurpose approach in the production of small- and

¹⁰ID/B/340, chap. IV, para. 42.

¹¹For the report of the expert group meeting for the formulation of strategies and policies for the development of the capital goods industry in Africa, see UNIDO/IS.538.

¹²For the report of the workshop on accelerating growth through co-operation in selected industrial sectors in the developing countries of the ESCAP region, see UNIDO/IS.543.

medium-scale agricultural machinery with a view to defining the possibilities of international co-operation between similar enterprises in the region which produce the same range of products (UNIDO/IS.607). Research was also undertaken on the situation of the agricultural machinery industry in North Africa. These documents, together with others still to be prepared, will be used, *inter alia*, as background papers in the forthcoming third Consultation on the agricultural machinery industry scheduled for September 1986.

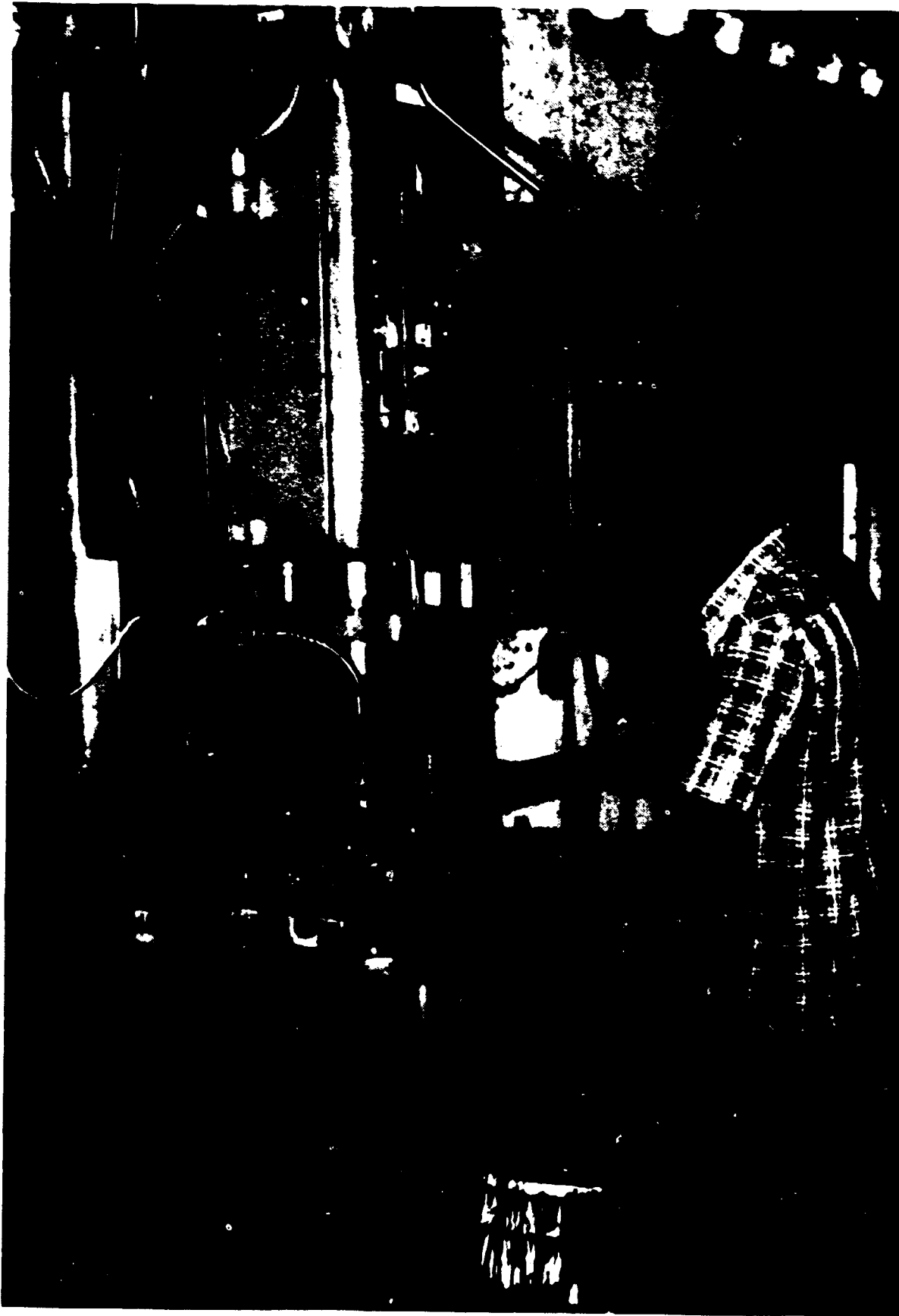
32. Research on the use and conservation of energy in selected industrial sectors continued. A related study in the field of cement industry was issued (UNIDO/IS.540), and preliminary work commenced for a study on industrial power co-generation which will be carried out in 1986.

33. The Methodology Unit continued to provide the sectoral research activities with econometric and statistical analyses, forecasts and data in tabular and graphic form. Further use was made of enhanced computer graphics introduced by UNIDO. In co-operation with the Manufacturing Division of UNCTAD, the Unit prepared several studies on the tariff and non-tariff measures in world trade as input to sectoral studies on oilseeds, vegetable oils and related products (UNIDO/IS.519), petrochemicals (UNIDO/IS.573) and building materials (UNIDO/IS.524). A redirection of the work towards the utilization of microcomputers continued. Special digests containing detailed sectoral information were developed as complementary volumes to sectoral studies on the building materials sector (UNIDO/IS.512/Add.1), the vegetable oils and fats industry (UNIDO/IS.604) and the petrochemical industry (UNIDO/IS.572/Add.1). Work is continuing on establishing and maintaining sector specific data bases.

OTHER ACTIVITIES

Statistics and related empirical research

34. The demand for industrial data and related empirical analysis produced by the Statistics and Survey Unit has risen significantly in recent years. In the year under review, emphasis continued to be placed on development of industrial statistics and the related field of empirical research with the UNIDO data base serving as a central reference point for general industrial statistics within the Organization. Operation and maintenance of the data base are determined by the recurrent need for international data on industry which are consistent, comparable and easily accessible. With regard to the issues of international comparability and consistency, research focused on efforts to standardize the concepts, measures and definitions employed by different countries, to adjust for the lack of data on small-scale enterprises in much of the national data, and to develop estimates for specific types of data that may not be systematically collected by some national suppliers. As these goals are gradually realized, greater efforts will be devoted to the collection of more detailed industrial data and to improvements in country coverage. The latter advances are expected to facilitate the study of various aspects of industry, including subjects relating to technical co-operation.



Advanced numerically controlled machinery applied in large-scale production at the agricultural implements factory (UPROMA) (Unité de production de matériel agricole), Kara (Togo)

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35. In 1985, statistical activities financed under the regular budget were complemented by the collection of field statistics, an operation funded by a grant from the Ministry of International Trade and Industry of Japan. The project is to be completed in 1986, and should lead to improvements in existing data. At the same time, a programme was undertaken to ensure that the available industrial data are as up to date as possible. Data from a variety of sources are being standardized and provisions are under way to automate this procedure.

36. In parallel with efforts to improve the quality and detail of data, data dissemination continued. Machine-readable copies of the UNIDO data base were provided to more than 25 international organizations, research institutes and universities. The industrial indicators appearing in the World Bank *World Development Report* as well as data shown in the UNCTAD *Handbook of International Trade and Development Statistics* were also supplied by UNIDO.

37. The collection of industrial data that, heretofore, was not available for African countries was continued in 1985. As part of its contribution to IDDA, the Statistics and Survey Unit issued "Africa in figures" (UNIDO/IS.517). The document draws upon previously unpublished data and provides a series of indicators on industrial performance and structural change in the African region. Volume II of "L'industrie africaine en chiffres", a statistical series based on field work in individual countries, will be issued in 1986 covering Benin and Burkina Faso. The Unit also provided the data inputs for documentation published in connection with the high-level experts meeting on Africa's external debt in respect of the industrial sector.

38. Several of the statistical publications prepared by the Unit were intended to meet more general statistical needs; for example, two documents designed to facilitate the use of the UNIDO data base. The first, "An inventory of industrial statistics: UNIDO data base, 1985" (UNIDO/IS.528), provides users with an overview of the contents of the data base while the second, "Industrial statistics for research purposes—methodology applied in compiling UNIDO's international data on the number of employees, wages and salaries, gross output and value added" (UNIDO/IS.558), describes the statistical methods used to adjust data and to develop estimates. A third statistical publication also issued in 1985 on international patterns of structural change within manufacturing deals with measuring the relative degree of industrialization (UNIDO/IS.491/Rev.1).

39. Preparation of regular statistical publications also continued in 1985. Among these, the *Handbook of Industrial Statistics, 1984* (ID/328) was published and preparation of the subsequent issue began. Similarly, "A statistical review of the world industrial situation, 1984" (UNIDO/IS.506) was issued and work on the 1985 issue was completed.

40. The empirical research carried out by the Unit is closely related to its statistical programmes. A major aspect of this work is the biennial preparation of the *Industrial Development Survey*, the tenth edition of which, *Industry in the 1980s: Structural Change and Interdependence* (ID/331), was published in 1985. In addition to providing an assessment of global change, the *Survey* shows trends in patterns of consumption in manufactures, international shifts

in comparative advantage, the growth of employment and productivity, skill requirements, industrial performance in the least developed countries and the evolution of agro-food systems. A second major analytical publication entitled *International Comparative Advantage in Manufacturing: Changing Profiles of Resources and Trade* (ID/334)¹³ was also completed in 1985. It analyses the determinants of comparative advantage and documents international changes in the competitive abilities of different industries and countries.

Environmental and related studies

41. Activities on environmental protection within the context of industrial development continued in 1985, in the form of studies and lectures.

42. A study on the utilization of phosphogypsum in the fertilizer sector (UNIDO/IS.533) was prepared which should be of particular interest to developing countries with phosphate rock supplies but no building materials.

43. An environmental study of the petrochemicals industry was completed (UNIDO/IS.568) which explains that some form of waste treatment must be practised in the petrochemical industry if environmental quality is to be maintained. A short study (UNIDO/IS.580) was also prepared to highlight the main issues that were identified in the environmental study of the petrochemicals industry. The purpose of the document was to stimulate discussion on environmental issues relating to the production of petrochemicals.

44. Lectures were again delivered at the UNIDO environmental course at the University of Ghent (Belgium). A new element in the form of an environmental decision game was included in the course, whereby 25 participants from 15 developing countries became involved in decision-making by evaluating alternatives associated with building a pulp and paper mill.

45. Work continued on industrial emergency contingency planning. Co-operation with the United Nations Environment Programme (UNEP) was highlighted by the joint preparation of a background paper on transnational industrial contingency planning for a seminar organized by UNIDO, UNEP and the United Nations Centre on Transnational Corporations.

¹³UNIDO publication, Sales No. E.85.II.B.9.

Chapter V

SPECIAL PROGRAMMES

SYSTEM OF CONSULTATIONS

Introduction

1. During 1985 the process of review and appraisal of the System of Consultations, which began in 1984,¹ neared completion. Member States, meeting in an informal open-ended working group under the guidance of the President of the eighteenth session of the Industrial Development Board, had the opportunity to examine closely the aims, functioning and results of the System of Consultations. The Board at its nineteenth session noted with appreciation the report on the outcome of the meetings of the informal working group (ID/B/349). The Board had also before it the views of Member States on achievements and possible improvements of the System (ID/B/346) as well as a report by the Executive Director on the benefits of the System (ID/B/341).

2. The extensive and in-depth examination of the System yielded results that could be considered a turning point for the System of Consultations. The examination generated greater understanding—even a consensus—among Member States of the limitations and potentials of the System. It also provided valuable ideas as to how the limitations could be overcome and the potentials maximized. In the light of those ideas, the Secretariat took a fresh look at the ways and means by which the effectiveness of the System could be enhanced. For example, recommendations from previous Consultations were re-examined with a view to improving implementation and follow-up particularly in the areas most amenable to technical co-operation. Improved co-ordination within the Secretariat and between the Secretariat and external sources of information have resulted in an increase in the production of studies by staff members rather than outside consultants. When external assistance proved unavoidable, consultants were drawn from a variety of countries including those that have hitherto been underutilized for such services. Attempts were made to provide fewer but more precise documents for Consultations and the production and distribution of documents were streamlined. Improvements continued to be made in the conduct of meetings. Thus, during the Consultations held in 1985 the Secretariat continued its efforts to ensure that more time was available for formal discussions on technical issues and that the discussions were carried out in a professional and business-like atmosphere; at the same time, the

¹ID/B/340, chap. V, para. 13.

participants had more opportunity for informal contacts. With the assistance of Governments, Resident Representatives of the United Nations Development Programme (UNDP), Senior Industrial Development Field Advisers (SIDFAs) and Junior Professional Officers (JPOs), greater efforts to attract representatives of industry and technically qualified persons to participate in Consultations were made. Despite the positive results achieved, there is need to intensify efforts in this regard.

3. There were other important developments in 1985. For example, the Board, at its nineteenth session, approved the programme of Consultations for the 1986-1987 and 1988-1989 bienniums and reaffirmed the importance of the System as a mechanism for the promotion of industrialization of developing countries as well as for the promotion of international co-operation in the field of industrialization at different levels.² The Board also decided to add four new sectors (small- and medium-scale enterprises including co-operatives, electronics, pesticides and off-shore industries) to the list of sectors on which the Secretariat could start preliminary work within available resources for the possible holding of Consultations in the 1988-1989 biennium. The Board welcomed General Assembly resolution 39/235 concerning the holding of more regional Consultations within the agreed programme. It also decided that the Consultation on the agricultural machinery industry to be held in the 1986-1987 biennium should be interregional.

Consultations held in 1985

4. Three Consultations were held in 1985, namely the First Consultation on the Building Materials Industry, the Second Consultation on the Capital Goods Industry with Special Emphasis on Energy-related Technology and Equipment, and the Third Consultation on the Petrochemical Industry. Reports on these Consultations, which include conclusions and recommendations, will be submitted to the Board at its second session, in October 1986, for decision and guidance on appropriate follow-up action.

Building materials industry

5. The First Consultation on the Building Materials Industry was held at Athens (Greece) from 26 to 30 March 1985. Of the 181 participants 25 per cent were from industry and 57 per cent were from specialized government and non-governmental agencies. The Consultation was sponsored by UNIDO and the United Nations Centre for Human Settlements (Habitat). It concentrated on issues related to the development of the building materials industry in developing countries and specifically on measures to strengthen their technological capabilities in the production of building materials. Measures required to develop building materials production in the informal economy were also discussed. The conclusions and recommendations adopted at the Consultation outlined measures that could be taken by Governments, industry and intergovernmental and non-governmental organizations in planning,

²Official Records of the General Assembly, Fortieth Session, Supplement No. 16 (A/40/16), conclusion 1985/5, para. 2.

research and development, dissemination of information on scale and technologies of production, training, finance, industrial co-operation, institution and infrastructure building, standards, codes and regulations.³

Capital goods industry with special emphasis on energy-related technology and equipment

6. The Second Consultation on the Capital Goods Industry with Special Emphasis on Energy-related Technology and Equipment was convened at Stockholm (Sweden) from 10 to 14 June 1985. It was attended by 147 participants, of whom some 30 per cent were from industry and 50 per cent from specialized government and non-governmental agencies. Preparatory activities for the Consultation included participation in the Second Regional Expert Group Meeting on Capital Goods in Latin America, organized by UNIDO and the Economic Commission for Latin America and the Caribbean (ECLAC) at Santiago (Chile) from 4 to 6 March 1985. Key issues dealt with by the Consultation covered the main obstacles to developing countries' entering the sector, strategies for integrated manufacture, and the development of the electric power equipment sector and technology unpackaging. In its conclusions and recommendations the Consultation emphasized that UNIDO should continue its efforts to promote the development of the capital goods industry in developing countries through, *inter alia*, the testing of new methodologies and the dissemination of existing methodologies for planning the production of capital goods and the technological screening of projects. UNIDO was also asked at the Consultation to promote activities relating to the development of small hydropower plants in view of the importance of rural electrification and potential uses of electric power in agriculture.⁴

Petrochemical industry

7. The Third Consultation on the Petrochemical Industry was held in Vienna from 2 to 6 December 1985. Extensive preparatory work took place with Governments, UNDP Resident Representatives, SIDFAs, JPOs and professional associations to ensure the most suitable participation; as a result, approximately 60 per cent of the 143 participants were from industry and some 20 per cent from specialized government and non-governmental agencies. The Consultation stressed the need to continue work on long-term arrangements for the development of the petrochemical industry, downstream petrochemical industries and research and development in that sector in the developing countries. The conclusions and recommendations adopted by the Consultation emphasized, *inter alia*, the importance of continued efforts to expand and update the UNIDO petrochemical data base and the need for a detailed analysis of the present status and future prospects of petrochemical downstream industries in developing countries with emphasis on the application of plastics in agriculture.⁵

³For the report of the First Consultation on the Building Materials Industry, see ID/335.

⁴For the report of the Second Consultation on the Capital Goods Industry with Special Emphasis on Energy-related Technology and Equipment, see ID/338.

⁵For the report of the Third Consultation on the Petrochemical Industry, see ID/340.

General activities

8. The Secretariat recognizes the importance of involving decision makers from the world of industry more closely in the consultation process and has therefore produced a pamphlet entitled "System of Consultations: a partnership for progress through international industrial co-operation". The pamphlet succinctly describes the objectives, functions and practical advantages of the System and encourages participation in Consultations by decision makers from industry. It is being translated into the official languages of UNIDO and will be given wide distribution.

9. Efforts have also been made to involve more deeply the Division of Industrial Operations in the Consultation process. To encourage a closer link between the System and the industry promotion activities of UNIDO, provision was made at Consultations for a presentation and discussion with senior officers from that Division of UNIDO technical co-operation programmes in the sector concerned. At the same time the Organization is able to benefit from the knowledge and practical industrial experience brought to Consultation meetings by participants from developed and developing countries.

10. The year also marked greater involvement of Member States in preparatory and follow-up activities to Consultations. An agreement was concluded with the Government of France to convene in Paris early in 1986 a preparatory meeting for the second Consultation on the training of industrial manpower. Discussions were initiated with interested Member States on preparatory expert group meetings in Africa on the fisheries industry and industrial manpower training, and in Latin America on the fisheries industry and pharmaceutical industry. The discussions are a response by Member States to the perceived need of providing a regional dimension to the System of Consultations and of financing these activities of the System through special-purpose contributions instead of through the regular budget of UNIDO. In this context, the Federal Republic of Germany provided a voluntary contribution to be used for preliminary studies on off-shore industries. Discussions were also held with the Governments of Sweden and China on follow-up to the recommendations of the Second Consultation on the Capital Goods Industry with Special Emphasis on Energy-related Technology and Equipment, in relation to the design and manufacture of small-scale hydropower plants, an area recognized as particularly important for promoting rural industrialization and forging stronger links between industry and agriculture.

11. Contacts between the System of Consultations and universities, research centres, training institutes, management institutes, chambers of commerce and industry and other non-governmental organizations were expanded in 1985. Among those contacts were lectures by staff of the Negotiations Branch of UNIDO at the International Development Law Institute in Rome (Italy), at Bradford University (United Kingdom), at the University of Delft (Netherlands) and at Grenoble University (France); an agreement for co-operation on industrial training with the Carl Duisberg Gesellschaft (Federal Republic of Germany); and the presentation of a paper to the twenty-sixth Iron and Steel Congress convened at Mexico City by the Latin American Iron and Steel Institute (ILAFA). A basis for closer co-operation in the building materials sector was established with the International Union of Testing and Research

Laboratories for Materials and Structures (RILEM) and the International Council for Building Research Studies and Documentation (CIB).

12. Close co-operation with other organizations of the United Nations system continued. The First Consultation on the Building Materials Industry was organized jointly with the United Nations Centre for Human Settlements (Habitat). Extensive consultations took place with the Food and Agriculture Organization of the United Nations (FAO) on the joint preparation of the first Consultation on the fisheries industry (to be held in June 1987), as well as in respect of other sectors, including the fertilizer, agricultural machinery, food-processing, leather and leather products, and wood and wood-products industries. Contacts continued with the World Health Organization (WHO) and the United Nations Children's Fund (UNICEF) in connection with Consultations on the pharmaceutical industry. Co-operation was further strengthened with the International Labour Organisation (ILO) and the United Nations Educational, Scientific and Cultural Organization (UNESCO) with regard to preparatory activities for the second Consultation on the training of industrial manpower to be held in 1987; with the United Nations Centre on Transnational Corporations (UNCTC) and the United Nations Conference on Trade and Development (UNCTAD) with regard to preparations for the first Consultation on the non-ferrous metals industry (to be held at Budapest (Hungary) in 1987); and with the General Agreement on Tariffs and Trade (GATT) in respect of trade aspects of vegetable oils and fats, where work is also carried out with UNCTAD. Other intergovernmental organizations with which there has been close co-operation include the European Economic Community (EEC), the Organisation for Economic Co-operation and Development (OECD), and the Organization of Petroleum Exporting Countries (OPEC). In co-operation with the Joint UNIDO/Czechoslovakia Programme for International Co-operation in the Field of Ceramics, Building Materials and Non-metallic Mineral-based Industries a workshop on the building materials industry was held at Pilsen (Czechoslovakia) following the First Consultation on the Building Materials Industry (held in March 1985).

Other activities by sector and topic

Chemical industries

Fertilizer industry

13. During 1985 work continued on several publications.⁶ The revised version of the UNIDO model form of a semi-turnkey contract for the construction of a fertilizer plant, as finalized by an expert group in July 1984, was edited for publication. The final draft of the model forms of licensing and engineering services agreement for the construction of a fertilizer plant neared completion. It incorporates the views expressed by the expert group in a balanced compromise and reflects the negotiating positions of technology suppliers and recipients. As part of the implementation of the recommendations of the Fourth Consultation on Fertilizer Industry, the "Draft directory of technological capabilities of the developing countries related to the fertilizer industry"

⁶ID/B/340, chap. V, para. 30.

was expanded, revised and updated. A new format was designed for the directory and more efficient updating procedures were devised to increase the usefulness and relevance of the information in the directory. The data compiled contributed to the assessment by the UNIDO/FAO/World Bank Working Group on Fertilizers of current capacities and projections of future trends in the production of the main nutrients.

14. Efforts were intensified to promote the application and dissemination of UNIDO model forms of contract for the construction of fertilizer plants. The efforts included a series of lectures presented by a UNIDO representative, which has been incorporated in the regular syllabus of courses organized by the International Development Law Institute attended mainly by contract negotiators and legal advisers from developing countries. Preparations were also initiated for an Asian regional workshop on the application of these model forms of contract.

15. Further activities carried out in implementation of the recommendations of the Fourth Consultation included initial work on the preparation of guidelines for fertilizer project management and capital cost control and the formulation and approval of a project to carry out pre-feasibility studies for the establishment of mini-fertilizer plants in four African countries. The project will ascertain the technical, commercial and economic viability of the mini-fertilizer plant concept for the solution of fertilizer supply problems in the countries concerned. As part of the programme of co-operation among developing countries, an examination began of successful joint venture arrangements between developing countries in the fertilizer sector, with a view to identifying the requirements related to markets, raw materials, production, technology options and skilled and managerial expertise.

Pharmaceutical industry

16. During 1985 the main task in this sector consisted of preparations for the third Consultation to be held in 1987 at Madrid (Spain). Work continued on guidelines to achieve an improved supply of medicinal plants as raw materials or as processed products, and work began on guidelines on the transfer of technology for the genetic improvement of medicinal plant species and their processing. A format was finalized for a UNIDO directory and data base on industrially utilizable plants with known therapeutic properties and work began on obtaining data on a limited number of plant species. A model programme was reviewed for the industrial production of biologicals with effective assimilation of technology and control procedures. The programme will be considered by the third Consultation.

17. A third meeting of the *Ad Hoc* Panel of Experts on Contractual Arrangements in the Pharmaceutical Industry was convened in April 1985 to finalize three documents on contractual arrangements relating to the production of bulk drugs and intermediates, on licensing arrangements relating to the formulation of pharmaceutical dosage forms and on the transfer of technology in manufacturing of bulk drugs and intermediates.⁷ These documents have been

⁷*Ibid.*, para. 35.

revised in accordance with the recommendations of the Second Consultation. The *Ad Hoc* Panel also considered outlines for further documentation related to the setting-up of turnkey plants and arrangements for technical assistance in the formulation of pharmaceuticals. The directory of sources of supply for pharmaceuticals, chemicals and their intermediates was expanded from the initial list of 26 essential bulk drugs to 100 included in the WHO model list of essential drugs. Other ongoing activities included the completion of the revision of technical profiles, the preparation of initial draft of documents related to national industrial drug policies, and a survey on transfer of technology for the production of pharmaceutical chemicals and formulations; the co-operation of FAO, UNCTAD, UNICEF and WHO was elicited in these activities.

Agro-based industries

Leather and leather products industry

18. Several regional studies were begun that will discuss ways and means of promoting regional co-operation with regard to tanning chemicals and footwear auxiliaries. The studies will serve as background material for expert group meetings in the African, Asian and Latin American regions, to be convened when resources permit. Preliminary arrangements have been made to convene a regional meeting for African countries in 1986 at Alexandria (Egypt), to promote the integrated development of the leather and leather products industry in African countries. The eighth session of the Leather and Leather Products Industry Panel was convened in Vienna from 20 to 22 November to review the current development trends in the sector and the background documentation for the African regional meeting, which includes case studies of a number of country development programmes for the sector in selected African countries.

Wood and wood products industry

19. In 1985 follow-up to the recommendations of the First Consultation on the Wood and Wood Products Industry, held in 1983, included preparation of training manuals, development of an international strength grouping system for tropical and other types of timber from developing countries, promotion of education and training at all levels related to wood technology and the use of wood in construction. Financing was sought for a project to increase co-operation among specialized research and development institutions in developed and developing countries. In co-operation with the Division of Industrial Operations, studies on timber bridge construction, computer-aided design and promotion needs in timber construction were provided as background documents to an expert group meeting organized by the Agro-industries Branch on timber construction, held in Vienna in December 1985.

Food-processing industry

20. Work in 1985 concentrated on implementing the recommendations relating to an integrated approach to food processing and the role of co-

operatives and small- and medium-scale enterprises in the food-processing industry adopted by the Second Consultation on the Food-processing Industry with Special Emphasis on Vegetable Oils and Fats, held in 1984. Under the first recommendation, emphasis was placed on the elaboration of a methodology which, when applied in technical co-operation programmes, would illustrate the practical application of the integrated approach to the food-processing sector. Preliminary steps were taken to organize a regional meeting for the Latin American and Caribbean region that would promote the food-processing industries by applying a model system based on a quantitative data analysis using the methodology developed by the Secretariat of the Andean Pact and UNIDO (see chap. IV, para. 19). Arrangements for compiling an inventory of all existing sources of information available in UNIDO on institutions capable of giving technical assistance were included in the preparations for the regional meeting.

21. Work focused on initiating project proposals for carrying out case studies to identify the role of co-operatives and small- and medium-scale industries in the field of food-processing. A study was undertaken on possible measures to stimulate co-operation among co-operatives and food-processing industries in developed and developing countries as well as among those in developing countries. In that context a project was initiated on co-operation between Bulgarian co-operatives and similar organizations in selected African countries for the promotion of food-processing industries, in particular fruit and vegetable canning and processing of juices, nectars and soft drinks.

22. Further activities in the food-processing sector concentrated on the analysis of potentials and perspectives of vegetable protein production in developing countries for human consumption and possible implications for the supply/demand balance of food products in the world. In co-operation with GATT and UNCTAD, the impact of tariff and non-tariff barriers on the development of the vegetable oils and fats industry was also examined. The necessity to eliminate obstacles to expanding South-South trade was brought to the attention of the international organizations concerned. Co-ordination was also maintained with the FAO Intergovernmental Group on Oil-seeds, Oils and Fats and the Agricultural Services Division.

23. Preparatory activities were initiated to convene a regional consultative forum on the vegetable oils and fats industry, with special emphasis on South-South co-operation among the African and the member countries of the Association of South-East Asian Nations (ASEAN). Work began on a draft guide of organizations and government institutions capable of giving technical assistance to developing countries in the field of food processing, especially at the level of training, feasibility studies and advisory services.

Fisheries industry

24. During 1985 the main tasks related to the sector consisted of preparations for the first Consultation on the fisheries industry to be held at Gdansk (Poland) in June 1987. Arrangements for sponsoring the Consultation with FAO were finalized and the modalities of co-operation in the preparatory work established (see chap. VII, para. 14). Organization of a regional preparatory

meeting for Latin America has begun, including a study on the fisheries industry in Latin America which has been completed and will be discussed at the meeting. The meeting will also be sponsored by the Latin American Fishery Development Organization (OLDEPESCA), and the Government of Peru has offered to host the meeting. Preparations also began for a regional meeting for Africa, to be held at Dakar (Senegal) in the first half of 1986.

Basic industries

Iron and steel industry

25. During 1985 the main task related to the iron and steel industry was to finalize preparations for the fourth Consultation, to be convened in Vienna in June 1986. The prospects for an integrated development of the iron and steel industry with other related sectors of the economy were closely examined and specific studies on the subject were concluded. In particular, integrated development was studied that takes into account the relationship between iron and steel production and the consuming sectors in developing countries. Studies were also completed on the following topics: the world crisis and its impact on the development of the iron and steel industry in developing countries; modalities and possibilities of an integrated development between the iron and steel sector and other sectors of the economy in Latin American countries; and the prospects of an integrated approach in Eastern and Southern African countries. Other studies started in 1985 on the iron and steel industry will be concluded early in 1986. Case studies were also presented by participants attending the *Ad Hoc* Expert Group Meeting on Strategies for More Integrated Development between the Iron and Steel and Capital Goods Sectors, convened in Vienna from 16 to 18 October 1985. A study on financial problems of developing countries and related strategies for the development of the iron and steel industry neared completion.

26. One of the recommendations of the Third Consultation on the Iron and Steel Industry (held at Caracas, Venezuela, 1982) relates to the problems of newcomer countries to the iron and steel sector. Follow-up actions concentrate on mini-steel technology including the development of skills and abilities directed towards promoting mastery of steelmaking operations and activities closely linked with related sectors of the economy. During 1985 the topic of mastering technologies in the iron and steel industry was analysed with respect to developing a normative training methodology in mini-steel plants and to financing infrastructure and personnel training in iron and steel projects.

27. A survey on mini-steel technology in various developing and developed countries was conducted by UNIDO in 1985. An analysis of data collected for 74 mini-steel plants was carried out and a comprehensive document was prepared.⁸ A study was also started on a possible programme of action in the iron and steel sector for developing countries, based on the mini-steel concept. A further analysis of mini-steel plant developments in newcomer countries was carried out at an expert group meeting on the preparation of guidelines for the establishment of mini-plants on iron and steel with special emphasis on Africa.

⁸ID/WG.458/4.

Chapter V

The meeting, organized by the Negotiations Branch and the Section for Economic Co-operation among Developing Countries, took place in Vienna from 2 to 5 December 1985.

Agricultural machinery industry

28. The main task during 1985 consisted of preparations, in close co-operation with FAO, for the third Consultation on the agricultural machinery industry which will be held at Belgrade (Yugoslavia) in September 1986. The background to previous Consultations and the changes that have occurred in the sector in the interim, have given an impulse to the third Consultation to consider as the first issue the development of a framework for interregional co-operation in the field of agricultural machinery, based on the experience of Latin America and Asia and the needs of African countries. The second issue will focus on an integrated approach to the development of agriculture with industry and the possibilities for local production of selected equipment for agricultural mechanization, irrigation, small hydropower etc. particularly by small- and medium-scale manufacturers.

29. As a follow-up to the Expert Group Meeting on the Development of Multi-purpose Agricultural Machinery Plants held at Guangzhou (China) in November 1984, programmes for joint activity between UNIDO, United Nations regional organizations and national entities in the developing countries were set up to promote the establishment and upgrading of design and development centres. A survey is to be carried out in selected countries of the available capacity in the engineering industries in order to identify the possibility of adopting the multi-purpose approach to manufacturing agricultural machinery. Guidelines for the import, assembly and manufacture of agricultural machinery and training were prepared and discussed at a meeting of experts held in Vienna in September 1985; the final version of the guidelines will be submitted to the third Consultation. Studies were prepared on the Asian and African regions and on selected countries in Africa and Latin America in preparation for an expert group meeting to elaborate a framework for international co-operation in the field of agricultural machinery, emphasizing small- and medium-scale enterprises, tentatively scheduled for 1986.

Non-ferrous metals industry

30. The main task during 1985 consisted of preparations for the convening of the first Consultation on the non-ferrous metals industry to be held at Budapest (Hungary) in December 1987. An analysis of the non-ferrous metals industries at the global level undertaken in 1983-1984 was concluded.⁹ Within this global perspective an expert group meeting on the restructuring of the non-ferrous metals industries was convened in Vienna from 18 to 21 March 1985, with the participation of the United Nations Centre on Transnational Corporations and UNCTAD. The objectives of the meeting included determination of critical areas for further analysis, bringing transparency to the identification of future activities to be undertaken in the sector, and discussion and tentative

⁹ID/WG.436/1 and Corr.1.



Solar panel array that provides hot water for a dairy company in Ruseifa (Jordan)

formulation of issues to be brought to the attention of the first Consultation. The background documents for the expert group meeting included the global analysis prepared by UNIDO and a study of the possibilities and advantages for as well as barriers to a further processing of non-ferrous metals in developing countries. The expert group meeting expressed its support for the views contained in the documents and provided feedback for further development of the sector. The written contributions made by the participants at the meeting on the particular situation of this sector in their countries will be used as inputs to further analyses being prepared for submission to a second expert group meeting to be convened on the sector in 1986.

31. Preparation has begun of country case studies on the sector that will permit an analysis of barriers to further processing of non-ferrous metals in developing countries and suggestions for possible strategies to promote such processing. Analysis was also started of technological alternatives with the aim of increasing the mastery of technologies for processing non-ferrous metals in developing countries. The global preparatory meeting for the first Consultation will be convened in 1986 to clearly define the issues for the Consultation and thus conclude the preparation of the corresponding background papers.

Topics common to all sectors of industry

Training of industrial manpower

32. The year was devoted mainly to the preparation, in co-operation with ILO and UNESCO, for the second Consultation to be held in 1987. As a result of the preparatory work, the second Consultation will focus on well-defined and practical subjects. Preparations were completed for a high-level expert group meeting for the Consultation held at Paris, from 13 to 16 January 1986. Two specific themes were discussed at the expert group meeting: human resources development (HRD) for industrial maintenance and HRD for mastering technological changes in industry. Two in-depth studies on those subjects were prepared as inputs to the meeting. The meeting gave an opportunity for UNIDO to discuss with the experts and representatives of concerned organizations the proposed orientation of the future Consultation in the sector and the issues that might be raised on that occasion.

33. At the sectoral level, research was completed on "Normative guidelines of the mastering of technology in iron and steel through training". The results of the research, which was financed from extra-budgetary resources, have been discussed with experts from developing and developed countries and will be presented to the fourth Consultation on the iron and steel industry to be convened in Vienna in June 1986.

Industrial financing

34. In conformity with conclusion 1984/4, paragraph 10 (b), adopted by the Industrial Development Board at its eighteenth session,¹⁰ work on industrial financing was pursued with regard to each sector in respect of which Consultations had been scheduled. Papers were prepared on questions related to financing in the building materials, capital goods and iron and steel industries.

New sectors

35. In accordance with conclusion 1985/5, paragraph 4, adopted by the Board at its nineteenth session,¹¹ preliminary work began on new topics for possible future Consultations. These topics are small- and medium-scale enterprises including co-operatives as well as electronics, pesticides and off-shore industries. In that context, an expert group meeting was convened with the OECD Development Centre on the mobilization and allocation of domestic financial resources in developing countries, with particular regard to the development of small and medium enterprises. The preliminary work on the new topics will result in the publication of four technical papers, encompassing some of the significant problems encountered in developing countries and some possible issues that might be examined. Summaries based on these four technical papers,

¹⁰Official Records of the General Assembly, Thirty-ninth Session, Supplement No. 16 (A/39/16), para. 84.

¹¹Ibid., Fortieth Session, Supplement No. 16 (A/40/16), para. 89.

together with possible modalities of co-operation with various institutions and United Nations agencies, will be presented in a report to the Board at its second session in October 1986, to enable the Board to reach decisions on the possible convening of Consultations in these fields in 1988-1989.

INVESTMENT CO-OPERATIVE PROGRAMME

36. The activities of the Investment Co-operative Programme (ICP) in 1985 were marked by a further increase in investment proposals (over 2,000 are currently in a computerized file) and potential investors (which exceed 3,000) in addition to those registered with the Investment Promotion Services of UNIDO. The number of investment promotion activities also reached a new peak, with five investment promotion meetings held and 49 country promotion tours organized. At the investment promotion meetings some 780 industrial investment projects were presented to over 600 potential partners; the result was the signature of more than 125 letters of intent. The programmes in which officials of developing countries are delegated to Investment Promotion Services also continued to meet with success.

37. While the number of investment proposals submitted for promotion has increased to a reasonable level commensurate with the "selling" capabilities of the UNIDO promotional system, the quality of investment projects proposed by public and private sector sponsors in developing countries remains inadequate when measured against the expectations of potential partners and financial institutions. The main obstacle is the lack of capability of sponsors in developing countries to prepare project proposals adequately. UNIDO, in particular the Feasibility Studies Section, is therefore providing the appropriate assistance in this respect and has developed tools for project analysis, such as the UNIDO Computer Model for Feasibility Analysis and Reporting (COMFAR) and the Project Profile Screening and Pre-Appraisal Information System (PROPSPIN). However, a major problem is the non-availability or unreliability of those inputs which are required for project analysis. This deficiency is mainly due to currency exchange rate fluctuations (which not only determine investment cost but also export possibilities), changeable energy prices and the unpredictability of interest rates.

38. Any risk analysis must cover a wide range of uncertainties, which makes investment decisions difficult. In addition, the varying investment conditions and foreign exchange constraints in many developing countries are serious obstacles to repatriation of earnings and capital as well as to the provision of foreign exchange funding for vital repair and maintenance inputs. These conditions are disincentives for joint ventures with foreign partners from both industrialized countries and other developing countries. Against this background, the investment promotion meetings were attended by an increasing number of potential project partners from countries such as Brazil, India and the Republic of Korea.

39. In 1985 the World Bank/UNIDO Co-operative Programme came under critical review by both the World Bank and UNIDO. As a result, a new work

programme was agreed upon, for signature in early 1986, which focuses on closer co-operation in industrial policy, enterprise efficiency, promotion of private industry and sector analysis.

40. New activities were initiated, including the following: a proposal for a joint venture repair and maintenance company; a combined compensation trade and investment company for China; a three-year programme providing for an export promotion adviser from the International Trade Centre (ITC) to be attached to the Zurich Investment Promotion Service; and a programme for generating small- and medium-scale investment opportunities in the field of biotechnology in Africa, the Caribbean and the Pacific. These ideas could be developed in addition to the needs of the basic operational activities of the Programme, only to the extent that staff and consultant time were available.

Industrial investment projects

41. As a result of contacts with public and private investment-related institutions in developing countries, a total of 600 new industrial investment projects were added to the UNIDO portfolio which, at the end of 1985, contained 2,140 active and pipeline projects in 71 countries. As in 1984, the largest number of projects were in the food sector (539), followed by the fabricated metal product and machinery sector (530) and the chemical sector (342).

42. Information on 986 industrial investment projects under active promotion appeared in four issues of the List of Industrial Investment Project Proposals published in 1985. Some 3,000 copies of each of the lists were distributed among potential partners, which gave rise to several thousand requests for further information on the projects. Summaries of 600 industrial investment projects presented at four investment promotion meetings held during the year formed the contents of separate lists prepared for that purpose.

43. In order to demonstrate to developing countries how to generate well-identified and well-prepared projects, ICP designed a new subsectoral programme approach, first tested in 1983 through a programme financed by Japan, which covered the electronics industry.¹² The programme approach aims at bringing together industrialists from industrialized countries or selected developing countries, and their counterparts from a group of developing countries, who are already active in the selected subsector or are interested in entering it. The assistance of UNIDO experts, combined with the practical expertise of industrialists from developing and industrialized countries from the very early stages of investment project generation, ensures the preparation of better quality projects and enables potential technical partners to be involved in project design from the early stages. Each programme concentrates on a specific industrial subsector and a group of developing countries where the development of the subsector has been accorded priority and where small and medium-size industries predominate. The programme approach enables developing countries to convert sectoral development plans into specific industrial investment opportunities for new, rehabilitation, expansion or redeployed

¹²ID/B/320, chap. V, para. 38.

projects, and to identify the technical assistance and programme-lending needs which are required to attain the objectives of these plans and improve the countries' investment climate. Furthermore, implementation of the programme requires the full participation of nationals from developing countries, who thereby receive valuable on-the-job training. Developing countries that participate in the programme also contribute financially to the implementation costs of the programme.

44. The subsectoral programme approach includes the preparation of documentation on the characteristics of the selected industrial subsector, of an annotated outline for the compilation of pre-investment data covering each developing country, and of specific production plant profiles to help industrialists in developing countries to prepare projects. The documentation may be utilized by other developing countries in subsequent programmes covering the same subsectors.

45. Most development financing institutions favour promoting the establishment of small- and medium-size industries through extending lines of credit, of equity and of leasing to national development finance institutions. The subsectoral programmes, by assisting in the preparation of better quality projects, generate proposals for industries which are suitable for financing by such institutions. The subsectoral programme approach also responds to the interest expressed by a number of representatives at the Fourth General Conference of UNIDO in the establishment of a link between the activities of the System of Consultations and those of investment promotion. In 1984 ICP prepared a programme document entitled "A sectoral programme approach for follow-up of the System of Consultations at the level of specific industrial investment: programme for the mobilization of financial resources through the generation and promotion of industrial projects in a specific priority industrial subsector".

46. Following the programme in the electronics sector financed by Japan, a second programme is currently under implementation by ICP with financing from Italy; it covers production in developing countries of equipment which utilizes or produces energy from selected new and renewable energy sources. Invitations to developing countries, the preparation of substantive documentation, and other organizational preparations continued during 1985 and the implementation of the programme is expected to be completed in 1986. Another programme to identify and promote investment projects in the metalworking industry was also formulated during 1985 and is expected to be implemented in co-operation with the Government of Japan in 1986.

47. Within the framework of IDDA, ICP conducted detailed discussions with organizations from India on the implementation of a programme which would cover a priority industrial subsector for the benefit of a selected group of African countries. Preliminary contacts were also pursued in 1985 with an association of manufacturers in Brazil for the purpose of finalizing a similar programme for the food-processing industrial subsector for the benefit of selected African countries. Another such programme prepared during 1985 is the programme for the generation and promotion of small- and medium-size investment opportunities in selected African countries in the field of biotechnology.

48. In 1985 information was compiled on 32 industrial plants in Austria, Finland, France, Italy, Sweden and the United States of America that would be suitable for redeployment to developing countries. The information was transmitted to 333 industrial firms in developing countries and 411 ministries of industry, development corporations and investment promotion agencies in developing countries for further transmission to enterprises that could utilize this information. In the first of the series of letters to the 411 investment-related institutions, the recipients were requested to inform UNIDO whether they found such information on plant offers useful and whether they wished to continue receiving it in the future. Positive replies were received from institutions in Brazil, the Gambia, Ghana, Guinea, Guyana, Haiti, India, Indonesia, Kenya, Malaysia, the Netherlands Antilles, Nigeria, Papua New Guinea, the Philippines, Sierra Leone, Sri Lanka, the Sudan, Swaziland, Thailand, Togo, Trinidad and Tobago, and Zimbabwe. Feedback received so far shows that an institution in Guyana is interested in a Finnish chipboard plant, a company in India is considering acquiring a French vehicle rim and wheel plant, an Italian factory that manufactures rubber soles has stimulated interest in Botswana and Sri Lanka and a Jamaican company has contacted a Swedish firm manufacturing nails and furniture fittings.

49. A memorandum of understanding between UNIDO and the Gulf Organization for Industrial Consulting (GOIC) was finalized in April 1985, for the purpose of strengthening co-operation in assisting member States of GOIC and other developing countries in identifying and promoting industrial investment projects.

Information systems

50. Work continued in 1985 on the development of the computerized Investment Promotion Information System (INPRIS). Numerous enquiries from institutions and enterprises in both industrialized and developing countries arose from the distribution of a leaflet describing the system. The Investment Promotion Service at Warsaw (Poland) became the third—following Cologne and New York—to access INPRIS in UNIDO Headquarters from a remote terminal using a telephone line; it can thus search directly for information stored in the system.

51. At the end of 1985 the Project File contained information on 2,367 industrial investment projects, which was more than double the number in 1984. The File provides a history of the promotional work carried out on all industrial investment projects reaching UNIDO. In addition to providing data on active projects in industrial sectors or in developing countries, the File can be searched for projects seeking particular forms of co-operation or with a total investment cost within a given range. During the year, information on projects entered in the File earlier than 1983 was verified with the project sponsors and updated where necessary.

52. The Investor File lists those public and private enterprises in some 40 industrialized and developing countries that are willing to participate in industrial investment projects in developing countries. The total number of records in the Investor File stood at 3,018 at the end of the year. During the

year, old records were referred back to responding firms and a number that had lost interest were deleted. At the same time surveys were taken among enterprises in Hungary, Romania, Singapore and Turkey. Thus, besides keeping the data up to date, the scope of the File has been enlarged.

53. In 1985 each development finance institution recorded in the Bank File was contacted and reminder letters were sent with a view to bringing information on those institutions up to date. It was thereby possible to revise data on 352 of the 580 development finance institutions contained in the File. It is intended to incorporate the updated information in a directory of institutions, which will supplement the document on "Financial Resources for Industrial Projects in Developing Countries" (PI/61/Rev.2).

54. At the end of 1985, the Institution File¹³ contained over 1,100 private and public institutions in developing countries that are likely sources of information on industrial investment projects. They are useful contact points in the dissemination of information on the investment promotion activities of UNIDO as well as for staff members on mission.

55. The Sponsor File, with over 1,000 records,¹⁴ was used extensively during the year to relay information on factories in industrialized countries that are suitable for redeployment to developing countries. The positive response received from the firms contacted has justified the establishment of the File and the dissemination of information to firms contained in it.

56. The Project Profile Screening and Pre-Appraisal Information System (PROPSPIN)¹⁵ continued to be used for improving the evaluation of the quality of information on industrial investment project proposals and speeding up preparation of project profiles for promotion. During 1985 PROPSPIN was improved and its operation further simplified. Refinements were also made on the balance sheet schedules. PROPSPIN is used mainly within ICP for internal project analysis in cases where the use of COMFAR is not justified.

57. One of ICP's major promotional tools is the Industrial Investment Profiles which are currently available on 102 countries. The Profiles consist of information on general economic data and investment conditions in developing countries and are used increasingly as background for industrial investment project proposals, investment promotion and country presentation meetings.

58. As an addition to volume II of "How to start manufacturing industries—technological and investment perspectives"¹⁶ 116 new industrial plant profiles were prepared and distribution to developing countries is scheduled for early 1986. The distribution of this document series continued to result in inquiries to UNIDO from potential industrial project proponents in developing countries who, having extracted ideas from these publications, request additional information which would enable them to develop specific industrial investment projects.

¹³ID/B/340, chap. V, para. 133.

¹⁴*Ibid.*, para. 134.

¹⁵*Ibid.*, para. 135.

¹⁶*Ibid.*, para. 138.

Investment Promotion Services

59. The UNIDO Investment Promotion Services (IPS) promote the flow of external financial, technological and managerial resources to developing countries. In August 1985, UNIDO signed an agreement with the Government of Italy to establish an Investment Promotion Service at Milan, making it the eighth such Service, the others being located in Cologne, New York, Paris, Tokyo, Vienna, Warsaw and Zurich. At the end of the year, discussions were still under way with the Republic of Korea to establish a Service at Seoul with the object of bringing the first developing country into the UNIDO IPS network and thereby actively promoting South-South co-operation.

60. After an extensive evaluation of the Zurich Service an agreement was signed with the Government of Switzerland in June 1985, which extends that Service for another five years. The Zurich Service was established in 1978 and has now been extended three times. A similar evaluation for the Paris Service, which was established in 1980, resulted in an agreement with the Government of France to extend the Service for another three years.

61. The evaluation of the Warsaw Service, established in 1983, was completed in December 1985. The evaluation will be available to the Government of Poland when considering a possible extension of the Warsaw Service which is operating until 30 June 1986. An agreement to extend the Vienna Service until 31 January 1987 was concluded in December 1985 after a review of the 1985 activities of that Service. The extensions of these investment promotion offices are possible owing to the financial support given by the host/donor countries that are satisfied with the service these offices provide both to developing countries and to the host countries.

62. In 1985, the Services obtained partners for industrial projects in developing countries for a total investment value of at least \$628 million. The number of projects promoted in 1985 was 93, compared to 47 in 1984, representing an increase of nearly 100 per cent. Nine projects account for a total investment value of \$491 million; the remaining projects average between \$1 million and \$2 million each.

63. During the year under review the Investment Promotion Services organized a total of 49 country presentation meetings for the following countries: Antigua and Barbuda, Argentina, Bahamas, Burma, Cameroon, China, Colombia, Congo, Cuba, Dominica, Ecuador, Grenada, India, Mexico, Panama, Sri Lanka, St. Christopher and Nevis, St. Lucia, St. Vincent and the Grenadines, the Sudan, Tunisia, the United Republic of Tanzania and Zimbabwe.

64. Country presentation meetings which are arranged at the request of developing countries enable representatives of those countries to inform potential partners about investment opportunities and climate and explain the comparative advantages of investing in their countries. For these meetings, the Services mobilize representatives from banks, manufacturers' associations and federations of industry as well as individual entrepreneurs. The presentations are supported by a portfolio of industrial investment project proposals which

include many sectors of industry. The country presentations which also give an opportunity to the participants to generate new project ideas, are often forerunners of investment promotion meetings in developing countries and help to mobilize maximum participation for these meetings. To ensure the success of the country presentation meetings the Services use all their contacts with industry and associations as well as public and private information media.

65. The Investment Promotion Services organized in 1985 the participation of some 460 potential partners from their countries in investment promotion meetings held in China, Colombia, Ecuador, Gabon and the Sudan. Where warranted, the Services sent their staff to the meetings to provide support. Letters of intent are issued as a result of these meetings, which are often the beginning of negotiations leading to concluded agreements. The Services provide follow-up to both the sponsor in the developing country and the potential partner by giving information which could lead to successful negotiations.

66. The Investment Promotion Services continued to provide opportunities for on-the-job experience whereby officials of developing countries are often delegated to Investment Promotion Services to obtain the know-how of industrial investment promotion and to carry out investment promotion activities for their countries. Developing countries wish to make increased use of such an opportunity and the Services have responded within their means. In 1985, officials from 33 developing countries participated in this programme.

67. The New York Service held a one-month orientation programme for 17 participants who represented 11 countries and provided facilities for officials from Antigua and Barbuda, Bahamas, Dominica, Grenada, Malawi, Somalia, St. Christopher and Nevis, and St. Vincent and the Grenadines. Officials from Angola, China, Colombia, Guinea, India and Rwanda participated in such a programme at the Paris Service. The Tokyo Service enabled officials from China, Egypt, Fiji and Nepal to take part in a three-month orientation programme to become familiar with business practices in Japan. They also presented a total of 84 projects to potential partners from Japan. Arrangements were made for officials from China, Indonesia and Thailand to be attached to the Tokyo Service for the period from October 1985 to June 1986 to intensively pursue investment promotion activities for their countries. They brought a total of 33 projects from their countries. In carrying out their activities, officials from developing countries are supported by specialized consultants who provide international contacts and advice on project formulation. A "shuttle" aspect of this programme allows the participants to go home midway during their programme to follow up on work initiated and collect additional projects for promotion. Officials from Bangladesh and Malawi were attached to the Cologne Service during 1985. The Cologne Service is making arrangements to increase the number to four officials per year. During 1985, an official from Sri Lanka was at the Zurich Investment Promotion Service for two months to follow up on previously initiated promotional activities. In 1986, when the Zurich Service moves to larger quarters, it will be possible to provide opportunities to as many as four officials from developing countries. The on-the-job orientation programme is evidence of the continued commitment of the Services to give the developing countries opportunities to promote themselves.

68. The Services have increased their contacts and participation in selected industrial fairs which are held in the countries where the Services are located with the aim of giving the developing countries greater access to potential industrial partners. In 1985, the Services participated in 37 fairs. In some cases, special stands were made available free of charge by the fair authorities.

69. The Services have installed, or are installing, personal computers as a means for providing quick information and maintaining up-to-date information on projects and potential partners. The computers can be used as word processors or remote terminals to access INPRIS (see para. 50 above). The Zurich Investment Promotion Service continued to utilize the pre-investment financing facility, which assists potential small- and medium-scale partners to complete pre-investment studies that can lead to partnership with industries in developing countries. The Heads of Service periodically visit UNIDO Headquarters to hold discussions with ICP staff and other substantive UNIDO staff. Meetings of Heads of Service are held twice a year when problems, results and present and future programmes are discussed.

Investment promotion meetings

70. In 1985 UNIDO was involved in the organization of five investment promotion meetings. The first was a regional investment promotion meeting for Djibouti, Egypt, Somalia, the Sudan, Uganda and Yemen that took place at Khartoum (Sudan) in March. A portfolio of 293 industrial investment projects and project ideas was prepared for the occasion and some 300 project suggestions were submitted during the meeting. In addition, a seminar on project financing was also held. Over 1,000 individual discussions on co-operation projects took place between the 194 participants from the six host countries and the 106 potential partners from 19 other countries. By the end of the meeting, 45 letters of intent were known to have been signed.

71. An Investment Forum on Agro-industry and Fishery, organized by the Government of Colombia with the assistance of UNDP and UNIDO, was held at Cali (Colombia) in October. The Forum was attended by 230 participants from the host country and 120 from other countries, including Canada, Italy, Spain and the United States of America. Two hundred projects were submitted for promotion at this Forum and 2,027 individual meetings between the local project sponsors and prospective foreign investors were arranged.

72. The Investor's Forum for Ecuador, organized by the Government of Ecuador, UNIDO and UNDP, took place at Quito in November with 94 participants from 22 countries. The Director-General opened and took part in the Forum at which 60 industrial investment project proposals with a total investment value of \$2,000 million were presented. As a result of the 380 individual meetings that were arranged, at least 10 letters of intent had been signed by the end of the Forum.

73. China has been increasingly absorbing foreign investments, and in order to attract further investments the Government has decided to grant 14 coastal cities and five provinces more autonomy in this respect. ICP has monitored

these changes in the investment climate in China and was in contact with a number of coastal cities and provinces. The Fujian Province approached UNIDO for assistance in promoting industrial projects for foreign investment. On the basis of 84 industrial project proposals and an additional 300 project ideas, UNIDO organized, together with the provincial government, an investment promotion meeting at Xiamen, Fujian province, in November. At the meeting the Chinese project proponents were given the opportunity to hold discussions with 128 potential foreign partners from 15 countries. Subjects discussed included collaboration in the establishment of industrial joint ventures (including contractual joint ventures), industrial financing through medium- and long-term loans, the transfer of technology and licensing and marketing, and access to foreign markets. Fifty letters of intent were signed and eight contractual joint venture agreements were concluded in connection with the meeting. UNIDO will follow up on the investment proposals which emerged from the meeting through its network of contacts and through INPRIS. Work will also continue on redesigning the project profile questionnaire and on guidelines to be used by the Chinese Government in preparing future investment promotion meetings.

74. The Industrial Forum for Central Africa was the last investment promotion meeting of the year. This Forum, at which 141 industrial investment projects were presented from Burundi, Cameroon, the Central African Republic, Chad, Congo, Equatorial Guinea, Gabon, and Sao Tome and Principe, took place at Libreville (Gabon) in December. The African countries at the meeting were represented by 130 participants, and 14 industrialized countries were represented by 155 participants. The total investment value of the projects promoted reached \$390 million and project size ranged from \$50,000 for a project to process goat meat to a methanol plant worth \$68 million. Twenty letters of intent were signed at the meeting.

Mobilization of external financial resources

75. The Investment Co-operative Programme continued in 1985 to maintain close links with national, regional and international financing and promotion institutions. For example, staff participated in the annual meeting of the Board of Governors of the Islamic Development Bank (IDB). Staff were also involved in the formulation and realization of specific technical co-operation projects implemented in co-operation with IDB.

76. Distribution of the "Industrial Finance News" to Headquarters and field staff continued. Twenty-three issues were distributed in 1985 which provided recent information on industrial financing currently available to developing countries through such financing institutions as the Asian Development Bank, the African Development Bank, UNDP and the OPEC Fund for International Development. This information enables UNIDO to approach promptly recipients of financing to provide technical assistance.

77. Advisory services on sources and terms of industrial financing continued to be provided in 1985 to project sponsors in developing countries and to UNIDO staff. ICP continued to assist in the identification and promotion of specific industrial investment projects in Morocco, Saudi Arabia, the Sudan

and Yemen. At the invitation of the Inter-Arab Investment Guarantee Corporation, ICP staff participated in the training of 45 senior Syrian officials and industrialists during a workshop on project financing and financial markets, held in December at Damascus (Syrian Arab Republic).

78. During 1985, the Arab Industrial Development Organization (AIDO) informed UNIDO of its intention to expand its investment projects promotion activities and requested ICP for information on its experience. ICP prepared a paper entitled "Industrial investment projects promotion in Arab countries" and presented it to a meeting attended by Arab project financing and promotion organizations held in September at AIDO headquarters at Baghdad (Iraq).

79. Preparatory discussions continued with the Islamic Development Bank (Jeddah) and with a number of other national Islamic banks about preparations for holding a workshop on the industrial financing activities of Islamic banks in Vienna in June 1986. The emphasis placed by Islamic banks on equity participation represents an important potential source of financing for industry. Topics proposed for discussion at the Vienna workshop deal with the problems faced by Islamic banks in expanding their industrial financing activities. The workshop will enable UNIDO to identify specific areas where technical co-operation to Islamic banks or to project sponsors could be instrumental in increasing the flow of financial resources into industrial investment projects.

80. In 1983 UNIDO was designated as lead agency within the United Nations system for co-operation with the Organization of the Islamic Conference (OIC) in investment mechanisms and joint ventures. A meeting planned in 1984¹⁷ for representatives of UNIDO, OIC and several interested United Nations agencies was held in Geneva on 30 and 31 July 1985, at which a report prepared by UNIDO was considered. A meeting of the United Nations agencies concerned will probably be held in 1986 to discuss specific tasks to be undertaken by each organization.

81. Further contacts took place between the African Development Bank and UNIDO to discuss project development. Areas of discussion included a pre-feasibility study on a salt works in Cape Verde and the preparation on a cost-sharing basis of an industrial sector study in Mozambique. Other proposals for collaboration with the Bank include industrial planning and restructuring in some African countries, the identification, preparation and appraisal of industrial projects for financing by the Bank and preparation of a subregional industrial promotion programme to be carried out within the framework of the Industrial Development Decade for Africa.

World Bank/UNIDO Co-operative Programme

82. During 1985 the liaison activities under the Co-operative Programme broke new ground. Particularly important were a number of contact meetings with the Industrial Development and Finance Divisions in the Regional Offices of the World Bank which have paved the way for better understanding and

¹⁷*Ibid.*, para. 152.



Trainees putting the finishing touch to an enamelled brass tray, Moradabad (India)

appreciation of investment activities and led to greater co-ordination and co-operation between the World Bank and UNIDO.

83. The two organizations co-operated during the year to develop a common methodology for studies in the agro-related sector. For that purpose, two senior staff members from UNIDO had a series of meetings with counterparts from the World Bank. Co-operation is also under consideration for a proposed study on cement, which could lead to the identification of projects for the rehabilitation of the cement industry in East Africa.

84. UNIDO co-operated with the World Bank in the preparation of industrial sector studies on Mozambique and Zimbabwe. It was agreed that in undertaking the sectoral study in Mozambique UNIDO should co-ordinate with the World Bank's proposed study on industrial enterprises for rehabilitation. In Zimbabwe the Bank participated in a seminar on industrial policy based on the findings of the industrial sector study carried out by UNIDO. The UNIDO study will form the basis of the Bank's proposals on an export sector strategy study in Zimbabwe. Co-operation at the field level between the Bank and UNIDO has been initiated in Cape Verde, Côte d'Ivoire and Senegal on the subject of industrial planning, policy and strategy.

85. UNIDO has offered expert assistance from UNIDO/UNDP resources to development finance institutions receiving World Bank credit lines with low commitment and disbursement levels. The assistance would help those finance institutions to identify and prepare projects through experts working under UNIDO supervision. Credit lines with low commitment levels are being scrutinized for such assistance.

86. The cost-sharing concept has been further enlarged and intensified.¹⁸ The cost-sharing arrangement whereby UNIDO/UNDP funds are channelled as grants reduces the borrowers' debt burden. Cost-sharing technical co-operation projects were under implementation by UNIDO during 1985 in Cape Verde, the Comoros, Ethiopia, Liberia and Zambia. UNIDO joined the World Bank and the European Economic Community in a technical co-operation project developed by the World Bank for Nigeria to a value of \$7.5 million. A project with a value of \$900,000 for strengthening the Planning Unit of the Ministry of Industry of Uganda was developed by UNIDO in consultation with the World Bank and the Ugandan authorities. Financed by the Bank, this project was submitted for execution by UNIDO.

87. Co-operation continued with the International Finance Corporation (IFC) in generating foreign private investment for developing countries. IFC has participated in some of the investment promotion meetings organized by ICP during 1985. Discussion is now in progress with IFC and UNDP on possible UNIDO participation in the IFC sponsored Africa Project Development Facility.

88. UNIDO helped the Bank to identify a Yugoslav shoe company as a potential joint venture partner for a Tanzanian shoe factory. In the Steering Committee of Donor Agencies for Small Enterprise Development, co-ordinated by the Bank, UNIDO is a regular participant and has made contributions to the development of a policy strategy for Bank lending.

89. In 1985 the World Bank/UNIDO Co-operative Programme received a number of World Bank staff members who had substantial discussions with the corresponding UNIDO staff. Their discussions served to forge a common and complementary approach on various activities of the Bank and UNIDO. UNIDO also provided three work-months of consultancy time to help the Bank in completing a study on textiles in Yugoslavia.

INDUSTRIAL DEVELOPMENT DECADE FOR AFRICA

90. During the period under review, the programme for the Industrial Development Decade for Africa (IDDA) continued to receive high priority, especially in view of the fundamental contribution that the industrial sector could make to the achievement of a lasting solution to the economic crisis faced by African countries. The policy-making organs of UNIDO and of the Organization of African Unity (OAU) intensified their support for the

¹⁸*Ibid.*, para. 156.

programme. While many countries continued some of the activities related to the preparatory phase (1982-1984), others initiated a number of activities to launch the implementation phase of the programme. In this regard, cognizance was taken of the technical co-operation programme prepared by the UNIDO Secretariat and submitted to the Fourth General Conference of UNIDO (ID/CONF.5/33) along with the compendium of project proposals (ID/CONF.5/CRP.2) and the initial integrated industrial promotion programme at the subregional level (UNIDO/OED.138).

91. The modest resources available to UNIDO for IDDA continued to pose a major obstacle to the full implementation of the programme. Apart from funding by UNDP and the United Nations Industrial Development Fund (UNIDF), funds specifically available for the programme during this period were drawn from the \$5 million allocated to UNIDO for IDDA by the General Assembly at its thirty-ninth session in 1985. Those funds, along with the \$1 million allocated in 1984 by the General Assembly for the same purpose, enabled UNIDO to finance a number of technical co-operation projects in Africa within the framework of the programme for the Decade. The projects included provision of technical advisory services; establishment of pilot demonstration plants for the production of oral rehydration salts; mobile brickmaking technology; training of industrial manpower; promotion of subregional industrial co-operation; standardization, quality control and metrology; industrial studies; and publicity for IDDA.

92. As a follow-up to the four subregional meetings held in late 1983 and early 1984 on the promotion of intra-African industrial co-operation within the framework IDDA,¹⁹ a second series of subregional meetings was initiated in 1985 to review, adjust and revise the initial programme. The west African subregional meeting was held at Lomé (Togo) in December 1985 and a meeting for the central African subregion was held at Bujumbura (Burundi) in January 1986. Two meetings for the eastern and southern and the northern subregions are planned for 1986.

93. On the basis of information provided by participants in the two subregional meetings already held and information obtained from the field in preparation of the other two meetings, action has been taken by most of the participating countries and organizations, in spite of the severe economic crisis and financial constraints they are facing, to implement the projects contained in the initial programme. A number of the core projects are already well advanced and some factories have been rehabilitated and feasibility studies prepared for several new projects. Implementation of most of the support projects was initiated with the assistance and support of UNIDO.

94. The initial subregional programme has contributed to the industrialization of Africa and to intensifying co-operation among the African countries as well as between the countries and various intergovernmental organizations, notably the Central African Customs and Economic Union (UDEAC), the Economic Community for Central African States (ECCAS), the Economic Community of the Great Lakes Countries (CEPGL), the Economic Community of West African States (ECOWAS), the Mano River Union (MRU), the Preferential

¹⁹*Ibid.*, para. 4.

Trade Area for Eastern and Southern Africa (PTA), the Southern African Development Co-ordination Conference (SADCC), and the West African Economic Community (CEAO). Those organizations are assuming an increasing leadership role in their respective subregions in the promotion of industrial co-operation and integration. Through the joint projects and programmes developed by UNIDO with these organizations, co-operation was intensified with the international community, as can be seen in the framework of co-operation offered by SADCC as well as by the African Development Bank and the World Bank. Follow-up meetings on the programme were strongly recommended by the participants in the subregional meetings who urged UNIDO to ensure that such meetings were held at least once every two years in each subregion.

95. The health sector has been identified as one of the priorities of the programme for the Decade. UNIDO intensified its technical co-operation activities in Africa relating to the local production of intravenous fluids and oral rehydration salts to reduce morbidity and mortality among infants and young children. Action was initiated to rehabilitate an existing pilot demonstration plant in Guinea for the production of oral rehydration salts and intravenous fluids. The plant will be upgraded to a regional pilot plant open to all African countries with the aim of demonstrating technologies and training local technicians in all aspects of production, quality control and management. It is expected that this project will open possibilities for joint ventures between the African countries and foreign investors which have been hampered in the past by lack of infrastructure and specialized manpower.

96. In May 1985, UNIDO received from the Government of Cameroon a request, based on the recommendations of the third meeting of the Advisory Panel on Preventive Medicine, for technical assistance in the local production of human vaccines utilizing the facilities at the National Veterinary Laboratory at Garoua, Cameroon. The UNIDO-financed project will benefit other African countries, especially those in central Africa. The Government of the Netherlands has been approached for complementary long-term assistance to enable national experts to acquire and master the production technologies.

97. Within the framework of IDDA, policy makers, planners, industrialists and private entrepreneurs were assisted in implementing the programme of IDDA and the Lagos Plan of Action for the Implementation of the Monrovia Strategy for the Economic Development of Africa²⁰ through the organization of national seminars/workshops on industrial strategies and policies. Seminars organized in Benin, Burkina Faso, Mauritania, Niger, Sierra Leone and Uganda enabled these countries to review their industrialization policies, strategies and plans and to readjust them in line with the principles and priorities of the Decade. At some seminars, UNDP-financed large-scale projects were formulated.

98. A programme initiated in 1985 provides technical advisory services to African countries. These services were given in plant maintenance, rehabilitation and establishment of industrial plants, industrial strategies and policies, industrial and technological manpower development and the development of

²⁰A/S-11/14, annex I.

energy resources. The programme included seminars for the promotion and dissemination of information on basic appropriate technologies developed by or available to UNIDO, such as the use of plastic in agriculture, development of low-cost building materials, use of bentonite in the improvement of soil fertility, technologies for processing of rubber, technologies for processing of fish and selection of metal-processing equipment. The seminars—held in Cameroon, Central African Republic, Congo, Ghana, Guinea, Guinea-Bissau, Nigeria, Sierra Leone and Zimbabwe—contributed to the opening up of new opportunities and the expansion of UNIDO technical co-operation activities in those countries.

99. At the request of the Seventh Conference of African Ministers of Industry, UNIDO intensified its activities aimed at promoting economic and technological co-operation between Africa and other developing regions and subregions. Drawing on the experience of the First International Latin American/African Symposium in Brazil in 1983, steps were taken to organize an Afro-Asian industrial co-operation meeting which will be held at New Delhi in November 1986.²¹ Preliminary activities included the preparation, with the assistance of Asian and African experts, of a background document and co-operation projects. The meeting, to be financed jointly by UNIDO and the Government of India, will aim at enhancing co-operation between Asian and African countries and organizations through the identification of specific industrial co-operation projects and programmes.

100. The mobilization of funds for the implementation of the programme of the Decade was also a concern throughout 1985. Two regional investment promotion meetings were held at Khartoum (Sudan) in March and at Libreville (Gabon) in September 1985 (see paras. 70 and 74 above). UNIDO also intensified its contacts with various sources of funds such as the World Bank, the African Development Bank, the Arab Bank for Economic Development in Africa, the Islamic Development Bank, the Commonwealth Secretariat, the European Economic Community/African, Caribbean and Pacific Centre for Industrial Development and other bilateral and multilateral institutions (see also paras. 75-81 above).

101. In 1985, a more dynamic approach in publicizing IDDA was adopted, aimed at establishing a quicker and more direct line of communication with the international media. Within the \$5 million allocated by the General Assembly for IDDA, additional resources were available for public information activities that enabled UNIDO to broaden the range of its promotional activities for IDDA. Briefings on the programme for the Decade were held for foreign correspondents accredited to the Vienna International Centre. Other activities included the organization of press conferences, reportage missions, the completion of a film on the Decade, and issuing printed material including bulletins, notes, special folders and external supplements on IDDA. Contacts were established with national chambers of commerce in seven countries, (Canada, German Democratic Republic, Germany, Federal Republic of, Hungary, Japan, the Republic of Korea and the United Kingdom of Great Britain and Northern Ireland). The promotion campaign has resulted in increased support for the programme from African countries and organizations as well as from the international community.

²¹ID/B/340, chap. V, para. 9.

102. In connection with the promotion of IDDA, special mention should be made of the active contribution of UNIDO, at the request of OAU, to the activities of the Fourth All-Africa Trade Fair (Africa 2000) held at Lomé (Togo). The Fair is held every four years and in 1985 was used as a forum to promote IDDA and industrialization in Africa. The target groups were the agents of production and distribution, local and foreign private entrepreneurs and industrialists as well as the business community. Inputs by UNIDO included the organization of an exhibition of selected prototypes of indigenous technologies developed by selected African institutions, a seminar co-sponsored with FAO on food self-sufficiency, and a seminar on IDDA. UNIDO also used the opportunity to provide information on selected UNIDO activities, including COMFAR (the UNIDO Computer Model for Feasibility Analysis and Reporting) and to advise on investment promotion.

103. During 1985, the Co-ordination Unit for IDDA together with the Task Force on the Decade, continued to assist the Executive Head of UNIDO in providing overall policy guidance and direction on all Decade-related activities in UNIDO. The Unit also assisted the substantive Divisions in the formulation, implementation and monitoring of their Decade-related projects and activities, especially those financed from the \$5 million allocated by the General Assembly to UNIDO for IDDA. At the same time, UNIDO, through the Co-ordination Unit, maintained close links with the OAU and the Economic Commission for Africa (ECA), particularly in connection with preparations for the twenty-first Assembly of Heads of State and Government of the OAU, the African Priority Programme for Economic Recovery and the Fourth All-Africa Trade Fair.

104. At the request of OAU, UNIDO carried out an analysis of the links between food and agricultural production and the industry sector. The findings were issued in one of the working documents presented to the twenty-first Assembly of Heads of State and Government of OAU. Also at the request of OAU, UNIDO examined the relationship between the external debt of the region and the industrial sector. This activity included the organization of a meeting of high-level African experts in May 1985 whose recommendations were presented in a second working document to the twenty-first Assembly.

105. Through the joint OAU/UNIDO/ECA committee, UNIDO, as lead agency within the United Nations system for the Decade, continued to co-ordinate and monitor activities designed to foster the implementation of the programme for the Decade within the framework of the Lagos Plan of Action and the Final Act of Lagos. In that connection, the Co-ordination Unit began elaborating joint IDDA programmes between UNIDO, selected United Nations agencies and donor countries.

106. The Co-ordination Unit also continued to develop a computerized information system on IDDA and produced a number of country profiles which provide summaries of the level of industrialization and development prospects in a given country. In 1985 country profiles were completed for Cameroon, Kenya, Sierra Leone, Senegal, Somalia, Tunisia and Zaire, which received a positive reaction from the countries concerned as well as from a number of international organizations.

ASSISTANCE TO THE LEAST DEVELOPED COUNTRIES

107. In recent years, there has been a tendency for growth rates in the industrial sector of the least developed countries to decline and, in some cases, even become negative. In these countries, as a whole, annual increases in manufacturing value added (MVA) are less than half of what they were in the 1960s and 1970s. The decline in the rate of expansion of the industrial sector is an integral part of wider problems. The agricultural sector has long been plagued by such difficulties as inadequate transport facilities, poor pricing policies and shortages of inputs such as fertilizers and improved varieties of seeds. Drought in Africa and inadequate monsoons in Asia have been added to these deep-seated problems. As a result not only has the agricultural sector been unable to provide raw materials and markets for the industrial sector, but the daily struggle for survival has become all important.

108. The difficulties of the least developed countries are not entirely domestic in their origin; there is also an international dimension to the problems. Until recently, there has been a tendency for the price of oil to rise, a basic commodity imported by all least developed countries. This, in addition to a decline in the demand for exports from the least developed countries, has led to a shortage of foreign exchange. International capital flows have not been sufficient to offset the shortage completely. Loans from international commercial banks to the developing countries are not as common as they were in the seventies, and even at that time the least developed countries were not considered sufficiently credit-worthy to benefit to a great extent from them. At the same time, concessional aid has increased only marginally compared with the 1970s.

109. With the agricultural sector unable to provide raw materials or markets, and with no foreign exchange available to purchase spare parts, energy and other imported inputs, it is hardly surprising that capacity utilization in the industrial sector of the least developed countries is extremely low. Solutions to the problems of the least developed countries have been hampered by poorly designed projects, by management problems, by over-reliance on the public sector and by the generally small size of the domestic markets in most of those countries. With the exception of one or two of the 36 least developed countries, capacity utilization has been estimated at less than 50 per cent.

110. Utilization of existing capacity is just one of the problems facing the industrial sector in the least developed countries. Another problem is that 90 per cent of the industries in the least developed countries are geared to the production of consumer goods. The major source of growth in industrialization is, however, in intermediate and capital goods production. If the least developed countries are to undergo a transformation and a change from an economic structure that is so precarious that any natural disaster, be it drought or delayed monsoon, leads to famine and epidemics, then the existing consumer goods industries must be made more efficient and capital and intermediate goods industries need to be established.

111. Against this rather difficult background, UNIDO continued in 1985 to initiate and support industrial projects mainly in the fields of industrial

planning and programming, preparation of pre-feasibility and feasibility studies, industrial infrastructure, pharmaceutical industries, industrial manpower development and promotion of small-scale industries based on the utilization of available resources. Special attention was given to the development of projects for the rehabilitation of factories and increasing the efficiency of existing industries.

112. In 1985 UNIDO devoted more of its own limited resources to the least developed countries than in 1984. Funds allocated under UNIDF remained constant, and under the regular programme and the Special Industrial Services programme, there was an increase of \$1.9 million, which was nearly 60 per cent more than in the previous year. In the case of the UNDP indicative planning figure (IPF) and other funds for which UNIDO is the executing agency, and which represent the bulk of the resources handled by the Organization, the situation was different: the level of approvals targeted for new projects was not achieved, the total attained being \$3.8 million or some 19 per cent less than the previous year. Two factors were responsible for this development. First, UNDP resources continued to cover only 55 per cent of the IPF established for the current programming cycle, and second, funds available for new projects were less than usual because 1985 was either the last or penultimate year for approval of projects under that cycle. A positive aspect was seen, however, in the active support of UNDP and the Governments of the countries involved, whereby an additional \$4 million was approved for UNIDO projects already in operation. Altogether the value of projects approved from all sources of funds reached \$20.5 million. Statistics for 1985 project approvals and expenditures by country and source of funds are given in appendix L.

113. An effort was made to devote more resources to those least developed countries that have hitherto not fared too well under UNIDO programmes. In 1985, a number of projects were approved for three of these countries: Comoros, Djibouti and Guinea-Bissau. These projects have all been financed from non-IPF resources. In addition, two projects—one for the Central African Republic and the other for Equatorial Guinea—were developed and cleared for negotiations with UNIDF special-purpose donors. Unfortunately, it has not been possible to mobilize IPF funds for those two countries, nor for the Gambia, Maldives, Samoa and Yemen. Those countries have small IPFs and have chosen not to allocate any of it to the industrial sector during the current UNDP country programming cycle. It is the intention of the Secretariat to be more actively associated with the preparation of the forthcoming country programming cycle, and it is hoped that this will lead to more meaningful programmes of assistance to those least developed countries. For 1986, programming missions have been scheduled to almost all of the countries mentioned above.

114. In 1985 there was a significant improvement in the delivery of technical assistance to all least developed countries. Total delivery reached \$17.6 million, which is \$3.6 million or 25.8 per cent more than in 1984. The main increase fell within regular programme funds which include the IDDA allocation (\$2.3 million or 162.7 per cent over 1984) and within IPF resources (\$2.6 million or 29.6 per cent over 1984). The quality of UNIDO technical co-operation also improved, a fact attested to by several of the recipient countries. In the following paragraphs, illustrations of some projects are given.

115. In Nepal, assistance was provided for the manufacturing on a scientific basis of ayurvedic drugs from medicinal plants cultivated in the country. Under a pilot project executed by UNIDO the medicinal and aromatic plants are processed into extracts, essential oils and pure compounds for domestic and foreign markets. Products made at the pilot plant have already resulted in a 50 per cent reduction of pharmaceutical imports. The government authorities have also boosted exports of the extracts to European and Asian markets, which has brought substantial improvement in the country's balance of payments. The Government extended the project in 1985 by allocating additional funds from the country's IPF resources. The funds will be used to establish a maintenance and control workshop on the project site.

116. In another UNIDO project, in Praia (Cape Verde), a quality control laboratory has been established with the aim of increasing the capacity and improving the quality of the existing facilities for producing pharmaceutical products. The project, which received further assistance from UNIDO resources in 1985, has successfully contributed to the self-sufficiency of Cape Verde in the production of quality essential drugs. It has also led to the country being considered by international pharmaceutical firms as a possible base for producing drugs for other African countries.

117. Another successful project is a factory for manufacturing agricultural tools in Lesotho. Under this project, which received further assistance in 1985, light engineering services are provided for the manufacture of agricultural equipment and implements for use in the rural community. The main piece of equipment produced by the project is a tool system which is a basic frame to which other types of implements can be fitted and mounted. The project has not only contributed to the improvement of farming methods, but it has also reduced the country's total dependence on imports for capital and intermediate goods.

118. In view of the constraints upon IPF resources and their deleterious effect on the industrial sector in the least developed countries, UNIDO took measures to increase its assistance to these countries by strengthening its co-operation with international and regional agencies. Some of these measures are worthy of specific mention. In the World Bank/UNIDO Co-operative Programme, UNIDO is involved in the implementation of technical co-operation projects for the industrial sector which are financed by World Bank loans. Similarly, links between UNIDO and the United Nations Capital Development Fund continued to be strengthened, with substantial funds being channelled into the industrial sector in Bangladesh, Mali, Togo and Uganda. Co-operation with other international organizations, in particular FAO and WHO, was further enhanced in the joint formulation and evaluation of industrial projects in several least developed countries. Contacts were intensified in 1985 with regional financial institutions with the intention of encouraging them to co-finance specific projects in the least developed countries of the respective regions. The prospects appear to be good for an increased flow of resources from regional financial institutions to the industrial sector of the least developed countries.

119. UNIDO initiated action aimed at ensuring that the industrial sector receives greater attention during the forthcoming UNDP country programming cycle (1987-1991) from Governments and the UNDP offices in the least

developed countries. Four programming missions took place in 1985 to Democratic Yemen, Nepal, Somalia and United Republic of Tanzania, during which the industrial sector was reviewed and specific projects were identified for possible financing under UNDP and other resources. In two other countries (Bangladesh and Ethiopia) the programming exercise was undertaken by UNIDO field representatives, supported by UNIDO Headquarters. It is expected that, through extensive consultations and the elaboration of sound and realistic industrial programmes, the UNIDO share in the IPF will substantially increase during the fourth country programming cycle. Many least developed countries will, however, receive very small IPFs for the next five years. For example, estimates show that there are five least developed countries that will receive less than \$4.0 million each and another four around \$10.0 million each. It is, therefore, unrealistic to expect that the IPF will be the main source of funds for technical assistance to their industrial sector. It is this situation that leads UNIDO to draw the attention of the international community to the special problems of the least developed countries and the need for favourable consideration to be given to their requests for assistance from sources other than the IPF. Unless such resources are provided, particularly through the Industrial Development Fund (IDF), UNIDO will not be in a position to help those countries to develop their embryonic industrial sector.

120. In order to improve co-operation with the countries concerned, the UNIDO Secretariat continued to encourage field staff to visit UNIDO Headquarters for consultations and UNIDO staff members to visit the countries for programme development and project formulation. Two UNDP resident representatives, 13 SIDFAs and 10 JPOs covering the least developed countries, visited UNIDO Headquarters to discuss matters relating to those countries while several project formulation missions from Headquarters were made to those countries in 1985.

121. Within the context of the special programmes of UNIDO, assistance was again provided in 1985 to representatives from the least developed countries who participated in UNIDO Consultations on capital goods, petrochemicals and building materials. These Consultations enabled the participants of the least developed countries, *inter alia*, to familiarize themselves with and to update their knowledge of the subjects discussed at those Consultations.

122. As part of its promotional and advisory services, UNIDO organized two investment promotion meetings of interest to the least developed countries in 1985: one at Khartoum (Sudan) for East African countries and another at Libreville (Gabon) for central African countries (see paras. 70 and 74 above). Assistance was also provided to three officials from the least developed countries (Bangladesh, Malawi and Nepal) to attend the training programmes carried out by the Investment Promotion Services in Cologne and Tokyo. Within the framework of the ECDC programme, a solidarity meeting was organized in Bujumbura (Burundi) (see para. 129 below), bringing the total number of solidarity meetings to 11.

123. Group training programmes especially designed for the needs of the least developed countries continued to be the main focus of UNIDO activities devoted to manpower development in 1985. These programmes covered formulation and evaluation of projects, industrial planning and programming,

industrial strategies and policies within the framework of the programme of the Industrial Development Decade for Africa, small foundry operations, industrial utilization of medicinal plants and the cement industry.

124. UNIDO also continued its efforts to develop regional programmes aimed at least developed countries facing special difficulties. Several projects in the Sudano-Sahelian zone were implemented. Special attention was paid to the production of hydraulic and irrigation equipment as well as to the manufacture of small-scale agricultural equipment. The establishment of maintenance and repair facilities was also emphasized. The primary aim of these projects was to help the countries concerned in their efforts to combat desertification.

125. Concerning follow-up of the Substantial New Programme of Action for the 1980s for the least developed countries,²² a mid-term global review of progress towards the implementation of the Substantial New Programme of Action (SNPA) was carried out by the Intergovernmental Group on the Least Developed Countries at its sixth session in 1985. An assessment of the recommendations made in 1981 was undertaken and suggestions were made for improvement. Representatives of UNIDO attended the Fourth Inter-Agency Consultation on Follow-up of the Substantial New Programme of Action and participated in the preparation of the mid-term global review by the intergovernmental Group.²³ At these meetings, the UNIDO contribution to the mid-term review of SNPA was an analytical paper presented to and discussed by the Intergovernmental Group at its sixth session. The paper, which identified the shortcomings of the industrial sector in the least developed countries and described the remedial actions to be initiated, was well received.

126. Subsequently, the General Assembly adopted resolution 40/205 on the implementation of the Substantial New Programme and endorsed the conclusions and recommendations of the Intergovernmental Group which appear in the annex to the above resolution (see chap. I, para. 35).

127. As a further contribution to monitoring and implementation of the Substantial New Programme of Action, UNIDO completed in 1985 four more country industrial development reviews for Bangladesh, Mali, the Sudan and United Republic of Tanzania and preparations began for another ten reviews which are expected to be completed in 1986. The "Statistical review of the world industrial situation, 1985" to be issued in 1986, provides again data on the industrial progress of the least developed countries which, among other things, is of great importance to the implementation of the Substantial New Programme of Action.

INDUSTRIAL CO-OPERATION AMONG DEVELOPING COUNTRIES

128. The activities of UNIDO for the promotion of economic and technical co-operation among developing countries (ECDC/TCDC) during 1985 focused

²²United Nations Conference on the Least Developed Countries, Paris, 1-14 September 1981 (United Nations Sales Publication, Sales No. E.82.I.8), part one, section A.

²³ID/B/340, chap. V, para. 68.

on two programme elements: (a) the development of projects for co-operation among developing countries; these activities concerned solidarity ministerial meetings to encourage co-operation in the industrial development of selected least developed countries, round-table ministerial and high-level meetings to develop co-operation in specific industrial subsectors on the basis of mutual benefit; technical workshops and seminars; study tours; training and other joint industrial programmes; and (b) the identification of new forms and new institutional machinery for industrial co-operation, such as multinational production enterprises and enterprise-to-enterprise co-operation. In carrying out these activities, particular attention was given to the elaboration of concrete programmes and projects and the monitoring of their implementation.

129. A solidarity ministerial meeting was held at Bujumbura (Burundi) from 12 to 15 March 1985 and attended by representatives of 13 developing countries as well as five international organizations and financial institutions. At the meeting, 22 projects were examined covering agro-industries, chemical and pharmaceutical industries and industrial promotion. Agreements on co-operation were reached for the majority of the projects presented, particularly concerning experts services and feasibility studies, training and provision of equipment. An action plan has been established by the Government of Burundi for the implementation of these agreements. Steps have already been taken concerning the establishment of a co-operation framework with the industrial promotion office of Senegal, and two feasibility studies will be carried out with financial assistance by India and the provision of expert services by Egypt.

130. Preparations for a solidarity ministerial meeting on the industrial development of Democratic Yemen were completed. The meeting, originally scheduled for December 1985, was postponed at the request of the host Government. In co-operation with the Economic and Social Commission for Western Asia (ESCWA) and the Arab Industrial Development Organization (AIDO), 35 projects dealing with agro-industries, chemical and engineering industries and institutional infrastructure were identified, presented in document form and distributed to 25 developing countries and nine financial institutions. Preparations also began for the holding of solidarity ministerial meetings in Cape Verde and Mali in 1986.

131. As a follow-up to previous solidarity ministerial meetings, UNIDO contributed to the implementation of several technical co-operation projects such as a techno-economic study for the establishment of a tannery in Burkina Faso with the assistance of the Government of Yugoslavia; a textile training programme for 25 Sudanese fellows in Morocco; the training of three fellows from Yemen in the leather industry in Sudan; assistance by experts from ESCWA and AIDO in the review of a proposed investment act and in the operation of a factory processing edible oil in Yemen; the provision by the Government of China of 13 experts to assist a Yemen cotton ginning and oil extraction mill during the ginning season and conduct of the required training; the finalization of an agreement on the utilization of a \$440,600 grant provided by Oman to Yemen to implement, starting in 1986, projects related to the setting up of a quality control unit and a feasibility study for an animal feed factory, including the training of personnel and the financing of experts.

132. A round-table ministerial meeting on co-operation among developing countries in the food-processing industries was held at Novi Sad (Yugoslavia)

in May 1985, at which a more practical approach to South-South co-operation was discussed with the goal of achieving mutual benefits. Representatives of 18 developing countries discussed 109 co-operation projects and identified further areas of co-operation by matching existing capabilities and requirements in the food-processing industry. UNIDO is assisting in the implementation of programmes of co-operation in the food-processing industries initiated as follow-up to this meeting between Yugoslavia and other participating countries.

133. The participants at Novi Sad recommended that UNIDO should continue to organize this type of meeting aimed at promoting co-operation among developing countries in specific industrial sectors on the basis of mutual benefit. Initial discussions therefore took place with the Argentine authorities in preparation for a round-table ministerial meeting on agricultural machinery to be held in Argentina towards the end of 1986.

134. A high-level intergovernmental meeting on co-operation among developing countries in the field of agro-industry development, held at Brasilia (Brazil) from 18 to 22 November 1985, was attended by representatives from 18 developing countries. The meeting provided an opportunity to identify areas of co-operation and resulted in bilateral or multilateral agreements on co-operation projects, including joint ventures among the participating countries. A new form of co-operation emerged at this meeting and is reflected in agreements such as one whereby Argentina, Brazil, Paraguay and Uruguay will carry out a project for a feasibility study for the establishment of a co-operative system for the production, processing and commercialization of milk and milk products; and another whereby Argentina, Brazil, El Salvador, Peru, Suriname, and Trinidad and Tobago will hold a course on thermoplastic extrusion of starches and flours for use in preparing human food and in industrial applications.

135. As in previous years, the organization of orientation visits, study tours and exchanges of experience were part of the UNIDO programme for the promotion of joint industrial programmes and projects. These exchanges encompassed subjects as varied as industrial free-zones, food research institutes, small-scale cement technologies, solar energy, and various light industries.

136. An agreement was reached for the visit of two senior staff members of the Preferential Trade Area of Eastern and Southern African States (PTA) to the secretariats of the Association of South-East Asian Nations, the Economic Community of West African States and the Board of the Cartagena Agreement. The purpose of the visit is to develop programmes of industrial co-operation among institutions in developing countries and to exchange experience on the promotion of subregional industrial project implementation, common industrial policies and financing. Preparations were finalized for a three-week tour of China by seven Nepalese officials to study agricultural machinery and tools.

137. Preparations were carried out for an expert group meeting, to be held at Zagreb (Yugoslavia) in April 1986, to discuss modalities for ensuring a permanent flow of information to strengthen ECDC/TCDC in the field of building materials and construction industry. The meeting will concentrate on

identifying ways and means of improving the flow of information in the field of building material industry through, *inter alia*, links among consulting and engineering institutions and construction and manufacturing firms in developing countries.

138. In the implementation of a joint UNIDO/ECA programme for co-operation among African countries in industrial manpower development, which is carried out with the Training Branch of UNIDO and under which the African Association for the Exchange of Industrial Interns for Technical Experience has been established, missions to Nigeria, United Republic of Tanzania, Zambia and Zimbabwe served to introduce and explain the programme and to assist the Governments in the establishment of committees in support of that programme.

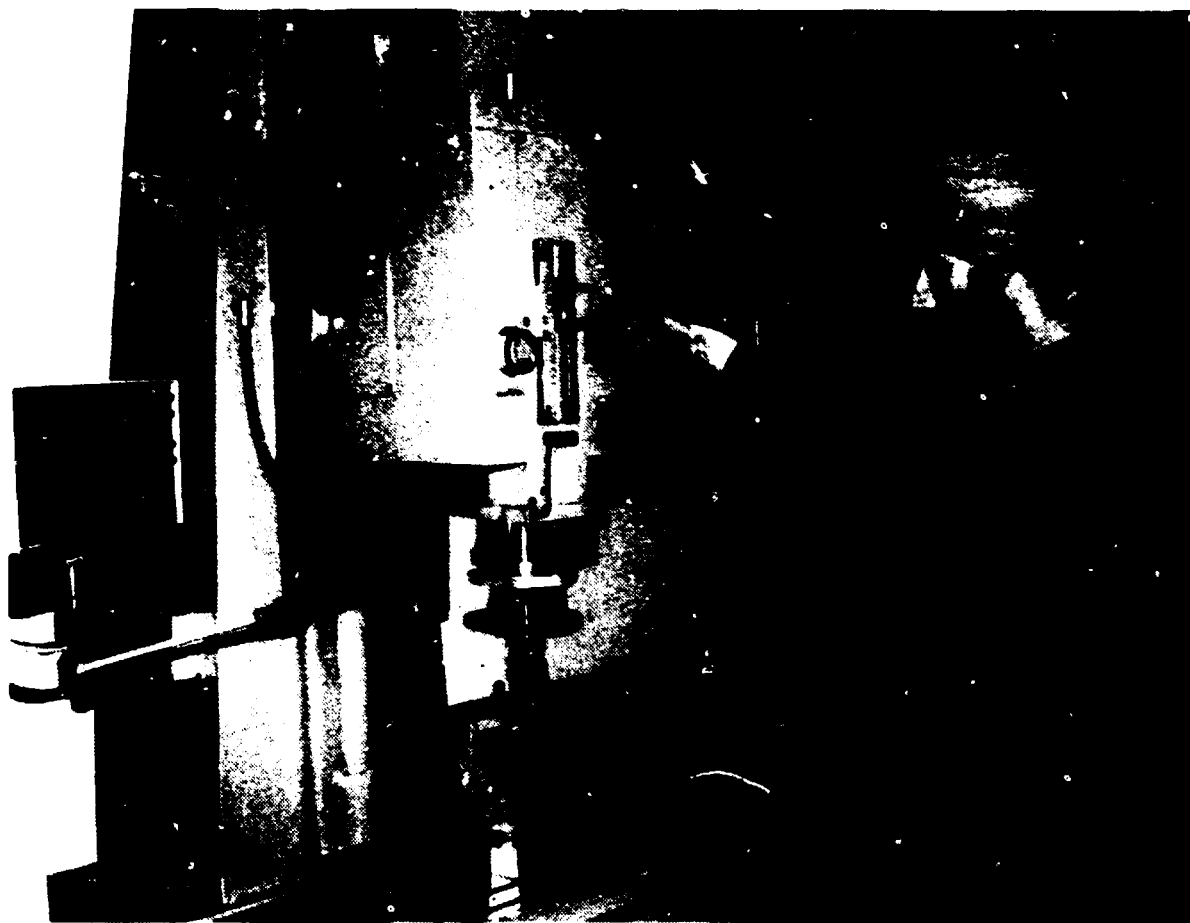
139. A technical and economic co-operation programme between China and Nicaragua on mini-plants for the production of basic nitrogen fertilizers was initiated in 1985 and will be implemented in 1986. An inventory was started of existing industrial capabilities in Brazil in selected sectors which will also provide information on that country's experience and potential for TCDC as well as on the possibilities for financial support.

140. The new programme initiated in 1984 on enterprise-to-enterprise co-operation among developing countries²⁴ was further developed by the preparation and convening of an expert group meeting on enterprise-to-enterprise co-operation within the Latin American plastics industry held at Buenos Aires (Argentina) from 4 to 6 November 1985 and attended by 83 entrepreneurs from the region. Discussions focused on the main constraints on production and commercialization, technology and training, and information and industrial promotion, and the measures that could be taken in that respect. It was decided that, to facilitate action in those areas, including the possible establishment of multinational production enterprises in this sector, a network of entrepreneurial associations of the plastic processing industry in Latin America should be constituted.

141. An expert group meeting on the establishment of multinational production enterprises in developing countries was held in Vienna from 25 to 28 November. The meeting concluded that the establishment and development of multinational production enterprises would attract all the essential elements of co-operation from either private or public enterprises at the industrial, commercial, technological and financial levels and should therefore constitute a major aim in developing countries.

142. Among the follow-up activities of the Consultations on the Iron and Steel Industry organized by the Negotiations Branch, an expert group meeting on the preparation of guidelines for the establishment of mini-plants on iron and steel with special emphasis on Africa, was held in Vienna from 2 to 5 December (see para. 27 above). At the meeting recommendations were made on items to be included in the guidelines for mini-iron and steel plants, ways and means of bilateral co-operation for the setting-up of iron and steel plants, and the establishment of a regional association of African iron and steel producers.

²⁴ID/B/340, chap. V, para. 176.



Advanced drill press, supplied by UNIDO and UNDP, at the Bicycle Research and Development Centre, Ludhiana (India)

143. An agreement that provides for close co-operation between UNIDO and the National Institute of Industrial Technology of Argentina (INTI) was concluded on 6 December 1985. The two parties agreed to establish a working arrangement to carry out a systematic programme of action to promote technical co-operation among developing countries. Specific areas of industrial technology for co-operation will include pulp and paper, dairy products, plastics, meat processing, textiles, leather, fish processing, metallurgical processing, metrology and quality control and building materials.

TECHNOLOGY PROGRAMME

144. The thrust of the Technology Programme remained (a) to assist developing countries in the selection, acquisition and development of technology, consistent with their conditions and capabilities and (b) to prepare them at the same time for the changes on the world technological scene and in that context to help them to strengthen their technological capabilities. In 1985, the Technology Programme continued activities initiated earlier; at the same time, new concepts were developed for promotional action and results were consolidated. In particular, several initiatives taken earlier began to bear fruit in terms of concrete activities and action was stimulated at the national, regional and international levels.

Technology policies

145. In formulating their technology policy, developing countries continued to show increasing interest in technological advances. UNIDO assisted the Government of Kenya in the organization of a national workshop on micro-electronics, held in January 1985, which was also attended by experts from Ethiopia, the Sudan, the United Republic of Tanzania and Zambia. In November, technology policies and institutional programmes on biotechnology were reviewed in Cuba with the help of experts. At the request of the Government of Argentina, a report was prepared on the steps to be taken to establish a technology monitoring system in the field of micro-electronics. Preparations were made for the UNIDO contribution to a national workshop to be sponsored by UNIDO and the International Development Research Centre (IDRC) (Canada) on monitoring trends in information technology.

146. UNIDO assisted the Government of Sri Lanka in organizing a national workshop on science and technology policy, held in March 1985; thereafter, at the request of the Government, draft legislation on science and technology was prepared for the Science Adviser to the President. In Cameroon, a technology transfer seminar was organized as part of a technology fair that was the follow-up to a national workshop organized earlier by the Technology Programme.

147. A study of the experience of Japan in the integration of industrial and technology policies and possible guidelines with respect to developing countries was nearing completion and is expected to be used in future national workshops. The policy implications of developments in telecommunications and marine industrial technologies were under study. Studies were prepared relating to telecommunications and the role of public purchasing policies in technological development with special reference to micro-electronics. The studies constituted part of the inputs to a meeting organized by the Technology Programme for the purpose of establishing the Regional Network for Micro-electronics in Latin America and the Caribbean (REMLAC) (see para. 156 below).

Technological advances

148. The basic aim of work related to technological advances continued to be the strengthening of the technological capabilities of developing countries.

149. As requested at the Ministerial-level Plenipotentiary Meeting on the Establishment of the International Centre for Genetic Engineering and Biotechnology (ICGEB), held in 1983, the Secretariat continued its efforts to promote the establishment of the Centre. In 1985, UNIDO serviced three sessions of the Preparatory Committee on the establishment of the Centre. At the end of 1985, 36 countries had signed the statutes of the Centre, 5 countries had ratified and in many other countries the process of ratification had advanced considerably.

150. A major step taken by the Preparatory Committee in 1985 was the agreement to implement an interim programme for the Centre, pending the entry into force of the statutes. The Preparatory Committee approved in broad

terms a programme for the years 1986 to 1988 in the order of \$16 million, which will be part of the Italian contribution to the establishment of the Centre. The contribution will make possible the implementation of a series of projects, to be executed by UNIDO, related to the appointment of a Director and heads of components of the Centre, the conduct of research and training activities, and assistance to affiliated centres.

151. Another significant activity was the meetings of the Panel of Scientific Advisers which made recommendations to the Preparatory Committee on the establishment of the Centre.²⁵ At the first meeting held in February 1985, in Vienna, several concrete recommendations for further action were formulated. The Panel members showed a high degree of commitment with regard to setting up the Centre. Further meetings of the Panel were held in New York in June and at Trieste in November.

152. An interim programme financed by the contribution of the Government of Italy was carried out by UNIDO. In particular, a workshop of high-level scientists on biotechnology and agriculture was organized in co-operation with the Government of India. The workshop, attended by over 30 high-level scientists, made recommendations to define more clearly the research activities that could be included in the programme of ICGEB. Preparations were also under way for a similar workshop on biotechnology and industrial commodities to be held at Trieste in March 1986.

153. Progress was also made by the Panel of Scientific Advisers in the evaluation of the information provided by countries that propose affiliation of their national institutions to the ICGEB. Based on the Panel's advice, the Preparatory Committee found that adequate information had been provided by the Governments of Bulgaria, Cuba, Egypt, Nigeria and Yugoslavia. Requests by other Governments were under consideration pending the receipt and evaluation of the information.

154. The process of establishing the Centre has resulted in increasing national efforts to develop biotechnology policies and programmes as well as in a commitment by the international scientific community to promote the application of biotechnology to development. An initiative taken by the Secretariat in 1985, in consultation with the Preparatory Committee and the Panel of Scientific Advisers, related to the development of safety guidelines in biotechnology. A study was prepared on that question which reviewed the existing situation in several countries and analysed the safety issues pertaining to laboratory research, production process and environment. The study showed the need for development of model guidelines. UNIDO established an informal working group with representatives from WHO and UNEP to examine the question of safety guidelines. A meeting of the working group took place in January 1986.

155. Other activities of the Technology Programme in genetic engineering and biotechnology were continued, particularly the co-operative programmes described earlier between the Centre for Biotechnology at Lorena (Brazil) and the University of Munich (Federal Republic of Germany); the University of

²⁵*Ibid.*, para. 83.

Dublin (Ireland) and the University of Punjab (Pakistan); the Kuwait Institute of Scientific Research and the University of Illinois (United States of America).²⁶ Proposals for preparatory work for the setting up of a regional network for biotechnology in Africa were also formulated.

156. A major event in 1985 in the field of micro-electronics was the establishment of the Regional Network for Micro-electronics for Latin America and the Caribbean (REMLAC). The network was established in a meeting organized by UNIDO in co-operation with the Secretariats of the Economic Commission for Latin America and the Caribbean and the Latin American Economic System and the Government of Venezuela held at Caracas (Venezuela) in June. Argentina, Brazil, Cuba, Jamaica, Guatemala, Mexico, Peru and Venezuela agreed to become members of the network and focal points for the network in their countries were designated. Nicaragua has subsequently asked to join the network. At the meeting the main elements of a programme of activities for the network were also agreed upon. The secretariat of REMLAC will be located in the country which hosts the annual meeting of the network. Accordingly, the Fundación Instituto de Ingeniería (Venezuela) will act as the REMLAC secretariat until the next meeting. The Institute has been requested to prepare inventories of Latin American experts and institutions in the field of micro-electronics and information technology. Experts of Latin American origin but working outside the region are also to be included in the inventory. A project for preparatory assistance to the institute has been submitted to UNDP to help prepare a four-year project for the next regional project cycle. An expert visited the REMLAC member countries to help prepare a programme of action for strengthening technological capabilities in the acquisition of hardware and software.

157. At the REMLAC meeting there was a keen desire on the part of several member countries to establish and strengthen capabilities for the design of hybrid and integrated circuits. The same interest has been shown in the West Asian region. Missions to several Arab countries were undertaken by the secretariats of UNIDO and of the Economic and Social Commission for Western Asia (ESCWA). A paper was prepared with the ESCWA secretariat that examined the current status of micro-electronics activities in the region and identified feasible steps and options for the establishment of design centres to be linked to a silicon foundry. The study was discussed at a meeting of experts in Algeria in January 1986. A regional project on the subject is also being formulated for UNDP assistance with UNIDO as the associated agency.

158. Another activity completed in 1985 was the compilation of an international roster of scientists and technologists in the fields of genetic engineering and biotechnology, micro-electronics and renewable energy. The roster contains some 100 names of persons engaged in genetic engineering and biotechnology, 64 in micro-electronics, and 90 in renewable energy. Contacts have been established with several persons on the roster who have shown interest in responding to requests for suggestions from the Secretariat and in contributing to strengthening technological capabilities in developing countries. Most of the names on the roster were collected on suggestion from other high-level scientists, based on the criterion of peer review. The distinguishing feature

²⁶*Ibid.*, para. 87.

of the roster is the mobilization of interest of high-level scientists who are at the "cutting edge" of technology.

159. Significant progress was made in regard to activities relating to new materials. In particular, contacts were established with experts in the diverse field of materials. A detailed study was completed containing 10 illustrative cases of composites that will have applications in developing countries. The periodical *Advances in materials technology: Monitor* received a high degree of interest from readers. During 1985 subjects compiled in the *Monitor* included optical fibres, powder metallurgy and composites. Several letters of appreciation were received from policy makers and specialized readers for the periodicals *Microelectronics monitor* and *Genetic engineering and biotechnology monitor*.

Technology selection and acquisition

160. Activities relating to technology selection in 1985 dealt with identification and evaluation of alternative technologies and broadening the range of technological choice. In co-operation with the International Labour Organisation a technical memorandum was completed on small-scale maize milling while four other technical memoranda were under preparation. Under an activity on how to start manufacturing industries, carried out in co-operation with the Investment Co-operative Programme, 50 plant profiles from Yugoslavia and 100 plant profiles from the Republic of Korea were completed. Work continued on the creation of a system of information exchange on technologies from developing countries, the International Technological Information Exchange Mechanism (ITIEM). So far six countries have nominated focal points for the system and concrete information on technologies available was received from Yugoslavia and India.

161. In the field of technology acquisition, major emphasis continued to be laid on strengthening negotiating capabilities. A variety of means were adopted, such as the provision of technological advisory services on request; the conduct of technical workshops on strengthening negotiating capabilities in Greece, Mali and Nigeria; the conduct of a technical workshop in Poland on contract negotiation and project preparation for African countries (in co-operation with the Feasibility Studies Branch); the preparation of guidelines for guarantees and warranties; and the consolidation of training material for strengthening negotiating capabilities. The last activity was undertaken with special attention to the possible use of training material in African countries.

162. Much of the work relating to acquisition of technology continued to be channelled to the Technological Information Exchange System (TIES). The Tenth Meeting of Heads of Technology Transfer Registries was held at Cairo (Egypt) in December 1985. At the meeting various issues were reviewed, such as trends in technology transfer flows; trends and issues in contractual arrangements; and the development of the computerized registry information system (CORIS). The review of the experience so far acquired through TIES confirmed the usefulness of the system. Exchange of TIES information and experience has been an important factor towards increasing the capabilities of national registries in the performance of their duties and in helping them to play a

greater role in the technological development of their countries. Informal contacts through TIES facilities permitted the registries to undertake bilateral co-operative action. The increased links between regional information exchange networks and TIES was another indication of the versatility and usefulness of the system. Similar links were being established in the Latin American and African regions and also in the subregions of the ASEAN and Andean Pact member countries. At the Cairo meeting the view was expressed that, keeping in mind the level of development of the countries and their experience in technology acquisition, TIES should also be involved in training and advisory services that apply to the specific needs of countries.

163. An important element of TIES activities has been the development of CORIS. Assistance was being provided to Argentina and India in adapting and applying CORIS and at the tenth TIES meeting participants from China, Egypt, Ethiopia and Pakistan requested UNIDO assistance in designing and implementing a national computerized information system based on CORIS software. Within the context of the establishment of an ASEAN Technological Information Exchange System (ASTIS), basic CORIS principles will be used to establish a computerized ASTIS with appropriate TIES links. Information on some 800 contracts was added during the year to the information contributed under TIES and maintained by the UNIDO Secretariat.

Technology for rural and small industries

164. The work relating to "appropriate technology" is being carried out by the UNIDO Secretariat in the form of several concrete and specific activities. Work relating to technological development and adaptation was carried out, for example, through the implementation of a project involving co-operation between Brazil and Kenya in the design and development of micro-distilleries in Kenya.²⁷ Preparatory work was undertaken in Zimbabwe for the design of a gasifier suitable for agricultural residues. The project aims to promote the commercial manufacture and use in rural areas of gasifiers to satisfy rural energy needs. Another objective of the project is to transfer the technology for gasifiers from Zimbabwe to neighbouring countries. In 1985 surveys were undertaken in Zimbabwe by international and local experts on the nature and availability of agricultural wastes in that country. A study was issued on commercialization of technological innovation in developing countries with special reference to the Sudan (UNIDO/IS.562). A study was also published on management of innovation with special reference to developing countries (UNIDO/IS.566).

165. Several innovative approaches were adopted to promote the practical application of technology for rural and small industries and to meet the needs of the rural poor. Firstly, a study was prepared on an alternative path to industrialization—a biomass-based strategy (UNIDO/IS.532). The theme of the study was that the renewable resources of biomass could be the basis for a significant component of an industrialization strategy in developing countries. The study noted that a variety of technologies already exist to use the biomass available in developing countries and that what are needed for their

²⁷*Ibid.*, para. 97.

development are a policy framework, industrial promotion and the organizational modalities for the generation and collection of biomass. The study showed that, in addition to existing technologies, possibilities existed for developing new technologies through research and development, in particular by utilizing the technological advances in the field of genetic engineering and biotechnology and thereby blending modern and traditional technologies. The need was also stressed for a network of institutes of biomass technologies. Four programmes that describe 45 project ideas were listed in the study.

166. Secondly, an expert group meeting was held for the purpose of discussing and preparing an international collaborative project to upgrade the nutritional value of fermented cassava (gari). The group was composed of experts in cassava fermentation from developing countries, high-level academic and scientific researchers in microbiology and biotechnology, and representatives from international organizations concerned with the problem. At the meeting seven major thrust areas were identified involving different degrees of technological sophistication and project concepts were prepared that related to each of the areas. Considerable interest was expressed by the participants to undertake the collaborative projects. The project concepts will be further elaborated in consultation with the participants in the meeting.

167. Thirdly, an expert group meeting was held to discuss and prepare an international collaborative project on an industrial approach to the manufacture and distribution of improved wood-burning cooking stoves. The context of the meeting was that, although many designs of improved wood and charcoal-burning stoves have been developed and considerable R + D activity, supported by international efforts, has taken place, the industrial-scale manufacture and distribution of improved wood-burning cooking stoves has not received sufficient attention. The participants identified the elements of an international collaborative project in terms of a series of modules on the large-scale manufacture and distribution of improved wood-burning cooking stoves. The participants also recommended that pilot projects should be implemented by UNIDO to establish financially viable enterprises for the manufacture and distribution of improved cooking stoves.

168. The establishment of rural industries could also be encouraged by the harnessing of small hydropower. Through the organization of technical advisory group meetings and training workshops, support was extended in co-operation with the Engineering Industries Branch and the Special Advisory Group on Energy to the Hangzhou Regional Centre for Research and Training in Small Hydropower (China), which is also the Secretariat of the Asia and Pacific Regional Network for Small Hydropower. A seminar/study tour on mini-hydropower in China was organized in October-November for personnel from Latin America and the Caribbean. Preparations were made for the possible establishment of an African regional network of small hydropower and also for co-operation in small hydropower between the Latin American and West Asian countries. Publications related to small hydropower were issued, including a manual for decision makers, an analysis of Chinese experience in hydropower and a bibliography on the subject.

169. Technological co-operation to upgrade the capabilities of small industries is an important means of adopting technologies appropriate to the conditions of developing countries. The concept of the Technological Services Delivery

System (TSDS), which was developed by the Technology Programme, continued to be promoted. In a workshop on the subject held in Vienna, in December 1985, guidelines for setting up a TSDS in developing countries were formulated after reviewing the experience of the Caribbean region, Greece, Japan, Malaysia, the Philippines and Thailand. The TSDS concept was also presented by UNIDO to a workshop on innovation held by the Organisation for Economic Co-operation and Development in October 1985.

170. Projects that provide for co-operation at the enterprise level for the transfer of technology in small- and medium-scale enterprises from developed to developing countries continued to receive special attention. In addition to the implementation of projects with Sweden and the Netherlands as donor countries,²⁸ a project involving Italy as a donor country was promoted and co-operation was extended to the Division of Industrial Operations in its implementation. A project for co-operation with Poland in metal-working industries was also developed. The project in light engineering and metallurgical industry involving Sweden has resulted in six agreements between Swedish entrepreneurs and enterprises in developing countries. Implementation of four of the agreements began in 1985.

Industrial and Technological Information Bank

171. Activities of the Industrial and Technological Information Bank (INTIB) during the year were marked by increased interaction with sources and users of information and the use of networking to facilitate and speed up the flow of information. A round-table discussion of an advisory group of INTIB users was held in September 1985, in Vienna. The meeting provided the first opportunity for a review of the work of INTIB since 1978, when an expert group studied the INTIB pilot operation. The advisory group agreed on the usefulness of INTIB to developing countries and noted with satisfaction the results of a recent survey conducted among users in developing countries that INTIB was among the first 10 information services found useful. The group emphasized, however, that if the usefulness of the Service were to be sustained and enhanced, its activities must be expanded and reoriented. The reasons included the technological changes taking place in the world, the growth and diversity of information and its accelerated flow thanks to development of telecommunications, and the changing needs for industrial and technological information. The group recommended that a medium-term programme (e.g. a five-year programme) for INTIB be drawn up and implemented by UNIDO to enable INTIB to make an orderly transition to a more effective activity that would keep in step with the developments in information technology and meet the requirements of the developing countries. The group also made recommendations related to the internal functioning of INTIB to emphasize its function as a network to meet the growing demand for industrial and technological information. The group, noting that the strengthening of INTIB had been recommended by the Fourth General Conference of UNIDO in more than one resolution, suggested that the information activity should be one of the essential activities of UNIDO. As a result of the round-table discussion the Secretariat began to elaborate a medium-term industrial information programme.

²⁸*Ibid.*, paras. 106-107.

172. Interaction with sources and users of information has been enhanced by several activities. The Secretariat identified more than 120 potential INTIB focal points in 55 countries with whom exchange of industrial inquiries and information could be undertaken. The exchange will take place for a trial period of one year before longer-term arrangements are made. The technical co-operation projects implemented by UNIDO in the field of information were also used for effective links with INTIB. INTIB's links with its clients have also contributed to strengthening national information handling capabilities. For this purpose two studies were prepared on guidelines for the formulation of national industrial and technological information policy based on the experience of India and the Republic of Korea, and on guidelines for the establishment or redesign of industrial and technological information service systems, including selection of software and hardware.

173. The importance of the links between INTIB and external data bases in the ESCAP region was discussed at the ESCAP/FAO/UNIDO Regional Consultation on Computerized Fertilizer Information Handling held at Bangkok (Thailand) from 18 to 22 November 1985, which called for support to the INTIB industrial inquiry service and for strengthening links through INTIB with end-users of information on fertilizers.

174. Within the framework of the programme for the Industrial Development Decade for Africa, a project was implemented to assist 10 selected African countries, namely, Algeria, Cameroon, Côte d'Ivoire, Egypt, Kenya, Nigeria, Senegal, United Republic of Tanzania, Tunisia and Zambia. The aim of the project is to provide the countries, through INTIB, access to external sources of information, thereby strengthening their national information systems and services and promoting the exchange of industrial information among themselves. The project identified the existing and potential information systems, services and networks as well as their needs and problems. The participating countries agreed to exchange industrial inquiries through their focal points. *Ad hoc* advice was provided on the improvement of national industrial information networking and special training related to the use of INTIB services was organized at UNIDO Headquarters for information specialists from the 10 African countries mentioned above.

175. Co-operation with specialized information systems of the United Nations agencies—such as the Technological Information Pilot System (UNDP), the International Referral System for Sources of Environmental Information (UNEP), the International Information System for the Agricultural Sciences and Technology (FAO), International Patent Documentation Centre (WIPO), and the International Nuclear Information System (IAEA)—and other international, intergovernmental, regional and national organizations was continued and strengthened.

176. The number of substantive inquiries received during 1985 was approximately the same as in previous years: 1,300. Of these, 36 per cent were from small and medium enterprises, 7 per cent from industrial information centres, 10 per cent from international organizations, 10 per cent from R + D institutions, 7 per cent from engineering and consulting firms, 16 per cent from government decision makers, 4 per cent from universities, 6 per cent from development banks and 4 per cent from others. By subject, 22 per cent of the

inquiries dealt with industrial chemicals/petrochemicals/pharmaceuticals, 22 per cent with agro-industries and food processing, 16 per cent with capital goods and fabricated metal products, 7 per cent with non-metallic minerals, 5 per cent with textile and leather goods, 4 per cent with pulp and paper, and 24 per cent with others. By region, 35 per cent of the inquiries came from Asia and the Pacific, 28 per cent from Africa, 17 per cent from the Americas, 9 per cent from Europe and 11 per cent from the Arab States. With regard to the type of inquiry, 42 per cent were related to manufacturing processes and know-how, 39 per cent to equipment and machinery suppliers, 10 per cent to research activities and 9 per cent to other activities.

177. The preparation of technological information profiles for mini-cement and mini-lime plants was initiated in 1985. The profiles provide industrial and technological information on technological alternatives. A number of information packages were also prepared.

178. The *Industrial Development Abstracts* data base now includes over 15,000 entries, of which 14,800 have been published. Four volumes of the *Abstracts* were issued in 1985. Work continued on a consolidated edition, including a cumulative index, of the first 10,000 abstracts. Some 12,000 external requests for approximately 150,000 documents and publications were also dealt with during 1985.

179. Work continued on the revision of sources of industrial information and directories within the framework of the On-Line-Information Key (LINK) data base, with two revised directories issued during the year: Directory of Industrial Information Services and Systems in Developing Countries (UNIDO/IS.205/Rev.1) and Directory of Industrial and Technological Research Institutes (UNIDO/IS.275/Rev.1).

180. The monthly *UNIDO Newsletter* in English, French and Spanish was sent to more than 36,000 addresses and additional editions in Chinese and Russian are published in Beijing and Moscow. The total number of mailing addresses in the computer for the various information publications of the Technology Programme was more than 44,000. At the request of the United Nations Sales Section in Geneva, the *Newsletter* carried a leaflet promoting two sales publications: *Economic Survey of Europe in 1984-1985* (United Nations Sales No. E.85.II.E.1), prepared by the Secretariat of the United Nations Economic Commission for Europe, and *Industry and Development: Global Report 1985* (United Nations Sales No. E.85.II.B.1), prepared by UNIDO. This was the first time that the *Newsletter* and the United Nations Sales Section had co-operated in such a promotion. Six issues of the *IDDA Bulletin* in English, French and Spanish were also carried in the *Newsletter*. The October 1985 issue of the *Newsletter* marked the first time in the printing history of UNIDO that a publication was handled entirely by computer from the manuscript input to the final camera-ready output, with all typesetting and page make-up done with the aid of computers. Four publications were issued under the Development and Transfer of Technology series.

181. In addition to co-operative activities mentioned in some of the preceding paragraphs, co-operation in the field of technology continued with other United Nations agencies and organizations through participation in the Task

Force on Science and Technology for Development of the Administrative Committee on Co-ordination and through participation in meetings of the United Nations Advisory Committee on Science and Technology for Development and its panels. A mid-decade review of the implementation of the Vienna Programme of Action on Science and Technology for Development was made from the point of view of industrial technology. It was used as a contribution to the United Nations Conference on Science and Technology for Development for the preparation of an overall review. Co-operation with the Asian and Pacific Centre for Technology Transfer (APCTT) continued and a staff member from the Centre participated in an expert group meeting dealing with the preparation of a handbook on technology policy.

ENERGY

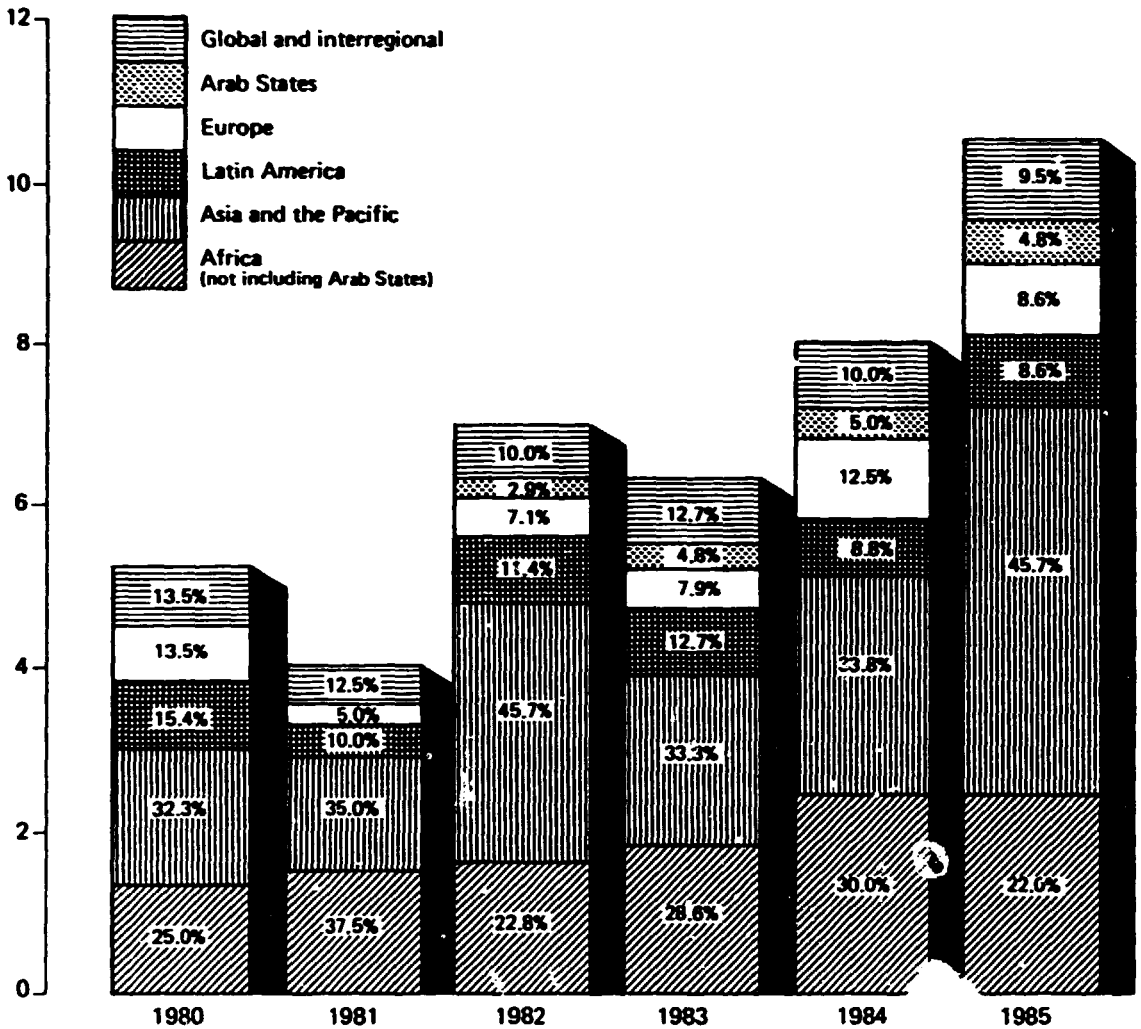
182. In recognition of the important role of energy in industrialization, UNIDO has since 1980 steadily increased its technical assistance delivery of energy-related industrial projects. In 1985 a total of 113 projects (1984: 90) were under execution in the field of energy, with an estimated expenditure for the year of \$10.5 million (1984: \$8.4 million) representing approximately 11 per cent (1984: 9 per cent) of the total estimated amount spent on technical assistance. In comparison to 1984 the total number of energy-related projects and the total expenditure increased by around 25 per cent. Technical co-operation projects in the Asian and Pacific region accounted for some 45 per cent of energy-related expenditures in 1985, followed by Africa with some 25 per cent.

183. Priority areas of the 1985 technical co-operation programme on energy and industrialization were: development of locally available energy resources; improved industrial energy efficiency; local manufacturing of energy equipment; and small hydropower for rural electrification. Energy-related industrial projects are carried out by the industrial operations and industrial studies programmes. They are thus reported on under chapters III and IV respectively. The following projects illustrate the overall direction of the UNIDO energy-related programme.

184. The first project on European regional co-operation in industrial energy conservation started in October 1985 as a UNDP inter-country project and was formulated at the regional technical meeting in Vienna in July 1985. The project demonstrates the role of UNIDO in an improved exchange of information on energy use in various sectors of the manufacturing industry on measures to enhance energy efficiency through good housekeeping practices and on improved energy utilization in industrial processes. At the end of the year seven European countries had participated in the project, namely, Bulgaria, Czechoslovakia, Hungary, Poland, Portugal, Romania and Yugoslavia. Additional input from other European countries is provided through a sub-contract with the Economic Commission for Europe (ECE). Because of the high level of economic development in Europe it is expected that experience accumulated in this project will be of benefit to developing countries in other regions.

Chapter V

Millions of US dollars



Note: Percentages do not necessarily add up to 100 because of rounding.

185. The Second Consultation on the Capital Goods Industry, with Special Emphasis on Energy-related Technology and Equipment took place at Stockholm (Sweden) in June 1985 (see para. 6 above). As a follow-up to the recommendations of the Consultation a project was initiated on the development of standardized small hydropower plants from the design stage to manufacture. The main objectives of the project are: (a) to elaborate engineering parameters for the selection of a small number of standardized types of hydropower plants that cover a wide range of capacities; and (b) to prepare a comprehensive study of the local or regional manufacturing of small hydropower plants or equipment. The general objective of the project is the increased use of hydraulic resources for decentralized electricity generation to facilitate the industrial development of rural areas.

186. In view of the lack of industrial energy in Africa, especially in the sub-Saharan region, an information survey was completed in 1985 on the present and future energy situation in Africa and the implications of energy consumption for industrial development. The purpose of the survey was to identify priority areas for more detailed studies towards the strengthening of the UNIDO technical co-operation programme on energy and industrialization within the framework of IDDA. The survey is also expected to provide guidance to African Governments in establishing their long-term energy-industry development policies and to initiate co-operative programmes with other international, regional and national organizations. The first results of the survey were presented at the ECA Regional Workshop on Energy Supply and Demand Projections in Africa at Addis Ababa (Ethiopia) in November 1985.

187. Energy-related topics were also the subject of discussions and meetings with a number of international organizations including ILO, FAO, the United Nations Environment Programme (UNEP) and ECE. A memorandum of understanding with the Latin American Energy Organization (OLADE) was signed on the co-operation on energy-related matters, supplementing aspects of the already established co-operation in small hydropower.

188. UNIDO will contribute to the documentation of the 1987 session of the United Nations Conference for the Promotion of International Co-operation in the Peaceful Uses of Nuclear Energy with a survey on nuclear energy and industrialization in developing countries.

INTEGRATION OF WOMEN IN INDUSTRIAL DEVELOPMENT

189. The United Nations World Conference to Review and Appraise the Achievements of the United Nations Decade for Women: Equality, Development and Peace, took place at Nairobi (Kenya) from 15 to 26 July 1985. UNIDO contributed to the documentation of the Conference and participated in all preparatory meetings held both at the regional intergovernmental level and at the United Nations inter-agency level and in the meetings of the United Nations Commission on the Status of Women acting as a preparatory body for the World Conference. Two staff members represented UNIDO at the Conference, where a UNIDO photo exhibition and a short film on women in industry drew attention to the contribution of women to industrialization.

190. The Conference adopted the Nairobi Forward-looking Strategies for the Advancement of Women,²⁹ which deal with women and industry and women and science and technology and contain specific recommendations concerning action by the specialized agencies of the United Nations system. Women and industrialization and women and science and technology were also the subject of individual resolutions, in which the Conference, *inter alia*, called upon UNIDO for action. The General Conference of UNIDO at its first session, in December 1985, adopted decision GC.1/Dec.29 on the integration of women in industrial development, in which, *inter alia*, it stressed the essential role

²⁹A/CONF.116/28, chap. I, section A.

UNIDO has to play in both rural and urban areas in the implementation of the Nairobi Forward-looking Strategies for the Advancement of Women as related to industrialization.

191. Three regional workshops were organized by UNIDO in 1984 to discuss the integration of women into the industrial planning and development process.³⁰ During the Conference at Nairobi, a contact group meeting was organized by UNIDO for participants who had also attended the regional workshops to review their impact. The discussions at the contact group revealed encouraging results. As a follow-up of the UNIDO workshops in most countries a dialogue was initiated at the national level between government departments, industry and women's organizations which led to a greater awareness of the contribution of women to the development process and in many cases to policy measures aimed at facilitating the participation of women in industry. In addition, an exchange of information and experience was initiated among countries at the regional level.

Technical co-operation projects

192. In 1985 technical co-operation projects specifically designed to upgrade capabilities of women and improve technologies traditionally used by women dealt mainly with salt production, garment manufacture and ceramics.

193. A breakthrough was reached in industrial planning in Cameroon, where UNIDO is elaborating an industrial master plan and subsectoral studies are being carried out in that context. One of the studies will focus on the role of women in the country's industrialization process with a view to ensuring that the country will benefit fully from its human resource potential and that women will participate on an equal basis with men in the manufacturing sector.

194. Efforts are also continuing to promote the involvement of women at all levels in sectors where traditionally they have not been employed. For example, in a project in Ethiopia on assistance to the marble and stone industry, almost 20 per cent of the workers are currently women. Upon the recommendation of UNIDO the government executing agency—the Ethiopian Construction and Material Corporation—recruited a woman engineer. Under the project's fellowship programme, she received training in marble quarrying and processing technologies in Italy and Turkey that enabled her to take up the position of assistant head of production of the Ethiopian marble industry with responsibility for the production performance of three marble factories. Within the framework of the same project a new project proposal has been formulated for making objects from rejects of the marble factories for sale to tourists. The project proposal, which is currently with the Government for consideration, would further enhance the participation of women in that industry.

195. Endeavours to improve the participation of women in a wider range of UNIDO technical co-operation projects will increase with the application of the UNIDO guidelines for the consideration of women in the design and implementation of UNIDO programmes and projects. The guidelines, which

³⁰ID/B/340, chap. III, para. 14.

were elaborated by the Focal Point for the Integration of Women in co-operation with the UNIDO Evaluation Unit, will be issued in early 1986. UNIDO also co-operated in 1985 with UNDP in the elaboration of a UNDP programme advisory note on women in development.

Research and data on women

196. Through contributions made by the Governments of the Netherlands and of Norway, UNIDO was able to initiate a sector-by-sector analysis on the role and condition of the participation of women in industrial development. Agro-industries were chosen as the starting point. Achievements so far include the preparation of two documents, "Women and the growth of agro-industries in developing countries" (ID/WG.452/1) and "Women's participation in manufacturing in developing countries, with emphasis on agro-industries" (ID/WG.452/2) and the organization of the Expert Group Meeting on Women in Agro-Industries³¹ which was held in Vienna in October 1985 and at which the documents were discussed. The meeting was attended by 16 experts from 15 countries and by 16 observers from governmental, intergovernmental and non-governmental organizations and from the United Nations Educational, Scientific and Cultural Organization, the United Nations Centre for Transnational Corporations and the International Research and Training Institute for the Advancement of Women (INSTRAW). The meeting drew attention to the vital role of the informal micro- and small-scale production sector in national economies and to the important contribution of women to that sector. Two sets of recommendations were formulated—one for the informal micro- and small-scale industry sector and one for the large and medium-scale industry sector. In view of the importance of agro-industries in all regions, and taking into consideration the great difference between regions in economic and social conditions, the meeting also recommended that UNIDO should organize separate regional meetings on the role of women in agro-industries in the African, Asian and Latin American regions. Subject to the availability of funds, UNIDO will endeavour to organize such meetings.

197. In 1985, the Division for Industrial Studies developed a methodology for preparing a series of country case studies on the role of women in the process of industrial development with a view to ascertaining the current and prospective contribution of women to the industrial development of a given country. Three of those studies will be carried out in 1986 if funds are available. The studies would be used in preparation for the second Consultation on training of industrial manpower to be held in 1987.

198. Data and information on women in industry, particularly agro-industries, were collected throughout 1985. The information will be computerized in 1986 so that it can easily be retrieved when considering the integration of women into UNIDO programmes and projects.

199. UNIDO staff participated in the Advisory Seminar on Women and Shelter organized by the Advancement of Women Branch of the Centre for Social Development and Humanitarian Affairs of the United Nations and the

³¹For the report of the meeting, see ID/WG.452/3.

United Nations Centre for Human Settlements (Habitat), in Vienna in December 1985.

Training

200. As a follow-up to a UNIDO/INSTRAW workshop in 1984, at which parameters were defined for a modular curriculum for training in industrial management for women entrepreneurs, modules were designed in 1985 for training different levels of female managers and entrepreneurs. The modules have been reviewed in Côte d'Ivoire and Egypt to adapt them to specific country needs.

201. In March, the Workshop on Development of Women Industrial Entrepreneurs organized by UNIDO, the World Assembly of Small and Medium Enterprises and the International Council of Women, was held at New Delhi (India). The workshop provided a forum for 12 women entrepreneurs from Asia and Africa in addition to 32 from the host country to discuss mechanisms and support systems that have proved successful in overcoming constraints faced specifically by women in the setting up and daily operations of an industrial unit.

202. Under the economic co-operation among developing countries (ECDC) programme, two women from the Lesotho Bureau for Youth and Women's Affairs attended a three-week training course on the making of soaps and candles, organized by the village industry service of Zambia. The training included specific instructions to enable the Zambian women to provide training themselves at the village level in their own country. Also under the ECDC programme, preparations were made for a study tour to China for a group of senior officials from the Philippines National Commission on the Role of Philippino Women. The officials will study the Chinese experience of cottage and small-scale agro-processing industries.

203. In in-plant and other group training programmes organized by UNIDO during 1985, 125 women participated. As regards fellowships and study tours started in 1985, the number of women placed was 207. These figures do not include female participants in training activities organized locally within the framework of UNIDO-executed field projects.

Representation of women in Headquarters and field activities

204. The total number of female professional staff members in UNIDO has remained stagnant in 1985. The number rose from 76 in 1984 to only 78 in 1985. Women now represent 17 per cent of all professional staff in UNIDO compared with 16.74 per cent in 1984 (details of employment of women in the Secretariat are provided in chap VIII, paras. 13-16).

205. One woman SIDFA (out of 29) and 21 women JPOs (out of 75) represented UNIDO in the field during 1985. A slight increase was observed in 1985 in the number of women in field posts, with 50 female experts serving on projects as compared to 42 in 1984.

Chapter VI

REVIEWS AND EVALUATION

1. As in previous years, in addition to periodic directors' meetings which often concentrated on particular themes of the UNIDO work programme, the main mechanism for reviewing the work of the Organization in 1985 was the implementation review meetings. These meetings were convened on two occasions during the year and attended by senior officers. The meeting convened in April concentrated largely on reviewing 1984 implementation, based on final statistics for that year. It also reviewed technical co-operation approvals and the implementation targets which had been established for 1985. The second implementation review meeting, convened in December, was held over a longer period than usual and concentrated on an in-depth analysis of all aspects of the UNIDO work programme, bearing in mind the Organization's impending conversion into a specialized agency. The direction of UNIDO activities was examined taking into account views that had been expressed at the first sessions of the Programme and Budget Committee and the Industrial Development Board. In particular, the meeting reviewed the allocation of resources within the Secretariat in the light of the priorities recommended by the inter-governmental meetings and established the target for the implementation of technical co-operation in 1986, on the basis of available resources.

2. The UNIDO internal evaluation system has been using the revised project self-evaluation report (PER) as its principal instrument for assessing the performance of technical co-operation projects since the second half of 1984. The main aim of PER is to bring together result-oriented reporting and headquarters feedback with the principal review and decision-making mechanism for field projects, namely, the tripartite reviews. Its format has been designed to elicit precise information on whether a project is producing outputs at the right time and in the quality and quantity foreseen in the relevant project document. Factors affecting project outputs are examined and recommendations are solicited on measures to resolve problems. The main participants in the self-evaluation process are the chief technical adviser and/or the national project director whose analysis, assessment and recommendations are further examined by the Senior Industrial Development Field Adviser (SIDFA), the backstopping officer and the relevant Section Chief/Branch Head in UNIDO. In coordinating this exercise, the Evaluation Unit provides an analysis and assessment of, *inter alia*, project design and issues suggested by the participants.

3. One hundred and twenty-six PERs were prepared in 1985. An analysis of 113 PERs in the period August 1984 to August 1985, which represented around 75 per cent of all UNIDO projects with international contributions of \$400,000

and above, showed several trends. For example, PERs were used in some 50 per cent of the tripartite reviews held, as compared with 26 per cent in the period prior to August 1984. In 74 per cent of the cases, the overall quality and usefulness of the exercise were considered to be within the range of acceptable, good or excellent. Recommendations made by the Evaluation Unit to backstopping officers on project design, issues for tripartite review and possible remedial action were accepted in some 80 per cent of the cases.

4. The above developments can be attributed to a greater understanding of the system supported by practical results derived from the correct and timely use of PER. The revision of the PER format further increased the usefulness of PERs for gathering information that provides a factual basis for subsequent management decisions. However, more effort will have to be exerted in the field to submit PERs well in advance of scheduled tripartite review meetings and at Headquarters to analyse the PERs immediately after their receipt. It is encouraging to note that the average time span for the review of PERs by backstopping officers at Headquarters decreased from 32 calendar days in 1984 to 29 in 1985.

5. Late in 1984 the self-evaluation system was expanded to cover group training activities.¹ It is expected that by the end of 1986, if not before, enough experience will have been accumulated to draw conclusions on the usefulness of the PER format specifically designed for group training activities. The Evaluation Unit will participate in the in-depth evaluation of a group training project, financed by the Government of Finland, on furniture and joinery industries that has been repeated over several years; this exercise will provide some useful experience in evaluating activities in training. More exercises on group training activities are anticipated.

6. PERs and tripartite reviews, which form the basic structure of the UNIDO evaluation system, are complemented by both scheduled and *ad hoc* tripartite in-depth evaluations. These in-depth evaluations analyse the experience gained and facilitate decisions concerning the future of a project. In-depth evaluation can help to improve project performance, particularly when the projects are experiencing serious problems that cannot be dealt with by the normal management structure. Such situations are increasingly being identified through the PER system. In the past, in-depth evaluations of UNIDO projects were conducted mostly on an *ad hoc* basis, often without adequate preparation and sometimes without UNIDO participation. In 1984 and 1985, the Evaluation Unit, in close co-operation with the Division of Industrial Operations, focused particular attention on systematic preparation and co-ordination of in-depth evaluations with the United Nations Development Programme (UNDP). In the same period, co-operation with donor Governments has increased with regard to preparation and joint conduct of evaluations of projects funded through the United Nations Industrial Development Fund (UNIDF). A significant step forward has also been made in securing full participation of recipient government representatives in an increasing number of in-depth evaluations. As a consequence of careful and timely preparation and better co-ordination with the other parties involved, the in-depth evaluations have been conducted with greater professionalism and have contributed to improvements in the project.

¹ID/B/320, chap. VIII, para. 7.

In-depth evaluations make use of methods and formats for terms of reference and evaluation reports developed by UNIDO on the basis of agreed standard practices.

7. A total of 27 tripartite in-depth evaluations with UNIDO participation were conducted in 1985. The close co-operation of the Evaluation Unit with the Division of Industrial Operations included the Unit's involvement in the preparation of (or consultation on) terms of reference, selection of participants, co-ordination with other parties (UNDP, recipient Government, in some cases donor Government) regarding team composition, briefing of consultants and assistance in the preparation of the report of the tripartite review. In a number of cases (see para. 8 below) UNIDO was represented in the evaluation by a staff member of the Unit. The presence of a professional evaluator in in-depth evaluations makes it possible to analyse systematically the progress made by the project, its contribution to industrial development, and the problems encountered during implementation.

8. UNIDO evaluation staff participated in seven tripartite in-depth project evaluations conducted in Indonesia (two projects), Kenya, Morocco, Pakistan, Sri Lanka and Thailand. In Indonesia, government representatives as members of the evaluation team were actively involved in the evaluation of two large-scale projects. One project, which was nearing the end of its first five-year phase, dealt with identification, preparation and implementation of industrial projects in selected regions. The objective of the project was to develop entrepreneurship in medium-scale industry in North Sumatra, East Kalimantan and South Sulawesi. The evaluation team concluded that the progress of this unusual and complex project was below expectations primarily because there was no link between the project and financing institutions at the development stage of investment activities and no permanent national staff or institution to deal with that problem. The evaluation mission recommended that the next phase of the project should concentrate on establishing a permanent national institution which will be able to provide the long-term services needed. In response, the Indonesian Government is planning to set up an institute for industrial entrepreneurship in close co-operation with two financial institutions. The other project evaluated in Indonesia had a very broad scope for planning, co-ordinating and promoting country-wide programmes and projects for the construction of low-cost housing with building materials based on locally available raw materials. Its mid-term evaluation, however, showed that project activities had focused primarily on the introduction of new building material production techniques within the co-operative programme framework. The evaluation mission recommended that the project should concentrate fully on developing model production units so that the remaining activities in this project would lead to proposals that could be used at national and regional levels.

9. A tripartite in-depth evaluation of a large-scale multi-disciplinary project in Kenya—which represented the third phase of UNIDO assistance in industrial surveys, studies, strategies, policies, promotional programmes and development plans—had two government representatives on the team and focused on recommendations for following up the results achieved. A large number of studies prepared within the project are awaiting implementation and further assistance should focus on strengthening the capability of the Government's

Department of Industry to develop the small-scale industry sector, extension services and industrial capacity utilization.

10. Another evaluation took place in Morocco, where a date-processing factory encountered operational and financial problems. UNIDO had been involved in the pre-investment study as well as in the establishment and running of the plant. The evaluation mission analysed the causes of the difficulties—prolonged drought, date-palm disease, technical, managerial and commercial problems—and prepared detailed recommendations to restructure the company's debt, and change the product range and marketing arrangements. In Pakistan a project to establish a leather product development centre was evaluated and was found to be generally successful in achieving its objectives. Recommendations were prepared for a further phase of technical assistance, which would increase the range of training activities of the centre to include more short practical courses and to develop further the advisory and extension services. A positive feature of this evaluation was the participation of representatives of both the Government of Pakistan and the leather products industry.

11. The progress of a large-scale institution-building project in Sri Lanka financed by a special-purpose contribution of the Federal Republic of Germany to UNIDF was assessed by a joint evaluation undertaken by the donor Government and UNIDO. The evaluation showed that the establishment of a ceramic research and development laboratory was progressing remarkably well. In the two years since the project started, a laboratory was established, which is already providing a number of services to the industry and even earning fees for those services. The evaluation mission recommended that two more years of international assistance should be provided to make the laboratory fully self-sufficient; joint financing by the Federal Republic of Germany and UNDP is being considered for that purpose. The evaluation of an experimental project in Thailand which had as its purpose the acceleration of industrial development in a remote and backward region, took place with the participation of the Thai Government. The evaluation showed that the approach used for the experiment needed adaptation, and that a stronger commitment was needed on the part of the financial authorities for the project to be a success.

12. Training in project design and evaluation methodologies for, and their application to, technical co-operation projects continued both at Headquarters and in the field. Two-day training workshops consisting of lectures, group discussions and case studies drawn from UNIDO experience are conducted by the evaluation staff for groups numbering up to 25 participants. At Headquarters such workshops are regularly held for Secretariat staff involved in the formulation and implementation of technical co-operation projects on a bi-monthly basis, and for Junior Professional Officers (JPOs) as part of their training. In the field, to save both time and travel funds, the workshops are held where possible in conjunction with evaluation missions. In 1985, 60 staff members and 25 JPOs attended such workshops bringing the number of Headquarters staff and JPOs trained since November 1983 to a total of over 120 and 45 respectively. UNIDO put particular emphasis on conducting workshops in countries with relatively large UNIDO programmes. In 1985, workshops were held in Burma, China, Democratic People's Republic of Korea, Indonesia, Kenya, Thailand and Turkey 'or 191 government officials,

7 UNIDO field staff members and 48 staff members of UNDP and other United Nations agencies involved in project planning, formulation, implementation and evaluation. The totals for the biennium 1984-1985 are 19 workshops in 11 countries for 290 government officials, 26 UNIDO field staff and 163 UNDP and other United Nations staff. Briefings on the methods and requirements of project design and evaluation continued to be given to chief technical advisers for large-scale projects, consultants engaged to carry out preparatory assistance missions, as well as SIDFAs during their visits to Headquarters. The Secretariat also continued to give regular briefings to UNIDO project staff, national project co-ordinators, and UNDP and government officials on the occasion of evaluation missions. Seminars and briefings on UNIDO practices in design and evaluation were also given to representatives of donor countries; this exchange of information has taken place with representatives of 16 countries.

13. Although the training workshops have led to a gradual improvement in the situation, the quality of project design and formulation still leaves something to be desired. The Evaluation Unit is increasingly asked by the Division of Policy Co-ordination and the Division of Industrial Operations to provide assistance in designing and formulating new projects. In 1985, the evaluation staff assisted in the design or re-design of more than 100 projects of which more than 50 were on a large scale (value of over \$400,000). This involvement gives an opportunity to apply the lessons learned from evaluations, especially thematic ones, and to build appropriate evaluation elements into the original project design and management plan. Noteworthy is the involvement of the Unit in the preparation of draft UNIDO project proposals for the next UNDP country programme in China which led to a UNDP-financed mission of an evaluation staff member to China to deal with the detailed preparation of a number of priority UNIDO projects, in close co-operation with UNDP staff and Chinese officials.

14. UNIDO was invited by UNDP to carry out, in association with the International Labour Organisation and with the participation of the Government of the Netherlands, a thematic evaluation of technical co-operation programmes in rural small industrial enterprises. Preparatory work has begun; desk studies are expected to take place in the early part of 1986.

15. The testing of the revised UNDP policies and procedures regarding monitoring, evaluation and reporting is under way with a view to establishing a common, standardized system for informing various levels of management on project and programme performance. One of the new features is the inclusion of an internal evaluation report which, like the UNIDO PER, is completed once a year prior to a tripartite review meeting. UNIDO was involved in the inter-agency working group which drafted the format of the UNDP internal evaluation report. In comparison to the UNIDO PER, the format of the UNDP report has been simplified to facilitate its introduction and acceptance. In order not to curtail the flow of information generated by the UNIDO system and to sustain the management decisions resulting from its analyses and recommendations, UNIDO has continued to supplement the UNDP reports by using PERs. A comparison of the experience gained from the simultaneous use of both formats would help to determine a common format that provides factual and timely information on project status and performance.

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16. The evaluation activities of UNIDO will continue for some time to concentrate on technical co-operation activities while taking into account the recommendations of the policy-making organs, as well as those of the Joint Inspection Unit, which in a recent report² recommended that UNIDO "continue to refine and expand evaluation activities and their quality as an integral part of UNIDO management decision-making".

²"Status of internal evaluation in organizations of the United Nations system" (JIU/REP/85/10), para. 156.

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CO-ORDINATION, FIELD AND LIAISON ACTIVITIES AND PUBLIC INFORMATION

INTER-AGENCY PROGRAMME CO-ORDINATION

1. Co-ordination between UNIDO and other United Nations organizations and specialized agencies was carried out, as in the past, at the policy-making level through participation in the sessions of the General Assembly, the Economic and Social Council and its subsidiaries, the Administrative Committee on Co-ordination (ACC) and its sub-organs, as well as in the meetings of the intergovernmental Committee for Programme and Co-ordination (CPC) and the governing bodies of specialized agencies. At the inter-secretariat level, regular meetings were held as provided for in the memoranda of understanding concluded between UNIDO and other United Nations organizations and specialized agencies. At the country level, co-ordination continued through the offices of the United Nations Resident Co-ordinators, the United Nations Development Programme Resident Representatives and, in particular, through the Senior Industrial Development Field Advisers (SIDFAs). In addition, inter-secretariat contacts were maintained through the UNIDO Liaison Office at United Nations Headquarters and the UNIDO representative at Geneva.

2. During the period under review, UNIDO continued collaboration with many specialized agencies. Co-operation with the Food and Agriculture Organization of the United Nations (FAO) covered a wide range of activities in such areas as food industries, fisheries, forest industries and rural development. Preparation continued for the joint study on agriculture/industry linkage and the elaboration of case studies on that subject that aim at the development of planning methodologies.¹ UNIDO intensified its co-ordination with the International Labour Organisation (ILO) in areas of common interest including training, energy and co-operatives, and in the publication of a number of technical memoranda. Possibilities for co-operation in organizing the second Consultation on training of industrial manpower to be convened in mid-1987 were discussed. Negotiations were held with the World Health Organization (WHO) to find new and more effective methods of co-ordination. The Pan American Health Organization (WHO regional office for the Americas) sought UNIDO assistance in implementing the Central American Health Initiative. UNIDO continued close co-operation with the International Trade Centre UNCTAD/GATT (ITC) to increase complementarity in technical co-operation

¹Cf. ID/B/340, chap. VII, para. 10.

projects. With the United Nations Educational, Scientific and Cultural Organization (UNESCO) contacts were maintained on subjects of joint interest including industrial application of micro-electronics, biotechnology, co-operation between technological education and industry, training of industrial manpower, and the development of the building materials industry.

3. UNIDO also collaborated actively with various organs, organizations and bodies within the United Nations. For example, preliminary discussions took place with the Office of the United Nations High Commissioner for Refugees to develop co-operative activities aimed at finding permanent solutions to specific economic problems of refugees. Negotiations continued with the United Nations Environment Programme (UNEP) on a project to introduce environmental components into UNIDO training programmes. At the end of 1985, UNEP tentatively offered to contribute some counterpart funding to enable UNIDO to commence implementation of the project. UNEP also bore the costs of a consultant employed by UNIDO for the preparation of a study on the pollution of the Mediterranean Sea due to disposal of waste lubricating oils. A joint UNIDO/WHO/UNEP informal working group was established to prepare safety guidelines for bioscience-based industry. Co-operation continued with the Centre for Social Development and Humanitarian Affairs of the Department of International Economic and Social Affairs, particularly with regard to the advancement of women and youth. The First Consultation on the Building Materials Industry, which took place at Athens in March 1985, was a joint effort of UNIDO and the United Nations Centre for Human Settlements (Habitat). The recommendations of the meeting were being implemented in co-operation with the relevant organizations of the United Nations system.

4. Efforts were intensified to develop projects which lend themselves to joint implementation with other agencies, such as a proposed regional project with UNEP for the production of improved cooking stoves, and the funding by UNESCO of a literacy component in UNIDO projects. There were 13 joint technical co-operation projects under implementation in 1985 for which UNIDO was the executing agency and a further 15 for which UNIDO was the associated agency.

5. Another aspect of co-ordination activities is the provision of information for reports prepared by the United Nations, its subsidiary bodies and other organizations. In 1985, UNIDO contributed comments on the programme budgets of FAO, ILO and WHO and information was provided on UNIDO activities in connection with the European and Asia and Pacific regional seminars for the International Year of Peace, the World Decade for Cultural Development, the International Youth Year and the United Nations Decade of Disabled Persons. In addition, reports, papers and statements were prepared for the twenty-third session of the Executive Board of UNESCO, the twenty-third session of the Conference of FAO, the thirteenth session of the Governing Council of UNEP, the thirty-eighth session of the World Health Assembly, the eighth session of the Commission on Human Settlements, an informal seminar on international process safety hazards organized jointly by the United Nations Centre on Transnational Corporations and UNEP, and the Inter-Agency Working Group on Desertification. UNIDO also provided technical comments on reports, papers and studies requested by other organizations, organs or specialized agencies of the United Nations system.

6. UNIDO maintained programme co-ordination with the regional commissions. In this connection, UNIDO participated in an evaluation exercise on industrial activities in the countries of the central African subregion and contributed to a regional review, prepared by the Economic Commission for Africa (ECA), of the implementation of the science and technology chapter of the Lagos Plan of Action.

7. During 1985, nine inter-secretariat co-ordination meetings were convened. The twelfth session of the FAO/UNIDO Joint Technical Working Group on Forest Industries (Rome, January) reviewed co-operation between the two organizations involving over 20 specific forest industries projects in Africa, Asia and Latin America. These included 12 pulp and paper projects and other projects dealing with the mechanical processing of wood, including such non-conventional raw materials as coconut stem wood and rubber wood.

8. The first session of the UNIDO/ECWA (Economic Commission for Western Asia)² Inter-Secretariat Meeting (Vienna, January) resulted in the signing of a Note of Understanding between the two organizations and, among other things, established a new co-ordination mechanism, the Annual Programming and Co-ordination Meeting. An in-depth review of existing areas of substantive co-operation was carried out and new areas were identified for future co-operation.

9. At the UNIDO/UNV (United Nations Volunteer Programme) Meeting (Vienna, April), a draft Memorandum of Understanding between the two organizations was also signed setting out modalities and procedures aimed at increasing the use of United Nations volunteers in UNIDO technical co-operation projects.

10. The thirty-fifth session of the ILO/UNIDO Working Party (Vienna, April) considered areas for future co-operation including training, energy, information systems, continuation of the publication of the series of Technical Memoranda, and future ILO contributions to the sectoral studies of UNIDO.

11. The eighteenth session of the FAO/UNIDO Inter-Secretariat Committee (Vienna, May) reviewed the work of the various FAO/UNIDO Joint Technical Working Groups and considered how co-operation on the UNIDO System of Consultations could be strengthened. The status of projects under joint execution was also reviewed.

12. The fifth session of the UNEP/UNIDO Joint Committee on Co-operation (Vienna, September) considered such issues as environmental studies of the petrochemical and the iron and steel industries, environmental decision game, safety and health at work in pesticide manufacture/formulation plants in developing countries, training in environmental assessment, introduction of environmental components into UNIDO training programmes, preparation of safety guidelines pertaining to bioscience industry and follow-up to the World Industry Conference on Environmental Management.

²Now Economic and Social Commission for Western Asia (ESCWA).

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13. At the thirty-sixth session of the ILO/UNIDO Working Party (Geneva, October), discussions centred on future co-operation in human resource development pursuant to resolution 1 adopted by the Fourth General Conference of UNIDO. Views were also exchanged on ways and means of enhancing co-operation between UNIDO and the ILO Centre for Advanced Technical and Vocational Training (Turin Centre).

14. The fifth session of the FAO/UNIDO Joint Technical Working Group on the Fisheries Industries (Rome, October) discussed modalities for co-sponsorship of the first Consultation on the fisheries industry that UNIDO is planning for 1987. It reviewed the situation with regard to the implementation of the conclusions and recommendations of the World Conference on Fisheries Management and Development organized by FAO in 1984.

15. The first UNIDO/ECE (Economic Commission for Europe) Inter-Secretariat Meeting (Vienna, December) reviewed the scope and content of past and current co-operation between the two organizations with a view to arriving at a new agreement embodying revised mechanisms for co-operation. Special attention was paid to joint studies on industrial sectors of common interest, as well as to energy issues and the joint execution of projects with co-operation, wherever possible, from the private sector.

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

17. In the period under review, UNIDO received approximately 500 invitations to meetings of policy-making bodies as well as to programme-related technical meetings organized by other organizations, organs or specialized agencies of the United Nations system. UNIDO participated in only 138 of these meetings, 72 of them through staff based at the meeting venue including Vienna.

RELATIONS WITH GOVERNMENTS AND INTERGOVERNMENTAL ORGANIZATIONS

18. The external relations activities of UNIDO received special emphasis in 1985 in connection with the finalization of the process of the conversion of UNIDO into a specialized agency. The Secretariat provided assistance to delegations of Member States attending the first session of the General Conference held in August and December 1985, and participating in the 1985 Pledging Conference for the Industrial Development Fund held on 11 and 12 December. Contacts were also maintained with Member States before and after the entry into force of the Constitution of UNIDO on 21 June 1985 to ensure a smooth transition period and to encourage the Member States of the

United Nations to join UNIDO as a specialized agency without delay. As of 31 December 1985, 133 States had become Members of UNIDO.

19. Included among the external relations activities of the Secretariat were matters such as arrangements for visits of the Executive Head of the Organization to Governments and intergovernmental organizations and for high-level visits from Governments and intergovernmental organizations to UNIDO Headquarters, as well as follow-up on issues originating from those visits. Arrangements were also made for the participation of UNIDO in various international meetings. As part of its protocol activities the Secretariat arranged for the presentation of credentials of Permanent Representatives to UNIDO and continued to issue the monthly Permanent Mission directory.

20. During the year under review, the Secretariat continued to strengthen co-operation with the intergovernmental organizations active in the field of industrial development. In 1985 co-operation was maintained with 107 intergovernmental organizations of which 38 had concluded formal co-operation arrangements with UNIDO as an organ of the United Nations, mainly relating to technical co-operation activities. At its nineteenth session (May 1985), the Industrial Development Board of UNIDO as a United Nations organ agreed to grant the status provided for under rule 75 of its rules of procedure to five intergovernmental organizations: the Arab Federation for Technical Education, the International Institute of Refrigeration, the International Jute Organization, the Islamic Centre for Development of Trade and the South Asia Co-operative Environment Programme. This brought to 46 the total number of intergovernmental organizations associated with the work of the former Industrial Development Board (see appendix H). Article 19 of the Constitution of UNIDO as a specialized agency stipulates that the Director-General, with the approval of the Board and subject to guidelines established by the Conference, may enter into agreements establishing appropriate relationships with intergovernmental and governmental organizations. In December, the General Conference of UNIDO at its first session adopted decision GC.1/Dec.41 containing guidelines for the relationship of UNIDO with intergovernmental, governmental, non-governmental and other organizations.

21. Efforts continued to increase co-operation with several regional and sub-regional organizations. Such co-operation took place between UNIDO and the Preferential Trade Area for Eastern and Southern African States (PTA), the Arab Industrial Development Organization (AIDO), the Commission of the Cartagena Agreement, the Andean Development Corporation (ADC), the Latin American Energy Organization (OLADE), the Group of Latin American and Caribbean Sugar Exporting Countries (GEPLACEA), the Caribbean Community (CARICOM) and the Caribbean Development Bank. An agreement for co-operation was signed with the Latin American Economic System (SELA) in February 1985. Accordingly, areas were identified for co-operative endeavours between the two organizations to be monitored by a UNIDO/SELA inter-secretariat working party which will meet annually. Within the context of the conversion of UNIDO into a specialized agency and the celebration of the tenth anniversary of SELA, a reiteration of the agreement was signed at SELA headquarters in November. Another example of inter-organizational co-operation was a meeting at executive head level between UNIDO and AIDO in Baghdad in January 1985, at which past and future

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co-operation activities between the two organizations were reviewed and programmes and projects were agreed upon for joint implementation during 1985 and 1986.

22. The Joint UNIDO/Council for Mutual Economic Assistance (CMEA) Working Group held its first meeting in Moscow in January 1985 during which a work programme for 1985-1986 was adopted. At a meeting of the Joint Committee of UNIDO and the International Centre for Public Enterprises in Developing Countries (ICPE) held in Vienna in November experiences and achievements since 1980 were reviewed and a work programme for 1986-1987 was established. In co-operation with the Organisation for Economic Co-operation and Development (OECD) a joint UNIDO/OECD Development Centre expert group meeting was held in Vienna in December to discuss the mobilization and allocation of domestic finance in particular for small and medium enterprises, including industrial co-operatives.

23. UNIDO continued to pursue its activities relating to joint programmes and similar co-operation arrangements which have been established between UNIDO and a number of countries for co-operation in specific areas. Joint committees set up to monitor these activities met during the year: the Joint UNIDO/Hungary Programme for International Co-operation at Budapest (January), the Joint UNIDO/Romania Centre in Vienna (April), the Joint UNIDO/Czechoslovakia Programme for International Co-operation in the Field of Ceramics, Building Materials and Non-metallic Mineral-based Industries at Pilsen (February) and in Vienna (November) and the Joint UNIDO/Turkey Committee for Co-operation in Vienna (October). Furthermore, a working arrangement was elaborated with the National Institute for Industrial Technology (INTI) of Argentina for the establishment of a programme to promote co-operation among developing countries.

24. The Secretariat proceeded with its efforts to enhance the role of the National Committees for UNIDO which advise Governments and institutions about UNIDO activities and provide support to Governments' efforts towards industrialization. During 1985, five States—Central African Republic, Côte d'Ivoire, Guatemala, Guinea and Senegal—re-activated their National Committees and four States—Democratic People's Republic of Korea, Indonesia, Niger and Yemen—created National Committees, bringing to a total of 70 the countries which have established National Committees for UNIDO. In Africa, the National Committees are particularly active in connection with the Industrial Development Decade for Africa (IDDA), some of them acting as National Co-ordinating Committees for IDDA. For example, in Uganda the National Committee organized a workshop in March at which recommendations were adopted that have enabled the Government to readjust or reformulate its industrial strategies and policies with a view to accelerating the industrialization process in Uganda. In Côte d'Ivoire, the National Committee acted as host to a national seminar organized by the Ministry of Industry and UNIDO in June to discuss the industrialization programme of Côte d'Ivoire, appropriate tools of industrial policies and financing of industrial development. The fourth round of discussions with the National Committees for UNIDO was organized in May during the nineteenth session of the Industrial Development Board. Representatives of the National Committees of the Central African Republic, Colombia, Czechoslovakia, Kenya, Nepal, Niger and Yemen parti-

participated in the discussions which centred on the role of the Committees as an effective instrument for accelerating the industrialization process of their countries. The quarterly *News Bulletin* for the National Committees for UNIDO continued to be issued; the *Bulletin* reports on the activities of Committees around the world and is distributed widely.

25. Throughout 1985, the Secretariat once again sought support from Member States for the Industrial Development Fund (IDF). With the conversion of UNIDO into a specialized agency, pledges to the Fund for 1986 were made during the United Nations Pledging Conference for Development Activities held in New York on 13 and 15 November as well as at the 1985 Pledging Conference for the Industrial Development Fund held in Vienna on 11 and 12 December. The amount pledged on both occasions totalled \$13.8 million (see chap. II).

CO-OPERATION WITH NON-GOVERNMENTAL ORGANIZATIONS AND BUSINESS AND INDUSTRIAL INSTITUTIONS

26. Throughout 1985, UNIDO strengthened and expanded its co-operation with non-governmental organizations (NGOs), and business and industrial institutions. This co-operation is initiated and monitored by the Non-governmental Organizations Section, which acts as a co-ordinator between UNIDO and national and international NGOs, such as professional and manufacturers associations, chambers of commerce and industry, universities, industrial R + D institutes, industrial co-operative organizations, international trade unions and industrial enterprises.

27. The co-operation between UNIDO and NGOs was aimed at tapping the resources from the latter organizations for UNIDO technical assistance and promotional activities. In order to make effective use of existing institutional facilities in the developing countries, co-operation with NGOs in those countries was intensified. Additional opportunities were thus offered to identify, formulate and implement projects in developing countries by using the accumulated experience and expertise from these organizations. UNIDO also promoted co-operation directly between NGOs, as very often problems of NGOs in developing countries can be solved by providing or initiating direct contacts with other NGOs from developed or certain other developing countries.

28. Priority was given to identifying and negotiating appropriate joint activities with NGOs. These activities are formulated with a view to supporting the UNIDO technical co-operation programme and special programmes such as the System of Consultations, IDDA and Economic Co-operation among Developing Countries (ECDC). An important resource for UNIDO was the technical and financial assistance provided by NGOs to the UNIDO work programme. This assistance helped to improve the quantity and quality of UNIDO technical co-operation programmes.

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29. Most joint promotional projects with NGOs, which were implemented in co-operation with other UNIDO branches or sections, led to technical co-operation activities either with bilateral assistance from donor NGOs or with multilateral assistance from UNIDO. Some NGOs made special-purpose contributions to the United Nations Industrial Development Fund (UNIDF) for joint implementation of technical co-operation activities. During 1985, 11 joint projects were implemented in co-operation with NGOs and many joint projects were being prepared for possible implementation later. For example, a workshop for African participants was jointly organized by UNIDO, the Polish Chamber of Foreign Trade and a Polish metallurgical consulting and engineering company. The workshop, which was held in Poland from 25 to 29 August, was aimed at improving the performance of the metal-processing industries in African countries. Apart from generating bilateral activities between Poland and the participating countries, the workshop also provided an opportunity for initiating projects of technical assistance to be jointly undertaken by the Polish industry and UNIDO. An offer was also made by the Polish company of a special-purpose contribution to UNIDF to implement the follow-up activities with inputs in kind and with direct financial contributions. Another example of a joint project is a workshop on computer-aided engineering held in Nanjing (China) in co-operation with the Chinese Association for Science and Technology. This workshop led to negotiations concerning the possible establishment of a regional centre for South-East Asia on computer-aided engineering.

30. In co-operation with the Association of African Development Finance Institutions (AADFI), UNIDO organized a forum at Abidjan (Côte d'Ivoire) to discuss possibilities of improving involvement of African and other international NGOs in UNIDO activities and promoting co-operation among these NGOs. The meeting was attended by more than 60 participants and a large number of project proposals were formulated for follow-up in 1986 and 1987.

31. Considerable attention was also given to the involvement of co-operatives in activities related to rural development and food processing. Several joint projects were developed in this field, particularly with respect to food-processing co-operatives. Special-purpose contributions to UNIDF and contributions in kind have been secured from the Central Co-operative Unions of Poland and Bulgaria for the implementation of these projects.

32. In order to stimulate the co-operation of NGOs in the technical co-operation programmes of UNIDO, for example with respect to the provision of expertise and training facilities, contacts with appropriate NGOs were elaborated and formalized. Particular efforts were made to recruit experts through NGOs on favourable terms for ongoing projects in Africa and for the rehabilitation of existing factory capacity. Experts were also secured through NGOs for some ongoing trust-fund projects.

33. An attempt was made to improve the interaction between UNIDO and selected universities that have included industrial development curricula for students from developing countries in their programmes. Memoranda of understanding were thus signed in 1985 with two universities.

34. The Section contributed directly to the System of Consultations by identifying NGOs in developed and developing countries to be invited to the Consultation meetings with subsequent involvement in follow-up activities. For example, as a follow-up to the Second Consultation on the Food-processing Industry with Special Emphasis on Vegetable Oils and Fats,³ a roster of partners for international co-operation in the food-processing industry was prepared and a project was formulated for implementation in 1986 in collaboration with the Central Co-operative Union of Bulgaria.

35. At its nineteenth session (May 1985), the Industrial Development Board of UNIDO as a United Nations organ granted consultative status to nine NGOs: the African Technical Association, the European Organization for Quality Control, the Federation of African Consultants, the Institute for Development of International Co-operation, the International Association of Islamic Banks, the International Organization of Experts, the International Society of Engineering Education, the Islamic Chamber of Commerce, Industry and Commodity Exchange, and the Latin American Association of Food Processors. This brought to 84 the total number of international NGOs having consultative status with UNIDO as a United Nations organ (see appendix H). Article 19 of the Constitution of UNIDO as a specialized agency stipulates that the Director-General, with the approval of the Board and subject to guidelines established by the Conference, may establish appropriate relations with non-governmental organizations the work of which is related to that of UNIDO. In December, the General Conference of UNIDO at its first session adopted decision GC.1/Dec.41 containing guidelines for the relationship of UNIDO with intergovernmental, governmental, non-governmental and other organizations.

FIELD ADVISER AND JUNIOR PROFESSIONAL OFFICER PROGRAMMES

36. At the beginning of 1985, 29 Senior Industrial Development Field Advisers (SIDFAs) and one project co-ordinator acting as SIDFA were on board. The implementation of the programme that covers SIDFAs under contract with UNDP and with UNIDO amounted to a total of 329 work-months compared to 319 work-months in 1984. Three SIDFAs were debriefed during the year, three were recruited and one was reassigned to another duty station. Of the 29 SIDFAs, 20 were from developing countries, seven from countries in list B, and two from countries in list D of annex I to the Constitution of UNIDO.

37. The table below shows the distribution of SIDFA posts as agreed with UNDP for 1985 compared with 1983 and 1984. Appendix F gives more details on the distribution of SIDFAs in 1985.

³Cf. ID/B/340, chap. V, para. 24.

DISTRIBUTION OF SIDFA POSTS

(By region and source of funds)

Region	Source of funds											
	UNDP			Regular budget			Voluntary contributions			Total		
	1983	1984	1985	1983	1984	1985	1983	1984	1985	1983	1984	1985
Africa	8	7	7	6	5	5	1	—	—	15	12	12
Asia and the Pacific	9	6	6	2	2	2	1	2	2	12	10	10
Latin America	6	5	5	2	2	2	—	—	—	8	7	7
Arab States	2	1	1	—	—	—	—	—	—	2	1	1
Europe	1	—	—	—	—	—	—	—	—	1	—	—
TOTAL	26	19	19	10	9	9	2	2	2	38	30	30

38. At the end of 1985, three SIDFAs covered one country each, 23 covered 52 countries in addition to the country in which their duty station was located (including 32 least developed countries and seven countries on an *ad hoc* basis) with assignments ranging from one to six additional countries each. Two SIDFAs in the Caribbean covered 20 countries and territories and one SIDFA in the Pacific region covered 12 countries and territories. Twenty-five countries and territories (including four least developed countries) were covered from UNIDO Headquarters.

39. At its nineteenth session in May 1985, the Industrial Development Board of UNIDO as a United Nations organ, in its conclusion 1985/7,⁴ underlined the need to strengthen and improve the SIDFA programme and agreed to invite the Governing Council of UNDP to finance the maximum number of SIDFA posts in 1986-1987, and for that purpose to explore all possible ways of locating additional resources. All Member States were urged to provide generous voluntary contributions for the programme and the Board stressed that the SIDFA programme should be maintained in 1986-1987 at its current level of 30 posts and that it should continue to take into account the special needs of the least developed countries. In approving the programme and budget for the biennium 1986-1987 (UNIDO/GC.1/10/Rev.1), the General Conference of the new UNIDO at its first session in December 1985 also approved provisions for the financing of nine SIDFA posts.

40. Subsequent to the nineteenth session of the Industrial Development Board in May 1985, the Governing Council of UNDP in its decision 85/41 requested the Administrator to review UNDP policy concerning the future of the SIDFA Programme during the fourth country programme cycle. It was agreed with UNDP that a joint UNDP/UNIDO review be prepared and undertaken by two senior consultants with the purpose of (a) evaluating the effectiveness of the present arrangements and (b) proposing, on the basis of the findings, ways and means to elicit a more effective response through the SIDFA programme to the present and future requirements of the developing countries in the industrialization process. The review covered, *inter alia*, an assessment of the performance of the SIDFA programme, the question of replacement of SIDFAs, selection of

⁴Official Records of the General Assembly, Fortieth Session, Supplement No. 16 (A/40/16), para. 119.



Preparation of a graphic design for textile printing (Sri Lanka)

SIDFAs as well as financing of the programme. The UNDP and UNIDO secretariats will make their assessments of the senior consultants' report and submit proposals to their governing bodies in 1986. On the basis of decisions to be taken by their governing bodies, UNDP and UNIDO will review the existing arrangements for the UNIDO field representation.

41. The continued support of the UNIDO Junior Professional Officer (JPO) programme by donor Governments has resulted in an increase in the number of JPOs. In 1985, a total of 75 JPOs were under contract for varying lengths of time, compared with 65 JPOs during the previous year. In 1985, 30 new JPOs were recruited, including two from developing countries. The increase was made possible through generous contributions of the Governments of Belgium, Denmark, Finland, Germany, Federal Republic of, Italy, Japan, Netherlands, Norway, Sweden and Switzerland. The Government of the Netherlands continued to sponsor six JPOs from developing countries. Appendix F shows the distribution of the JPOs and the corresponding donor countries.

42. The JPOs, whose main function is to assist SIDFAs in co-ordinating and monitoring UNIDO activities, have continued to provide valuable support to the UNIDO technical co-operation programme. In 1985, 35 JPOs were assigned to countries with resident SIDFA, and 28 JPOs were in countries covered by a SIDFA. At various times throughout the year nine JPOs served in countries

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where it was not possible to provide SIDFA coverage because the presence of a SIDFA was only on an *ad hoc* basis or the SIDFA post was vacant or discontinued. These nine JPOs were responsible for providing sectoral support to the UNDP Resident Representatives' offices and assisted in the implementation of UNIDO programmes.

43. The JPOs contributed to various seminars and meetings organized by UNIDO such as the investment promotion meetings in Ecuador, Gabon and Sudan. They also attended regional and national meetings as observers on behalf of UNIDO when financial constraints prevented UNIDO Headquarters staff from travelling.

44. Two JPO training courses, which were attended by 30 JPOs and donor country representatives, were held in April and November. Two mid-assignment review meetings for 19 JPOs took place in March/April and October. A comprehensive manual to guide the work of UNIDO JPOs was prepared in 1985 and the draft was used as a background document during the November training course. The manual will be printed in early 1986.

45. SIDFAs and JPOs are required to report on a quarterly basis on economic and political developments in the industrial sector of the countries covered. The new guidelines on reporting, introduced at the beginning of 1985, help SIDFAs and JPOs to present clear field reports on progress made and problems encountered in the implementation of UNIDO technical co-operation projects. Acting as an early warning system, the reports alert the management of UNIDO to the need to take measures to redirect project activities and avoid implementation delays. The latest available data on economic policies and conditions in the industrial sector are also used for the preparation of regional and country studies. During the year, some 250 field reports were received and distributed to the substantive and policy-making sections and branches at UNIDO Headquarters. In addition, monthly summaries of field reports received from SIDFAs and JPOs are prepared and distributed to the officers concerned at Headquarters. In 1985, a preliminary study was undertaken in the UNDP office in Brazil on the possibility of establishing a computerized system of information within the SIDFA offices.

46. In 1985, UNDP visits to UNIDO Headquarters included 35 Resident Representatives from all the regions of the developing countries. A number of high-level officers from UNDP Headquarters also visited UNIDO including the representatives from the Regional Bureau for Latin America, UNDP consultants for regional Europe and the UNDP/UNIDO consultant team which prepared a joint study on the SIDFA programme. In 1986, more stress will be placed on consultations with UNDP senior officials from the regional bureaux, and UNDP Resident Representatives.

47. A revision of the "Country data bulletin" (UNIDO/PC/R.5/Rev.1) was published and distributed within the UNIDO Secretariat and to field offices in September 1985. The bulletin contains information, according to country, on UNIDO/UNDP field offices, governmental institutions and basic country statistics and provides an information tool on the UNDP country network. The bulletin will be updated every six months.

PUBLIC INFORMATION

48. With the transformation of UNIDO into a specialized agency in 1985, many of the public information activities were geared towards serving the special requirements of the Organization during its transition period. Although there was a formal separation of the United Nations Information Service (UNIS) from UNIDO Public Information in 1984, the Head of the UNIDO Public Information Section continued to act as Director of UNIS until October 1985, when a full-time UNIS Director was appointed. Pending the outcome of consultations between UNIDO and the United Nations on the future of the audio-visual service, UNIDO continues to administer this service and to meet, on a reimbursable basis, the needs of the United Nations units based in Vienna in this area.

49. The highlight of the year was the publicity effort devoted to the meetings of the policy-making organs of the new Organization, in particular the two parts of the first session of the General Conference. The news media were kept abreast of developments through press releases in English and French, press briefings and interviews with the Executive Director of UNIDO as a United Nations organ and the Director-General of UNIDO as a specialized agency, both at UNIDO Headquarters and abroad.

50. During the Conference, arrangements were made to accommodate all visiting journalists and the UNIDO/United Nations staff responsible for covering the meetings at Vienna's Hofburg Congress Centre. A total of 138 journalists from 23 countries were accredited for the two parts of the Conference. Facilities in the press area included video monitors covering the main meeting room; sound equipment giving access to the seven-language translation service; telex, telephone and postal services; a briefing room; a documents centre; and radio/television recording facilities. Arrangements were made for press briefings given by the Executive Director, the three official candidates for the post of Director-General, the Presidents of the Conference and the Industrial Development Board, the Director-General elect, spokesmen from regional groups and heads of delegations.

51. Another area of emphasis during 1985 was public information activities in support of IDDA. These activities included organizing a mission for reportage to several African countries (Côte d'Ivoire, Egypt, Nigeria, Senegal, Sudan, Tunisia and Zaire) for senior editors from the *World Newspaper Supplement*. The editors observed industrial development work in those countries and prepared articles and featurettes for their respective newspapers. Feedback from United Nations Information Centres (UNICs) in the countries visited and from the journalists who participated indicated that the mission provided a unique opportunity to obtain information on government programmes dealing with industrialization and to assess the role of UNIDO in those programmes. Production began on the film *Challenges of Industrialization*. A camera team, supervised by the Public Information Section, undertook filming in several African countries and additional material was obtained from a number of international organizations and other agencies.

52. With regard to IDDA, emphasis was placed throughout the year on encouraging representatives of leading international news media to give

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adequate coverage to industrial development efforts in Africa. In that context extensive briefings were given to visiting journalists as well as to correspondents accredited to the international organizations in Vienna. Publicity material was made available and a number of journalists were provided access to studio facilities for audio transmissions. Advance notification was given for and press releases were provided on meetings and conferences relating to Africa that took place in the Vienna International Centre (VIC). Towards the close of the year, preparations were concluded for a journalists' workshop on the industrialization of Africa. The workshop will be held in conjunction with a Conference of African Ministers of Industry, now scheduled to take place in the second half of 1986 in Rujumbura (Burundi), with the goal of developing a fresh approach to publicity of the industrial effort in Africa and outside the region. A number of African directors of information and members of the world press have been invited.

53. Publicity material included two principal publications on IDDA which made an impact in 1985: the *Bulletin of the Industrial Development Decade for Africa* and *Notes on the Industrial Development Decade for Africa*. All items in the *Bulletin* are researched, written and edited by the Public Information Section. The Section also prepared an IDDA folder, which contains selected background papers, reports, brochures and other items on the Decade. The folder was distributed to interested parties at UNIDO Headquarters as well as through SIDFAs and UNICs.

54. At the request of the Government of Togo and the Organization of African Unity (OAU), UNIDO participated in the fourth All Africa Trade Fair (Togo 2000) held in Lomé in November/December. At the Fair, the Public Information Section provided an information stand where publicity material on UNIDO and IDDA was distributed (cf. chap. V, para. 102).

55. To give UNIDO senior staff greater access to newspapers and journals of direct relevance to their work, as well as generate increased current awareness of development issues, a weekly UNIDO press review was initiated at UNIDO Headquarters. Since its inauguration in January, abstracts were made of some 900 articles from the world press according to specific categories of interest and distributed to senior staff in newsletter format. The growing number of requests for copies of the complete articles supplied by the Section as a reader service reflect a favourable response to the project.

56. Public information activities during the year under review again included missions covering UNIDO projects; press conferences and media interviews; briefings for journalists, government officials, UNIDO field representatives and others on the work of the Organization; audio-visual activities; preparation, on request, of features and articles on specific subjects; publications on UNIDO activities; dissemination of information material to Governments, the media and the general public; and maintenance of a reference library. Existing publications were updated and new ones describing the work of UNIDO were produced as well as a series of illustrated success stories on UNIDO projects.

57. Press release coverage was provided of all major UNIDO meetings during 1985, including the sessions of the policy-making organs (Vienna); the Regional Investment Promotion Meeting for East Africa (Khartoum); the First Consul-

tation on the Building Materials Industry (Athens); the Second Consultation on the Capital Goods Industry and Energy-related Technology and Equipment (Stockholm); the Investment Promotion Meeting for the Fujian Province (Xiamen, China); the Investment Promotion Meeting for Ecuador (Quito); the Third Consultation on the Petrochemicals Industry (Vienna); and UNIDO participation in the Technology for the People fair (Budapest).

58. An information exhibition on UNIDO activities in Geneva was arranged on the occasions of United Nations Day and the fortieth anniversary of the United Nations.

59. The increase in demand for audio-visual services over the past year was a reflection of the expansion of UNIDO activities and those of the United Nations. The increase was in the production of video and radio programmes, the number of exhibitions mounted and photo coverage. The *VIC Journal*, a quarterly video programme of UNIDO and United Nations activities, was introduced early in the year. The international public was informed about UNIDO and United Nations activities through transmission of television programmes depicting the work of the organizations.

NEW YORK LIAISON

60. In 1985, the UNIDO Liaison Office in New York continued to serve as the major link between UNIDO Headquarters and United Nations Headquarters. During the fortieth session of the General Assembly, support and services were provided to representatives from UNIDO Headquarters, particularly with regard to agenda item 12 ("Report of the Economic and Social Council") under which the relationship agreement between the United Nations and UNIDO was discussed; agenda item 84 ("Development and international economic co-operation"); agenda item 116 ("Proposed programme budget for the biennium 1986-1987") under which a loan of \$24 million from the United Nations to UNIDO as a specialized agency was discussed; and other items of interest to UNIDO that were allocated to the Second and Fifth Committees.

61. The Liaison Office also provided representation at, coverage of and reporting on some 150 intergovernmental and inter-agency meetings that took place in New York or elsewhere, including those of the Economic and Social Council, the thirty-second session of the Governing Council of UNDP, the fourth session of the High-level Committee on the Review of Technical Co-operation among Developing Countries, various technical committees, the ACC and its subsidiary bodies, the twenty-first session of the Committee for Development Planning, the first session of the *Ad Hoc* Committee of the Whole to Review the Implementation of the Charter of Economic Rights and Duties of States, the resumed first session of the Committee on the Review and Appraisal of the Implementation of the International Development Strategy for the Third United Nations Development Decade, the eleventh session of the Commission on Transnational Corporations, the fifth session of the Intergovernmental Committee on Science and Technology for Development, the

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twenty-third session of the Population Commission and the resumed third session of the Commission on the Status of Women acting as the preparatory body for the World Conference to Review and Appraise the Achievements of the United Nations Decade for Women.

62. Close co-operation was maintained with the Office of Legal Affairs in New York and with delegations and groups of delegations with regard to the ratification of the Constitution of UNIDO and in the implementation of General Assembly resolution 39/231 on the conversion of UNIDO into a specialized agency.

63. Through contacts with permanent missions and United Nations departments concerned, the Liaison Office also participated actively in the organization of the one-day closing meeting of the Meetings on the conversion of UNIDO into a specialized agency held in New York on 10 June 1985, and the first sessions of the General Conference of UNIDO, the Industrial Development Board and the Programme and Budget Committee. The Liaison Office also assisted in the organization of the meeting of the Economic and Social Council Committee on Negotiations with Intergovernmental Agencies for the purpose of negotiating a relationship agreement between the United Nations and UNIDO. The General Assembly adopted the agreement, as contained in resolution 40/180, on 17 December 1985.

64. The Liaison Office was responsible for follow-up at United Nations Headquarters to the United Nations Pledging Conference for Development Activities for 1985 concerning pledges for UNIDF. It also represented UNIDO at the Pledging Conference for 1986 which was held at United Nations Headquarters on 14 and 15 November 1985.

65. As in the past, the Liaison Office maintained close co-operation with the Office of the Director-General for Development and International Economic Co-operation and with the Office for Special Political Questions on the implementation by UNIDO of General Assembly resolutions on special economic assistance programmes; it also maintained close relations with the League of Arab States, the OAU and the Organization of the Islamic Conference. The Office continued to represent UNIDO at the inter-agency Working Group on Assistance to Lebanon and meetings organized by the Secretary-General on the critical economic situation in Africa, on special assistance to Mexico, and on narcotic drug abuse and control.

66. The Office maintained contact with UNDP and continued to assist in the implementation of technical co-operation activities covering formulation and implementation of projects, including recruitment of experts, placement of fellowship holders, procurement of equipment and organization of study tours. Follow-up action was taken on nearly 150 projects and project proposals. The Office participated actively in the emergency assistance to Mexico, when that country was struck by an earthquake.

67. The Liaison Office provided information and documentation to permanent missions in New York as well as to industry, libraries, research organizations, government agencies, technical experts and academic institutions. As in the previous year some 4,000 inquiries were received on UNIDO

activities. Items of particular interest during 1985 included the conversion of UNIDO into a specialized agency and in that context the first session of the General Conference of UNIDO, the International Centre for Genetic Engineering and Biotechnology, IDDA as well as information and studies on the petrochemical and agro-industries.

68. The Office also maintained contact with United States and Canadian business companies that expressed interest in co-operation with UNIDO. As a follow-up to the visit of the Director-General to the United States of America in October 1985, the Liaison Office contacted 26 companies and institutions to discuss the possibility of supplying high-level expertise at short notice and to advise on identification and selection of training institutions and equipment supplies. Private companies expressed particular interest in working with China, India, Saudi Arabia, and the Caribbean and Pacific island countries.

69. As an outcome of discussions with the Liaison Office, the Polytechnic University of New York with a group of scientists and major company representatives decided to form on an experimental basis an informal industrial co-operative group. The group is to assist UNIDO in responding to requests from developing countries on subjects dealing with high technology and in providing consultants for pre-investment planning and institution-building projects. Within the framework of the implementation of the programme for IDDA, the Liaison Office participated in the organization of a meeting on manufacturing telecommunications equipment at Harare (Zimbabwe) in February.

70. The Liaison Office held discussions with the County of San Bernardino, California, the University of California, and the California Engineering Foundation, on the holding in 1986 of an international seminar on earthquake engineering to consider experience gained in California, Mexico, the Asian countries and the Balkan States with rubber-base isolation techniques developed with the assistance of UNIDO.⁵

UNIDO REPRESENTATION AT GENEVA

71. In 1985, the UNIDO representation at Geneva was involved in the process and negotiations that led to the transformation of the Organization into a specialized agency. The Special Representative of the Executive Head and his assistant ensured liaison with the permanent missions of those countries that are accredited to UNIDO and based in Geneva, particularly in connection with the holding of the first sessions of the General Conference, the Industrial Development Board and the Programme and Budget Committee.

72. In addition to providing advice, information and documentation to permanent missions, the Geneva office acted at the request of UNIDO Headquarters to collect and supply information on activities and programmes of the Geneva-based United Nations organizations. The UNIDO stand at the

⁵ID/B/340, chap. III, paras. 261 and 262.

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open house day at the Palais des Nations organized on the occasion of the fortieth anniversary of the United Nations, in October, was arranged by the Geneva office to promote better knowledge of the activities of UNIDO.

73. During 1985 staff of the Geneva office participated in over 40 meetings, conferences, symposia and seminars. In particular, the Special Representative was invited to participate as a resource person in a round-table discussion at the United Nations Institute for Training and Research seminar on the International Civil Service.

74. As in previous years, the Geneva office assisted in the debate and discussions of the Economic and Social Council and in the meetings of the ACC and its subsidiary bodies. Other significant meetings covered included the Conference on the Emergency Situation in Africa, the thirtieth session of the Trade and Development Board and some of its committees, the thirty-eighth World Health Assembly of the World Health Organization and the meetings of the seventy-sixth session of its Executive Board, the seventy-first session of the General Conference of the International Labour Organisation and the meetings of the Governing Body of the International Labour Office as well as the UNIDO/ILO Joint Working Party.

75. UNIDO played an active role through its Geneva office in the preparation of the Conference on Indian Ocean Marine Affairs Co-operation. One of the activities in the calendar of the Geneva office in 1985 was the participation of the Special Representative in a symposium on entrepreneurship and economic development, which was organized in September by the Permanent Mission of the United States of America in Geneva with the Ambassador of the United States acting as host and co-ordinator.

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GENERAL ADMINISTRATION

STAFFING

1. UNIDO Personnel Service continued in 1985 to recruit and manage the Organization's Secretariat staff and to administer its internationally and locally recruited project personnel. The total number of persons administered at UNIDO Headquarters and in the field on 31 December 1985 was 2,393, compared with 2,361 on 31 December 1984. In addition to these functions, 1985 was marked by the initiation and implementation of many personnel-related activities arising from the conversion of UNIDO into a specialized agency and aimed at ensuring the smooth transfer of staff to the specialized agency. Furthermore, the UNIDO Personnel Service assumed additional functions previously carried out by the Office of Personnel Service at United Nations Headquarters.

2. Taking into account paragraph 4 of General Assembly resolution 34/96 and paragraph (c) of decision GC.1/Dec.9 adopted by the General Conference of UNIDO at its first session, which stated that the staff of the United Nations assigned to the existing UNIDO should be offered appointments by the new UNIDO that preserved their acquired rights and contractual status, an agreement on transfer, secondment and loan of staff was reached between the Director-General of UNIDO and the Secretary-General of the United Nations. Offers of appointment based on the agreement were made to all staff members stationed at UNIDO Headquarters and project personnel in field duty stations. The large majority of staff in the Professional category, the project personnel and their support staff, and the staff in the General Service and Manual Worker categories signed letters of appointment for their transfer to the new UNIDO. Twenty staff members in the Professional category have opted for special secondment from the United Nations to UNIDO.

3. The maintenance of staff/management consultations within UNIDO continued to be marked by a spirit of co-operation and effective communication. Management and staff representatives held continuous consultations on issues affecting the welfare of the staff, such as conditions of work and general living conditions. Communication was conducted mainly through the joint advisory machinery, particularly in connection with issues related to personnel matters resulting from the conversion of UNIDO into a specialized agency.

4. Following negotiations between UNIDO and the United Nations, posts and staff of certain services as reflected in the report of the Secretary-General on

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the conversion of UNIDO into a specialized agency (A/C.5/40/48) were transferred from UNIDO to the United Nations Office at Vienna (UNOV). These included posts in the Communications, Archives and Records Unit (1 Professional and 42 General Service and Manual Worker posts), the Interpretation Section (4 Professional and 1 General Service posts) and the Meetings Planning and Servicing Unit (2 Professional and 4 General Service posts). The remaining part of the UNIDO Conference Service—Office of the Head of the Service, Translation Section, Publications Section and Editorial Control Section (187 established posts: 81 Professional and 106 General Service and Manual Worker posts) as well as staff financed from temporary assistance resources—will continue to be managed by UNIDO during an interim period when the conference service requirements and facilities of the Vienna-based organizations will be analysed in a study to be completed in 1986. The United Nations General Assembly and the General Conference of UNIDO will take into account this study when deciding on the organization of the conference services in the Vienna International Centre (VIC). Pending such a decision, the Conference Service staff will continue to hold United Nations appointments and be on loan to UNIDO. The Personnel Service of UNIDO will remain in charge of their administration, review of contractual status and recruitment.

5. Several papers were prepared on issues related to personnel matters and submitted to the Industrial Development Board and General Conference. Personnel Service implemented decisions taken on the following subjects by the General Conference at its first session:

(a) Membership of UNIDO in the International Civil Service Commission (ICSC) (IDB.1/Dec. 18);

(b) Participation by UNIDO in: (i) the United Nations Administrative Tribunal with respect to matters relating to the United Nations Joint Staff Pension Fund; and (ii) the Administrative Tribunal of the International Labour Organisation with respect to terms of appointment of officials and matters relating to staff regulations and rules of the staff of UNIDO (GC.1/Dec.36);

(c) Participation by UNIDO in the United Nations Joint Staff Pension Fund, including the conclusion of an agreement and the establishment of the UNIDO Staff Pension Committee (GC.1/Dec.37).

In addition, an Advisory Board on Compensation Claims was established and continued coverage was secured for staff members in the group life and health insurance plans. Drafting began on staff regulations to be submitted to the Industrial Development Board for consideration at its second session (October 1986).

6. On assuming its responsibility as an independent specialized agency, UNIDO established its own Appointment and Promotion Board, Committee and Panel which will review appointments, extensions and renewal of contracts where appropriate and deal with promotions and other reviews foreseen in the Staff Regulations and Rules.

7. The composition of the staff of the UNIDO Secretariat up to 31 December 1985, according to category and sex, and with comparable figures for 1983 and 1984, is given in table I below.

TABLE I. COMPOSITION OF THE UNIDO SECRETARIAT^a

Category	As at 31 December 1983		As at 31 December 1984		As at 31 December 1985	
	Male	Female	Male	Female	Male	Female
P-5 and above	139	3	140	4	136	5
P-1 to P-4	222	66	239	72	245	73
General Service	191	627	189	644	195	653
Manual Worker	124	5	120	6	135	5
Language Teachers	—	—	2	4	2	5
Subtotal	676	701	690	730	713	741
TOTAL	1 377		1 420		1 454	

^aFigures include interregional and special technical advisers attached to UNIDO Headquarters (as of 31 December 1985: 5 interregional advisers and 15 special technical advisers); they do not include short-term staff or Senior Industrial Development Field Advisers (with the exception of three staff members temporarily serving in the latter capacity). The figures also include staff members filling posts under budget sections 28 and 29 of the United Nations.

Recruitment

8. On 31 December 1985, there were 42 vacant posts under various stages of recruitment, compared with 30 in 1984. Of these 14 were language posts for which recruitment is undertaken in conjunction with the United Nations, New York. One was in the Economic Commission for Africa, one in the Economic Commission for Latin America and the Caribbean and one was in the Economic and Social Commission for Western Asia.

9. As of 31 December 1985, 78 appointments had been made in the Professional and higher categories (1984: 116). Among those appointed were staff members reassigned from other United Nations duty stations, and candidates who had been successful in the United Nations internal competitive examinations for the promotion of staff from the General Service to the Professional category. During the same period, 67 staff members at the Professional and higher levels left the Organization (1984: 69).

10. During the period under review, 90 fixed-term appointments were made in the General Service and Manual Worker categories and 56 staff members were reassigned within UNIDO or transferred from the United Nations units to UNIDO. In 1985 the total of appointments was 104 and the total of transfers and reassignments was 60. Altogether 71 staff members in these categories left the Organization (1984: 86) and 5 staff members transferred to the United Nations units (1984: 15).

11. UNIDO continued to recruit conference servicing staff for all conferences and meetings organized not only by UNIDO but also by the United Nations units in Vienna, as well as for those organized at Vienna by United Nations Headquarters and other intergovernmental organizations and some international conferences organized by the Austrian Government during 1985. Personnel Service issued altogether 2,002 contracts for conference servicing staff (1984: 1,594). In addition, during the same period, 188 short-term contracts were issued for secretariat staff (1984: 256).

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12. During 1985 a total of 443 consultants and individual contractors' contracts were issued for the provision of outside expertise and professional services in the Secretariat (1984: 367).

Employment of women

13. Prior to its conversion into a specialized agency, UNIDO as part of the United Nations Secretariat measured its achievements in the employment of women against the target set in 1978 by the General Assembly in its resolution 33/143 in which the Secretary-General was requested to ensure that by 1982, 25 per cent of all posts subject to geographical distribution would be filled by women. The number of women in such posts in UNIDO has almost doubled since 1978 but by the end of 1985 the target set had not been reached with only a total of 57 women (16.62 per cent of all posts). If all professional posts are considered, the number of women rose to 78 (17 per cent), representing a modest increase over 1984.

14. Efforts were made by the UNIDO Secretariat to increase the number of women candidates on the roster for filling vacant posts. Vacancy announcements were circulated to women's associations and repeated appeals were made to Member States to give particular attention to submitting female applicants for consideration by UNIDO. Despite these efforts, however, the number of applications received from females was not encouraging. As in previous years¹ applications received from women accounted for some 16 per cent of the total number received and came mostly (92.2 per cent) from nationalities which are already either well represented or over-represented.

15. A comparison of the distribution of male and female Professionals by grade shows an increase since 1978 of female staff in the Professional category up to the P-4 level. In 1985, one woman was promoted to the D-1 level (25 per cent of all promotions to that level in UNIDO); one to the P-5 level (14.3 per cent); three to the P-4 level (20 per cent); and five to the P-3 level (45 per cent).

16. To provide a better tool for career development, the data base on women was improved. Participation by women in personnel advisory and administrative boards has for a long time been high; appointment and promotion bodies for Professional as well as General Service and Manual Worker staff were chaired by women during the period under review. Training courses and workshops were organized for women. Courses were also conducted to further understanding at the managerial level of the role of women in the development process and the need to integrate them into that process.

Personnel management

17. Within its statutory personnel management responsibilities, personnel administration is concerned with the implementation of staff regulations and staff rules relating to the benefits and entitlements of the staff members as well

¹Cf. ID/B/340, chap. VIII, para. 15.

as their contractual status. In accordance with Article 26.2 of the Constitution of UNIDO and decision IDB.1/Dec.17 of the Industrial Development Board, the Staff Regulations of the United Nations as at 31 December 1985, *mutatis mutandis*, will continue to apply until the General Conference approves the staff regulations of UNIDO as a specialized agency (see para. 5 above).

18. The preparation and classification of job descriptions for the Professional category and for the D-1 level was completed in 1985. In accordance with an ICSC decision, common job classification standards for General Service and Manual Workers are being developed for the use of all Vienna-based organizations. A joint working group composed of representatives of the staff and the administrations of UNIDO, UNOV and the International Atomic Energy Agency (IAEA) and observers from the United Nations Relief and Works Agency for Palestine Refugees in the Near East continued to make progress on the subject. The first tests on the proposed standards were completed in October 1985 and the final tests will be completed early in 1986. The classification standards will be submitted to ICSC for consideration at its twenty-fourth session (1986).

19. The training programme continued to emphasize courses in electronic data processing (EDP), and 10 different courses in word processing and data processing were offered in 1985. Terminals were rented to make the best use of in-house trainer time. Because significant progress resulted from these efforts, UNIDO acquired by the end of 1985 four terminals for continuous training. The terminals will enable staff to receive training in more advanced applications, thereby increasing the benefits to the organization through more sophisticated use of the equipment available. Significant progress was made on a management development programme for managers and supervisors at all levels in the Organization. Twenty-five different training courses were offered for career development of staff, including the subjects of drafting skills, management of cultural differences, interpersonal communication, small-group dynamics, presentation skills and UNIDO financing systems as related to projects. In the latter part of the year, senior managerial staff assessed the training needs of their divisions and a training plan for 1986-1987 was developed.

20. 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, mission members and adult dependants of staff. In the autumn 1985 semester 803 persons were enrolled in 64 classes of the regular language programme. The Unit also continued to administer the United Nations competitive examination for promotion to the Professional category of staff members from other categories. In addition, the Unit administered competitive examinations for translators, editors and proof-readers and the language proficiency examinations in the official languages of the United Nations.

21. Personnel Service participated in a series of inter-agency meetings of the United Nations common system such as ICSC and its technical bodies and the Consultative Committee on Administrative Questions (CCAQ).

PROJECT PERSONNEL

22. In 1985, experts and consultants continued to be the main component of UNIDO technical co-operation projects. Project personnel constituted 46.9 per cent of all expenditures for UNIDO technical co-operation activities (1984: 48.7 per cent). In 1985, the Project Personnel Recruitment Section (PPRS) recruited 1,628 new experts (1984: 1,132) and extended 774 experts in their posts (1984: 711).

23. The total of experts services (new appointments, appointments carried forward from previous years and extensions) amounted to 8,872.4 work-months. In 1984, this figure was 7,701. The average duration of appointment was 2.87 months (1984: 3.67 months).

24. The tendency for developing countries to utilize their own national professional project personnel continued to show a substantial increase. In 1985, the number of new experts recruited under national professional project personnel was 164 as compared to 92 in 1984. The transfer to UNIDO in 1984 of the full responsibility for the recruitment of national professional project personnel has proved to be a step in the right direction because by centralizing this activity a series of problems associated with recruitment can be properly addressed. One such problem is the payment for national experts. Normally payment is in local currency with adjustments as required. In countries with fluctuating local salaries and high inflation, a flexible adjustment mechanism for payment is required. This problem must, however, be dealt with on a country-by-country basis in co-operation with the Resident Representative of the United Nations Development Programme (UNDP) and the Senior Industrial Development Field Adviser if available. In exceptional cases, certain portions of a salary are paid in dollars to expatriates to facilitate paying obligations in their home country.

25. The recruitment through reimbursable loan agreements of experts from institutions, professional associations and other governmental and non-governmental organizations continued to gain momentum during 1985. Under a reimbursable loan agreement, an expert is loaned to the United Nations for a fixed term and the United Nations agrees to reimburse the employer for the actual cost incurred in providing the employee's services, including the basic emoluments paid by the employer during the period of the loan. The number of experts recruited in 1985 using this scheme was 133.

26. Efforts continued in 1985 to streamline the activities of PPRS through automation. A programme was established to include institutions and industrial firms in the computer roster. As a result, whenever a roster search is made, the computer provides not only the names of individual experts, but also the names of organizations which are potential sources of candidates for the vacancy under consideration. Efforts are also being made to improve selectivity in the inclusion of individuals in the roster.

27. In order to expand the number of experts from developing countries on the roster, missions were undertaken to Côte d'Ivoire, Ethiopia, Kenya, Libyan Arab Jamahiriya, Malaysia, Morocco, Republic of Korea, Senegal and Singapore. Some developed countries were also visited. It is expected that by increasing the number of experts on the roster from all those countries and by strengthening ties with governmental organizations, an improved geographical distribution will be achieved in the recruitment of experts.

28. The number of experts from any given country recruited in 1985 is listed in table 1 of appendix G. Table 2 of the same appendix gives the cumulative list of experts according to countries recruited during the period 1971 to 1985. Out of the 1,628 experts recruited during the year, 45 were women; 50 female experts served on projects in 1985. The pattern of recruitment by groups of countries is shown in table 2 below.

TABLE 2. DISTRIBUTION OF EXPERTS BY GROUPS OF COUNTRIES

(1 January to 31 December 1985)

	Number of experts					
	UNIDO roster	Percentage of roster	Submitted to Government	Selected by Government ^a	Appointed	Percentage of appointments
Developing countries ^b	5 651	36	452	616	508 ^c	31
List B countries ^d	8 348	52	1 240	1 207	849	52
List D countries ^e	1 948	12	372	370	271	17
TOTAL	15 947	100	2 064	2 193	1 628	100

^aIncluding government nominees.

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

^cIncluding appointment of 164 national professional experts.

^dStates in list B of annex I to the UNIDO Constitution, excluding Cyprus, Greece, Malta, Portugal and Turkey.

^eStates in list D of annex I to the UNIDO Constitution, excluding Albania and Romania.

29. The top 10 countries on the UNIDO expert roster at the end of 1985 were: United Kingdom—1,691, India—1,577, United States of America—1,391, France—968, Germany, Federal Republic of—825, Italy—428, Poland—415, Canada—375, Belgium—339, Hungary—334. The roster contained 827 female experts, i.e. 5.2 per cent.

30. Under the programme of the Industrial Development Decade for Africa (IDDA) 169 experts were appointed, a figure that is equivalent to 235.8 work-months provided during the year. The Regional Office of Technical Assistance Recruitment at Cairo (Egypt) made frequent missions in the region and close co-operation was maintained with the United Nations Technical Assistance Recruitment and Fellowships Office (TARFO) in Geneva. Two PPRS outposted officers, together with other officers of TARFO, provided valuable assistance to PPRS by interviewing potential expert candidates in several European countries.

PURCHASE AND CONTRACT SERVICE

31. The implementation of the equipment and subcontract components of technical co-operation projects and, more specifically, the acquisition of project equipment, materials, supplies, spare and replacement parts, and the securing of the services of consulting engineering organizations and institutions are the responsibility of the Purchase and Contract Service (PAC) which is part of the Division of Industrial Operations. Another major responsibility of PAC is the provision of equipment, materials, supplies and technical services to UNIDO Headquarters, particularly with respect to common services and the operation, maintenance and repair of the VIC complex. In 1985 as in previous years, in addition to meeting the equipment and service requirements mentioned above, PAC continued to extend purchasing and contracting services to the United Nations Office at Vienna, the Division of Narcotic Drugs, the International Narcotics Control Board, the United Nations Commission on International Trade Law, the United Nations Fund for Drug Abuse Control and the United Nations Scientific Committee on the Effects of Atomic Radiation. Further, and in keeping with the memorandum of understanding signed between UNIDO and the Office of the United Nations Disaster Relief Co-ordinator (UNDRO), Geneva, PAC was requested again to purchase equipment and supplies to a total value of \$1.9 million which UNDRO required for its programmes of assistance to the Governments of Mali and Mozambique.

Services related to technical assistance

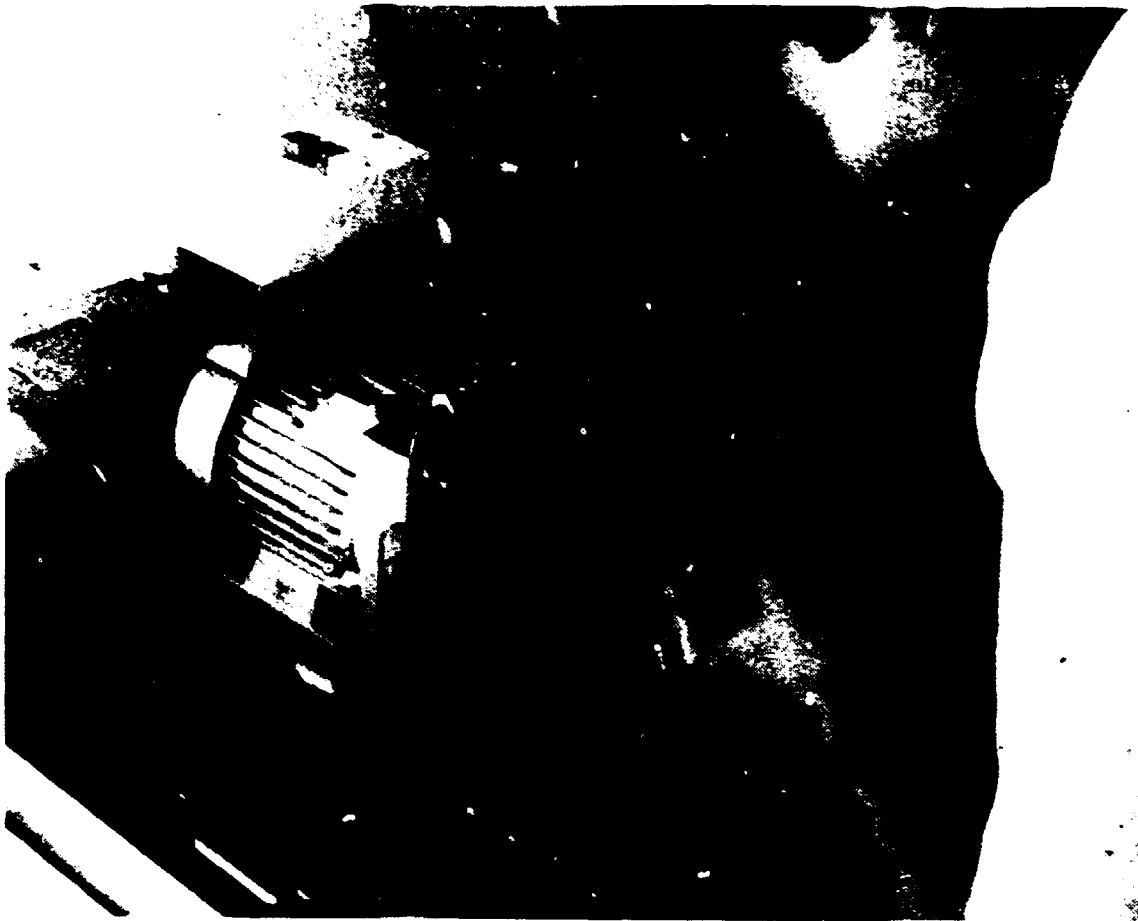
32. PAC continued to apply the UNDP criteria governing the establishment of obligations related to the procurement of equipment and the contracting of consulting services. Certain measures were, however, introduced early in the year with regard to the timely submission of new requisitions, enabling PAC to increase its deliveries to a record level of \$34.4 million.

33. Equipment purchased and services contracted for chemical, agro-industrial, metallurgical and engineering projects continued to account for the largest share of the technical co-operation programmes of UNIDO and represented over 80 per cent of the total.

34. Table 3 below shows the value of equipment purchased and services contracted in the years 1975, 1980, 1983, 1984 and 1985.

TABLE 3. VALUE OF EQUIPMENT PURCHASED AND SERVICES CONTRACTED
(In millions of US dollars)

Component	1975	1980	1983	1984	1985
Equipment	9.1	18.0	14.7	18.6	22.6
Subcontracts		9.3	7.8	12.2	11.8
TOTAL	9.1	27.3	22.5	30.8	34.4



Spindle realignment in a UNIDO textile project in Sri Lanka

35. The 1985 implementation of \$34.4 million was attained despite the fact that there was only one contract with a value of more than \$1 million and another contract with a value of slightly less than that amount. Furthermore, only one purchase order involved a cost of more than \$650,000. Details of these agreements and order are provided hereafter:

(a) \$1,500,000 for the preparation of a techno-economic feasibility study with pilot/semi-industrial scale testing of alunite ores in the Islamic Republic of Iran;

(b) \$949,800 for assistance to a diesel engine factory in Bangladesh;

(c) \$658,107 for the rehabilitation and development of the bakery industry in Mozambique.

Contracts

36. The delivery figure cited in table 3 above shows only those portions of the contract costs scheduled for payment during 1985. The total face value of contracts awarded in 1985 was \$13.0 million. Furthermore, the records kept by Financial Service and PAC show commitments totalling approximately \$5.2 million for 1986, \$1.3 million for 1987 and \$0.1 million for 1988.

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37. In 1985, a total of 148 new contracts (1984: 128) were awarded, with a face value of \$13.0 million (1984: \$13.8 million). Of these, 49 contracts representing 33.1 per cent (1984: 47 contracts representing 36.7 per cent) with a face value of some \$2.4 million or 18.5 per cent (1984: \$2.9 million or 21.0 per cent) were finalized with consulting engineering organizations and institutions from developing countries. The volume of business increased with organizations and institutions from planned economy countries, in particular with the Union of Soviet Socialist Republics.

Purchases

38. Purchases of equipment maintained an upward trend and, by the end of 1985, purchase orders with a total face value of \$22.6 million had been issued. This figure also includes orders issued in the field for local procurement. The total number of items procured was larger than that acquired in any of the previous years, while the average value of individual requisitions received and orders placed continued to decrease.

39. Of the 2,293 purchase orders placed by Headquarters in 1985 (total value \$20.7 million), 249 (10.9 per cent) with a total value of \$2.3 million (11.1 per cent) were placed with equipment manufacturers or vendors in developing countries. In 1984, of the total of 1,824 purchase orders, 171 or 9.4 per cent were placed in developing countries and of the total value of \$18.6 million, \$1.4 million or 7.5 per cent was spent in developing countries.

Other services

40. While the above activities were related almost totally to the Division of Industrial Operations, PAC continued to provide services to other divisions in UNIDO (not including the Division of Administration) to the value of \$0.6 million. PAC was also responsible for acquiring equipment, materials and supplies, amounting to \$5.8 million, and securing consulting and technical services to a value of \$3.4 million for the UNIDO Division of Administration (operation, maintenance and repair of the VIC complex), the United Nations Office at Vienna, the Division of Narcotic Drugs, the International Narcotics Control Board, the United Nations Commission on International Trade Law, the United Nations Fund for Drug Abuse Control and the United Nations Scientific Committee on the Effects of Atomic Radiation.

Internal activities

41. PAC continued to pay particular attention in 1985 to its internal activities. Processing and settling insurance claims for damages to or losses of equipment, and cases submitted to the Property Survey Board and, of importance to recipient Governments, finalizing Transfer of Title documents continued to receive attention. Thus (a) against 75 claims filed with the underwriters, 53 were settled (of which 16 had been submitted during previous years) with reimbursements to UNIDO in the amount of \$0.13 million; (b) the Property Survey Board was called to decide upon a total of 82 cases; and (c) Transfer of

Title documents were finalized for 91 projects—the total value of the equipment transferred to developing countries exceeded \$8.7 million.

42. Efforts were continued to identify consulting engineering organizations and institutions and equipment manufacturers, particularly those from developing countries. At the end of 1985, 3,520 consulting engineering organizations and institutions from 92 countries were recorded, and 1,396 equipment manufacturers from 44 countries were registered.

CONFERENCE SERVICES

43. During 1985 UNIDO continued to provide conference services to United Nations entities with Vienna as their established headquarters. Consultations were held by the Controller of the United Nations with representatives of UNOV, UNIDO and IAEA.² While there was no agreement concerning the need to proceed at once with the establishment of a unified service at the VIC, as proposed by the Secretary-General of the United Nations, it was agreed that the conference servicing requirements and facilities of the Vienna-based organizations should be analysed systematically in a comprehensive study to be carried out jointly by IAEA, UNIDO and the United Nations. The study should be completed in time to be submitted to policy-making organs in 1987 so that conclusions could be reflected in the 1988-1989 programme and budgets of those organizations. In the interim the United Nations would continue to provide the translators and supporting staff currently financed under section 29 (conference and library services) of the programme budget of the United Nations and UNIDO would operate a joint Translation and Documents Service on behalf of UNIDO and the United Nations. It was also agreed to establish a joint UNIDO/UN meetings and interpretation service to be operated by the United Nations. The arrangements outlined above are reflected in the programme budgets for 1986-1987 as adopted by the General Assembly of the United Nations and the General Conference of UNIDO respectively.

44. The General Conference of UNIDO at its first session and the General Assembly of the United Nations at its fortieth session decided to establish as of 1 January 1986 a joint Meetings and Interpretation Service to be operated by the United Nations Office at Vienna on behalf of UNIDO and the United Nations. The General Assembly at its fortieth session approved the establishment of 16 additional permanent posts for the purpose of forming a nucleus of regular interpretation staff to service meetings at the VIC.

45. The translation and interpretation services provided in 1984 and 1985 by the UNIDO Conference Service for both UNIDO and the United Nations are illustrated in table 4 below.

46. During 1985 a total of 1,991 half-day meetings with and without interpretation were serviced by the UNIDO Conference Service. (A detailed breakdown is shown in table 5 below.

²For note on results of informal consultations between UNOV, UNIDO and IAEA, see UNIDO/IDB.1/26, pp. 3-5.

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TABLE 4. TRANSLATION AND INTERPRETATION SERVICES PROVIDED BY THE UNIDO CONFERENCE SERVICE, 1984 AND 1985

Organization served	1984	1985
<i>A. Translation (by thousands of words translated)</i>		
UNIDO	12 971 ^a	10 540 ^b
United Nations	11 050	16 012 ^c
<i>B. Interpretation (interpreter-days)</i>		
UNIDO	3 081 ^d	2 427 ^e
United Nations	3 119	4 676 ^f

^aIncludes 3,015,000 words for the Fourth General Conference of UNIDO.

^bIncludes 772,000 words for the first session of the General Conference and 1,270,000 for the first session of the Industrial Development Board.

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

^dIncludes 1,597 interpreter-days for the Fourth General Conference of UNIDO.

^eIncludes 400 interpreter-days for the first session of the General Conference and 347 interpreter-days for the first session of the Industrial Development Board.

^fIncludes 1,192 interpreter-days for the World Conference to Review and Appraise the Achievements of the United Nations Decade for Women, Nairobi (Kenya).

TABLE 5. CONFERENCES AND MEETINGS WITH AND WITHOUT INTERPRETATION SERVICED BY UNIDO MEETINGS PLANNING AND SERVICING UNIT

Conferences/ meetings held	Number of half-day meetings					
	UNIDO			United Nations		
	With interpretation	Without interpretation	Total	With interpretation	Without interpretation	Total
In Vienna	365	405	770 ^a	328	339	667
Elsewhere	144	226	370	93	91	184 ^b
TOTAL	509	631	1 140	421	430	851

^aUNIDO meetings include 64 meetings with interpretation and 40 meetings without interpretation held in connection with the first session of the General Conference, Vienna, 12-16 August and 9-13 December 1985.

^bUnited Nations meetings include 93 meetings with interpretation and 91 meetings without interpretation held in connection with the World Conference to Review and Appraise the Achievements of the United Nations Decade for Women, Nairobi (Kenya), 15-26 July 1985.

47. Table 6 below shows the distribution of work in the UNIDO Editorial Control Section in 1985, with comparable figures for 1984.

48. The introduction of experimental scientific software in the Editorial Control Section has improved the appearance and speeded up the production of scientific papers prepared in the Section. Such considerations are important in view of the large number of manuscripts now being typed for publication in camera-ready form.

49. During 1985, the work-load of the Printing Unit within the Publications Section remained constant compared to 1984 with 13,043 manuscript pages

TABLE 6. EDITING OF MANUSCRIPTS AND ATTENDANCE AT MEETINGS BY UNIDO EDITORIAL CONTROL SECTION STAFF

Year	Editing of manuscripts submitted through Documents Control (by thousands of words edited) ^a			Attendance at meetings for editing of in-session and post-session documents (in number of days)		
	UNIDO	Non-UNIDO	Total	UNIDO	Non-UNIDO	Total
1984	3 250 (67%)	1 600 (33%)	4 850 (100%)	57	59	116
1985	3 392 (54%)	2 895 (46%)	6 287 (100%)	22	60	82

^aIncluding revision and typing in camera-ready form.

received and some 12,900 printed pages issued. A word-processor was connected through an interface to a photocomposition machine in 1983 and has greatly facilitated the production of printed material in 1985.

50. The Documents Unit in the Publications Section handled in 1985 an increase in work-load of over 40 per cent compared with 1984. In 1985 the Unit processed nearly 191 million page-impressions—an achievement made possible by the introduction of new equipment, including a machine which inserts documents automatically, a computer terminal which maintains statistics and retrieves information on the status of documentation, and an electronic scale which counts pages. The Unit continued to place on microfiche the documents of the former Industrial Development Board. Documents will thus be more accessible for reference and reproduction purposes and better use will be made of storage space.

COMMON SERVICES

51. As mentioned in last year's *Report*, the "Memorandum of Understanding Concerning the Allocation of Common Services at Donaupark Centre in Vienna", signed by the Secretary-General of the United Nations, the Director General of the IAEA and the Executive Director of UNIDO on 31 March 1977, set down the arrangements for common services at the VIC. In accordance with the Memorandum, UNIDO is, *inter alia*, responsible for buildings management, catering and language training as common services for the whole of the VIC.

52. The 1985 work programme of the General Services focused, in addition to day-to-day activities, on problems encountered in the operation and management of the Common Services. Its aim was to identify and take measures needed to ensure that the Common Services would continue to be fully responsive to actual needs, even after the transformation of UNIDO into a specialized agency. In so doing full advantage had to be taken of the experiences gained during the first six years of common service operation at the VIC.

53. During the year under review, the "Memorandum of Understanding", the rules and regulations and terms of reference for the various advisory and co-ordinating boards, committees and working groups established therein were reviewed and evaluated. Provisions and procedures requiring re-negotiation

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and streamlining to make them more responsive to management needs and the actual work situation were identified. Working groups were established for that purpose.

54. UNIDO as a specialized agency will continue to manage the Common Services as provided for in the 1977 "Memorandum of Understanding". The operating cost of these services was gross budgeted in the UNIDO budget for the 1986-1987 biennium. The United Nations and UNIDO budgets will be separated, however, and new cost-sharing arrangements were designed to include the United Nations in the cost-sharing arrangements. In addition to the Common Services, UNIDO will continue to provide other services, so-called "Joint Services", to the United Nations units in Vienna, for which the ratio of usage was determined in 1985, budgets prepared, and new procedures and a new cost-sharing formula developed.

55. In view of the transformation of UNIDO into a specialized agency during the second half of 1985, the management of the UNIDO General Services devoted its efforts almost entirely to negotiating the orderly transfer of certain services to UNOV. In addition to frequent meetings with United Nations Headquarters staff responsible for the establishment of UNOV, this process required (a) detailed analyses, identification, separation and costing of the equipment, supplies and services provided to each other by UNIDO, the United Nations Headquarters and United Nations organizations at the VIC, (b) reformulation of the cost-sharing formula for both Common Services and Joint Services provided by UNIDO to the United Nations, and (c) preparations for the 1986-1987 budget for UNIDO as a specialized agency.

STATISTICAL ANNEX

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TABLE 1. EXPENDITURES, 1972 TO 1986
(In millions of US dollars)

	Actual					Estimated	
	1972-1976	1977-1981	1982	1983	1984	1985	1986
Technical co-operation programmes	141.8	334.4	91.9	78.0	87.2	94.5	103.5
Regular programme	8.7	15.2	3.1	4.0	3.7 ^a	9.0 ^a	6.8
UNDP/IPF and cash counterpart	98.7	229.9	64.2	46.2	54.4	58.6	67.4
UNDP/SIS	14.3	17.2	3.1	3.0	1.8	2.7	2.5
UNDP/Special programme resources and special measures	3.1	5.3	0.9	1.0	0.5	0.3	0.6
UNDP-administered trust funds	—	3.4	3.1	2.7	3.6	1.9	2.1
Other trust funds	6.2	17.9	5.3	6.5	7.9	8.3	9.0 ^b
UNIDF	10.8	41.9	11.6	13.1	14.6	10.9	12.8
UNFDAC ^c	—	—	—	—	0.1	1.5	0.7
Non-UNIDO funds	—	3.6	0.6	1.5	0.6	1.3	1.6
Headquarters	100.5	202.4	45.4	50.3	47.7	49.3	52.4
Regular budget	85.2	160.7	35.6	39.8	37.4 ^a	38.1 ^a	40.7
Overheads	15.3	41.7	9.8	10.5	10.3	11.2	11.7
Total expenditure	242.3	536.8	137.3	128.3	134.9	143.8	155.9
Technical co-operation programmes as percentage of total expenditure	58.5%	62.3%	66.9%	60.8%	64.6%	65.7%	66.4%

^aExpenditure of \$1.0 million in 1984 and \$5.0 million in 1985 in respect of the Industrial Development Decade for Africa, for which funds are allotted under the regular budget, are included under the regular programme.

^bFigures are tentative only since contributions to trust funds are made on an *ad hoc* basis and cannot be accurately estimated.

^cUnited Nations Fund for Drug Abuse Control.

TABLE 2. TECHNICAL CO-OPERATION PROGRAMMES: PROJECT BUDGET APPROVALS AND EXPENDITURES, 1972 TO 1986

(In millions of US dollars)

	Actual						Estimated
	1972-1976	1977-1981	1982	1983	1984	1985	1986
A. All sources of funds							
1. Residual value of projects brought forward	37.4	72.8	136.4	153.7	164.8	181.0	162.1
2. Value of project budgets approved in the year (net)	177.2	398.0	109.2	89.1	103.4	75.6	95.6
3. Total of approved projects under implementation	214.6	470.8	245.6	242.8	268.2	256.6	257.7
4. Expenditures in the year	141.8	334.4	91.9	78.0	87.2	94.5	103.5
5. Residual value of approved projects carried forward	72.8	136.4	153.7	164.8	181.0	162.1	154.2
B. Regular programme^a							
1. Residual value of projects brought forward	—	—	—	2.7	—	3.5	—
2. Value of project budgets approved in the year (net)	8.7	15.2	5.8	1.3	7.2	5.5	7.5
3. Total of approved projects under implementation	8.7	15.2	5.8	4.0	7.2	9.0	7.5
4. Expenditures in the year	8.7	15.2	3.1	4.0	3.7	9.0	6.8
5. Residual value of approved projects carried forward	—	—	2.7	—	3.5	—	0.7
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
2. Value of project budgets approved in the year (net)	128.8	275.9	76.6	43.5	53.8	52.1	62.0
3. Total of approved projects under implementation	158.5	335.7	182.4	161.7	169.3	167.0	170.4
4. Expenditures in the year	98.7	229.9	64.2	46.2	54.4	58.6	67.4
5. Residual value of approved projects carried forward	59.8	105.8	118.2	115.5	114.9	108.4	103.0

TABLE 2 (continued)

	Actual						Estimated
	1972-1976	1977-1981	1982	1983	1984	1985	1986
D. UNDP/SIS^b							
1. Residual value of projects brought forward	5.3	5.8	2.8	5.0	2.4	2.8	4.9
2. Value of project budgets approved in the year (net)	14.8	14.2	5.3	0.4	2.2	4.8	3.0
3. Total of approved projects under implementation	20.1	20.0	8.1	5.4	4.6	7.6	7.9
4. Expenditures in the year	14.3	17.2	3.1	3.0	1.8	2.7	2.5
5. Residual value of approved projects carried forward	5.8	2.8	5.0	2.4	2.8	4.9	5.4
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
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
4. Expenditures in the year	3.1	5.3	0.9	1.0	0.5	0.3	0.6
5. Residual value of approved projects carried forward	1.7	0.9	0.7	1.0	0.6	0.6	0.1
F. UNDP-administered trust funds^c							
1. Residual value of projects brought forward	—	—	4.7	2.9	2.7	6.3	2.4
2. Value of project budgets approved in the year (net)	—	8.1	1.3	2.5	7.2	(2.0)	0.5
3. Total of approved projects under implementation	—	8.1	6.0	5.4	9.9	4.3	2.9
4. Expenditures in the year	—	3.4	3.1	2.7	3.6	1.9	2.1
5. Residual value of approved projects carried forward	—	4.7	2.9	2.7	6.3	2.4	0.8
G. Other trust funds^d							
1. Residual value of projects brought forward	0.4	1.3	5.7	5.4	21.9	34.2	24.2
2. Value of project budgets approved in the year (net)	7.1	22.3	5.0	23.0	20.2	(1.7)	5.0
3. Total of approved projects under implementation	7.5	23.6	10.7	28.4	42.1	32.5	29.2
4. Expenditures in the year	6.2	17.9	5.3	6.5	7.9	8.3	9.0
5. Residual value of approved projects carried forward	1.3	5.7	5.4	21.9	34.2	24.2	20.2

H. UNIDF^a							
1. Residual value of projects brought forward	2.0	4.2	14.6	17.1	19.4	16.0	17.8
2. Value of project budgets approved in the year (net)	<u>13.0</u>	<u>52.3</u>	<u>14.1</u>	<u>15.4</u>	<u>11.2</u>	<u>12.7</u>	<u>15.0</u>
3. Total of approved projects under implementation	15.0	56.5	28.7	32.5	30.6	28.7	32.8
4. Expenditures in the year	<u>10.8</u>	<u>41.9</u>	<u>11.6</u>	<u>13.1</u>	<u>14.6</u>	<u>10.9</u>	<u>12.8</u>
5. Residual value of approved projects carried forward	4.2	14.6	17.1	19.4	16.0	17.8	20.0
I. UNFDAC							
1. Residual value of projects brought forward	—	—	—	—	—	0.6	0.1
2. Value of project budgets approved in the year (net)	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>0.7</u>	<u>1.0</u>	<u>1.0</u>
3. Total of approved projects under implementation	—	—	—	—	0.7	1.6	1.1
4. Expenditures in the year	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>0.1</u>	<u>1.5</u>	<u>0.7</u>
5. Residual value of approved projects carried forward	—	—	—	—	0.6	0.1	0.4
J. Non-UNIDO funds^f							
1. Residual value of projects brought forward	—	—	1.9	1.7	1.9	2.1	3.7
2. Value of project budgets approved in the year (net)	<u>—</u>	<u>5.5</u>	<u>0.4</u>	<u>1.7</u>	<u>0.6</u>	<u>2.9</u>	<u>1.5</u>
3. Total of approved projects under implementation	—	5.5	2.3	3.4	2.7	5.0	5.2
4. Expenditures in the year	<u>—</u>	<u>3.6</u>	<u>0.6</u>	<u>1.5</u>	<u>0.6</u>	<u>1.3</u>	<u>1.6</u>
5. Residual value of approved projects carried forward	—	1.9	1.7	1.9	2.1	3.7	3.6

^aExcludes the value of projects approved but not implemented within the year (prior to 1978) or within the biennium (after 1977), as appropriate. For 1984 and 1985 see table 1, footnote a.

^bIncludes SIS Trust Funds prior to 1973.

^cInclude United Nations Trust Fund for Sudano-Sahelian Activities; United Nations Financing System for Science and Technology for Development; UNDP trust fund for projects financed by the Voluntary Fund for the United Nations Decade for Women; United Nations Capital Development Fund; third-party trust funds.

^dInclude special-purpose trust funds financed by third parties; special-purpose trust funds financed by recipient Governments; SIS Trust Funds; government cash counterpart contribution paid to UNIDO; United Nations Fund for Population Activities; projects financed from World Bank loans.

^eIncludes UNIDO General Trust Fund.

^fInclude projects executed by other agencies for which UNIDO is the associated or co-operating agency.

TABLE 3A. TECHNICAL CO-OPERATION ACTIVITIES: PROJECTS APPROVED IN 1984 AND 1985, 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)	
	1984						
Regular programme	177	5 144	29	23	2 101	91	7 245
UNDP/IPF and cash counterpart	95	43 692	460	585	10 139	17	53 831
UNDP/SIS	86	2 695	31	174	(507)	(3)	2 188
UNDP/Special programme resources and special measures	5	449	90	18	(334)	(19)	115
UNDP-administered trust funds	8	7 205	901	16	—	—	7 205
Other trust funds	28	1 735	62	88	18 450	210	20 185
UNIDF	226	11 549	51	383	(390)	(1)	11 159
UNFDAC	1	654	654	—	—	—	654
Non-UNIDO funds	7	409	58	31	432	14	841
TOTAL	633	73 532	116	1 318	29 891	23	103 423
	1985						
Regular programme	154	8 958	58	148	(910)	(6)	8 048 ^a
UNDP/IPF and cash counterpart	138	36 766	266	550	15 373	27	52 139
UNDP/SIS	133	5 131	38	181	(284)	(1)	4 847
UNDP/Special programme resources and special measures	3	342	114	19	(70)	(3)	272
UNDP-administered trust funds	2	179	89	22	(2 179)	(99)	(2 000)
Other trust funds	45	2 781	61	88	(4 512)	(51)	(1 731)
UNIDF	171	14 444	84	409	(1 792)	(4)	12 652
UNFDAC	1	1 019	1 019	1	(10)	(10)	1 009
Non-UNIDO funds	19	2 833	149	16	111	6	2 944
TOTAL	666	72 453	108	1 434	5 727	3	78 180

^aFrom the regular programme, \$2.6 million lapsed at the end of the biennium 1984-1985 and are subject to re-approval in 1986-1987.

TABLE 3B. TECHNICAL CO-OPERATION ACTIVITIES: COMPARISON OF THE VALUE OF PROJECTS AS AT 31 DECEMBER 1984 AND AS AT 31 DECEMBER 1985, BY SOURCE OF FUNDS

Source of funds	Number of projects		Total value of projects (\$000)		Average value of projects (\$000)	
	1984	1985	1984	1985	1984	1985
Regular programme	200	341	7 245	15 294 ^a	36	44
UNDP/IPF and cash counterpart	753	749	423 608	424 432	563	566
UNDP/SIS	269	333	9 671	12 657	36	38
UNDP/Special programme resources and special measures	27	25	5 298	4 867	196	194
UNDP-administered trust funds	26	28	17 438	15 437	671	551
Other trust funds	126	144	61 275	53 003	486	368
UNIDF	688	671	63 526	66 144	92	98
UNFDAC	1	2	654	1 663	654	831
Non-UNIDO funds	47	47	5 984	8 139	127	173
TOTAL^b	2 137	2 340	594 699	601 636^a	278	257

^aFrom the regular programme, \$2.6 million lapsed at the end of the biennium 1984-1985 and are subject to re-approval in 1986-1987.

^bThe following is a breakdown by status of projects:

	Number of projects		Total value of projects (\$000)	
	1984	1985	1984	1985
New and or jing	1 355	1 498	462 028	475 985
Operationally completed	178	239	32 544	35 434
Financially completed	604	603	100 127	90 217
TOTAL	2 137	2 340	594 699	601 636

TABLE 4. EXPENDITURES ON TECHNICAL CO-OPERATION ACTIVITIES IN 1984 AND 1985,
BY SOURCE OF FUNDS AND PROJECT COMPONENT

Source of funds	Project personnel		Subcontracts \$000	Fellowships and training \$000	Equipment \$000	Miscellaneous expenses \$000	Total \$000
	Number of experts' work-months ^a	\$000					
<i>1984—Actual</i>							
Regular programme	209	1 958	234	1 193	182	98	3 665
UNDP/IPF and cash counterpart	3 316	25 927	5 868	5 108	16 129	1 329	54 361
UNDP/SIS	136	923	546	66	200	47	1 782
UNDP/Special programme resources and special measures	58	455	(47)	39	11	21	479
UNDP-administered trust funds	67	602	2 376	277	372	11	3 638
Other trust funds	3 282	7 186	101	292	319	79	7 977
UNIDF	559	4 900	3 133	4 609	1 371	562	14 575
UNFDAC	4	32	27	—	—	—	59
Non-UNIDO funds	70	495	10	89	45	16	655
TOTAL	7 701	42 478	12 248	11 673	18 629	2 163	87 191
<i>1985—Actual</i>							
Regular programme	411.4	3 813	2 198	1 991	750	279	9 031
UNDP/IPF and cash counterpart	4 173.7	26 132	5 868	6 700	18 697	1 209	58 606
UNDP/SIS	185.7	1 402	681	274	266	63	2 686
UNDP/Special programme resources and special measures	37.5	217	—	56	34	7	314
UNDP-administered trust funds	30.1	264	1 284	52	270	18	1 888
Other trust funds	3 073.8	7 412	36	212	471	101	8 232
UNIDF	497.0	3 922	1 184	3 828	1 548	456	10 938
UNFDAC	39.4	298	549	4	535	117	1 503
Non-UNIDO funds	109.2	830	39	376	13	12	1 270
TOTAL	8 557.8	44 290	11 839	13 493	22 584	2 262	94 468

^aCategories are as follows:

	Work-months
International experts and consultants	7 800.0
Operational assistance experts	21.3
National experts	736.5
	<u>8 557.8</u>

TABLE 5. TECHNICAL CO-OPERATION ACTIVITIES: PROJECT EXPENDITURES, 1977 TO 1986,
BY PROGRAMME AND PROGRAMME COMPONENT

(In thousands of US dollars)

Programme/Programme component	Actual					Estimated
	1977-1981	1982	1983	1984	1985	1986
Office of the Executive Head	—	39	4	22	175	200
Division of Policy Co-ordination	3 552	832	578	952	1 294	900
Division of Industrial Operations						
Programme formulation and direction	2 917	724	1 150	490	482	200
Industrial planning	21 343	4 438	4 389	5 794	7 290	7 300
Institutional infrastructure	47 559	11 912	10 402	10 407	9 845	11 000
Factory establishment and management	15 384	3 728	3 213	2 914	3 905	4 300
Training	29 290	6 715	6 060	5 705	5 825	6 400
Feasibility studies	14 282	4 812	4 516	4 274	5 307	6 600
Agro-industries	40 303	12 181	10 919	9 675	9 918	11 300
Metallurgical industries	36 888	9 241	5 682	6 307	7 188	7 400
Engineering industries	43 229	13 963	9 544	13 913	13 931	14 500
Chemical industries	67 297	18 909	17 115	22 083	24 470	28 000
Investment co-operative programme	6 081	2 517	2 774	3 178	2 933	3 900
Division for Industrial Studies	6 007	1 639	1 508	1 294	1 719	1 400
Division of Conference Services, Public Information and External Relations	178	126	142	207	146	100
Other	180	103	23	(24)	40	—
TOTAL	334 490	91 879	78 019	87 191	94 468	103 500

TABLE 6. EXPENDITURE ON TECHNICAL CO-OPERATION ACTIVITIES, BY SOURCE OF FUNDS AND PROGRAMME COMPONENT, 1985
(In thousands of US dollars)

<i>Programme/Programme component</i>	<i>Regular programme</i>	<i>UNDP/IPF and cash counterpart</i>	<i>UNDP/Special programme resources and special measures</i>	<i>UNDP/SIS</i>	<i>UNDP-administered trust funds</i>	<i>Other trust funds</i>	<i>UNIDF</i>	<i>UNFDAC</i>	<i>Non-UNIDO funds</i>	<i>Total</i>
Office of the Executive Head										
Industrial Development Decade for Africa	159	—	—	—	—	—	14	—	—	173
Energy-related industrial technology	2	—	—	—	—	—	—	—	—	2
Subtotal	161	—	—	—	—	—	14	—	—	175
Policy co-ordination										
Programme formulation and direction	—	—	—	—	—	38	38	—	—	76
Programme development and evaluation	559	23	—	—	—	—	—	—	—	582
Negotiations	—	—	—	—	—	—	149	—	—	149
Field reports monitoring	—	80	—	—	—	50	84	—	—	214
Non-governmental organizations	6	—	—	—	—	—	1	—	—	7
Least developed countries	—	—	—	—	—	—	(38)	—	—	(38)
Economic co-operation among developing countries	153	—	2	—	—	—	149	—	—	304
Subtotal	718	103	2	—	—	88	383	—	—	1 294

Industrial operations										
Investment co-operative programme	169	417	—	—	—	343	2 004	—	—	2 933
Industrial planning	765	5 856	15	35	—	305	76	—	238	7 290
Institutional infrastructure	472	7 819	30	101	33	494	552	—	344	9 845
Factory establishment and management	48	3 451	200	54	—	16	136	—	—	3 905
Training	1 762	887	—	—	54	—	3 122	—	—	5 825
Feasibility studies	251	4 238	—	49	—	471	240	—	58	5 307
Agro-industries	499	4 412	21	568	163	394	2 126	1 503	232	9 918
Metallurgical industries	584	5 013	(1)	492	59	140	301	—	—	7 188
Engineering industries	206	12 527	9	382	176	72	457	—	102	13 931
Chemical industries	2 095	13 012	38	974	1 402	5 503	1 220	—	226	24 470
Programme formulation and direction	383	99	—	—	—	—	—	—	—	482
Subtotal	7 234	58 331	312	2 655	1 887	7 738	10 234	1 503	1 200	91 094
Industrial studies										
Global and conceptual studies	—	—	—	—	—	—	10	—	—	10
Regional and country studies	266	53	—	31	—	99	92	—	—	541
Sectoral studies	14	—	—	—	—	—	40	—	—	54
Development and transfer of technology	158	119	—	—	1	307	130	—	69	784
Technological advisory services	20	—	—	—	—	—	5	—	—	25
Industrial information	73	—	—	—	—	—	—	—	—	73
General industrial information services	—	—	—	—	—	—	—	—	—	—
Programme formulation and direction	218	—	—	—	—	—	13	—	1	232
Subtotal	749	172	—	31	1	406	290	—	70	1 719
Conference services, public information and external relations	129	—	—	—	—	—	17	—	—	146
Other	40	—	—	—	—	—	—	—	—	40
TOTAL	9 031	58 606	314	2 686	1 888	8 232	10 938	1 503	1 270	94 468

TABLE 7. EXPENDITURES ON TECHNICAL CO-OPERATION ACTIVITIES, BY GEOGRAPHICAL AREA, 1980 TO 1986

(In thousands of US dollars)

Area	Actual						Estimated
	1980	1981	1982	1983	1984	1985	1986
Africa							
Country projects ^a	24 106	32 756	29 137	25 683	25 300	31 431	31 000
Regional projects	1 469	1 589	1 828	1 773	4 713	5 791	6 000
Subtotal	25 575	34 345	30 965	27 456	30 013	37 222	37 000
The Americas							
Country projects	8 782	9 477	9 601	9 168	7 987	11 082	11 000
Regional projects	920	855	1 141	877	1 013	536	1 000
Subtotal	9 702	10 332	10 742	10 045	9 000	12 018	12 000
Arab States							
Country projects	9 315	11 355	10 726	11 274	11 807	11 448	11 500
Regional projects	405	456	997	593	1 104	532	2 000
	9 720	11 811	11 723	11 867	12 911	11 980	13 500
Country projects (African Arab States) ^b	(5 602)	(6 803)	(6 581)	(7 030)	(8 806)	(9 123)	(9 500)
Subtotal	4 118	5 008	5 142	4 837	4 105	2 857	4 000
Asia and the Pacific							
Country projects	22 097	27 185	32 658	23 599	29 795	29 313	35 000
Regional projects	1 131	1 539	1 034	1 062	1 437	1 088	3 000
Subtotal	23 228	28 724	33 692	24 661	31 232	30 401	38 000
Europe							
Country projects	5 804	3 487	3 241	2 513	3 609	3 047	3 400
Regional projects	16	46	410	248	49	39	100
Subtotal	5 820	3 533	3 651	2 761	3 658	3 086	3 500
Global and interregional projects							
	7 837	6 701	7 687	8 259	9 183	8 884	9 000
TOTAL	76 280	88 643	91 879	78 019	87 191	94 468	103 500

^aIncludes African Arab States.^bFigures deducted since already included under "Africa".

TABLE 8. TECHNICAL CO-OPERATION ACTIVITIES: PROJECT EXPENDITURE IN 1985

(In thousands of US dollars)

	<i>Africa^a</i>	<i>The Americas</i>	<i>Arab States^b</i>	<i>Asia and the Pacific</i>	<i>Europe</i>	<i>Global and interregional</i>	<i>Total</i>
A. By source of funds and geographical area							
Regular programme	6 642	228	641 (406)	607	39	1 280	9 031
UNDP/IPF and cash counterpart	18 340	7 683	4 320 (2 460)	28 022	2 701	—	58 606
UNDP/SIS	981	757	467 (277)	566	192	—	2 686
UNDP/Special programme resources and special measures	293	3	— —	16	—	2	314
UNDP-administered trust funds	1 441	196	13 (13)	197	—	54	1 888
Other trust funds	6 565	500	5 958 (5 720)	468	29	432	8 232
UNIDF	2 615	798	532 (247)	4	125	7 111	10 938
UNFDAC	—	1 503	— —	—	—	—	1 503
Non-UNIDO funds	345	350	49 —	521	—	5	1 270
TOTAL	37 222	12 018	11 980 (9 123)	30 401	3 086	8 884	94 468
B. By project component and geographical area							
Project personnel	22 320	5 746	9 735 (7 411)	10 398	689	2 813	44 290
Subcontracts	5 339	1 287	454 (439)	2 935	445	1 818	11 839
Fellowships and training	3 221	897	674 (266)	4 559	710	3 698	13 493
Equipment	5 374	3 679	906 (876)	12 038	1 198	265	22 584
Miscellaneous	968	409	211 (131)	471	44	290	2 262
TOTAL	37 222	12 018	11 980 (9 123)	30 401	3 086	8 884	94 468

^aIncludes figures related to country projects in African Arab States.^bFigures in parentheses relate to country projects in African Arab States only and are deducted from the end column "Total" since they are already included under "Africa".

Statistical Annex

TABLE 9. EXPENDITURE OF REGULAR BUDGET AND OVERHEAD FUNDS IN 1985, BY PROGRAMME COMPONENT AND OBJECT OF EXPENDITURE

(In thousands of US dollars)

Programme/ Programme component	Staff costs	Consul- tants	Expert group meetings	Other	Total
Policy-making organs	2 185	—	—	44	2 229
Executive direction and management ^a	1 517	107	—	81	1 705
Policy co-ordination					
Programme development and evaluation	2 180	—	—	80	2 260
Inter-agency programme co-ordination	370	—	—	12	382
Negotiations	1 483	157	137	96	1 873
Field reports monitoring	331	48	—	68	447
Non-governmental organizations	323	10	25	11	369
Least developed countries	571	—	—	9	580
New York Liaison Office	280	—	—	32	312
Programme formulation and direction	1 460	7	—	407	1 874
Economic co-operation among developing countries	385	13	30	15	443
Subtotal	7 383	235	192	730	8 540
Industrial operations					
Investment co-operative programme	1 159	67	—	59	1 285
Industrial planning	754	4	—	26	784
Institutional infrastructure	1 099	—	—	13	1 112
Factory establishment and management	719	8	—	7	734
Training	1 066	9	—	11	1 086
Feasibility studies	637	15	—	21	673
Agro-industries	1 030	6	37	23	1 096
Metallurgical industries	695	10	11	11	727
Engineering industries	872	11	6	12	901
Chemical industries	1 552	2	—	24	1 578
Project personnel recruitment ^b	1 371	—	—	17	1 388
Purchase and contract	1 128	—	—	13	1 141
Programme formulation and direction	930	9	—	36	975
Subtotal	13 012	141	54	273	13 480
Industrial studies					
Global and conceptual studies	896	196	—	19	1 111
Regional and country studies	1 352	170	27	34	1 583
Sectoral studies	1 030	195	74	36	1 335
Development and transfer of technology	761	204	8	32	1 005
Technological advisory services	205	12	29	10	256
Industrial and Technological Information Bank (INTIB)	270	45	—	2	317
Industrial information	443	—	—	53	496
Programme formulation and direction	1 035	5	—	9	1 049
Subtotal	5 992	827	138	195	7 152
Conference services, public information and external relations					
Secretariat of the IDB	276	—	—	1	277
Governments and intergovernmental organizations relations	329	—	—	4	333
Public information	351	2	—	69	422
Programme formulation and direction	222	—	—	11	233
Conference service	5 132	—	—	1 251	6 383
Subtotal	6 310	2	—	1 336	7 648

<i>Programme/ Programme component</i>	<i>Staff costs</i>	<i>Consul- tants</i>	<i>Expert group meetings</i>	<i>Other</i>	<i>Total</i>
Administrative and common services					
Financial service	2 101	3	—	30	2 134
Personnel service	1 813	—	—	304	2 117
General services	1 570	—	—	4	1 574
Legal service	195	—	—	1	196
Programme direction ^c	886	22	—	1 595	2 503
	<u>Subtotal</u>	<u>6 565</u>	<u>25</u>	<u>—</u>	<u>1 934</u>
	<u>TOTAL</u>	<u>42 964</u>	<u>1 337</u>	<u>384</u>	<u>4 593</u>

^aIncludes UNIDO representation in Geneva.

^bIncludes Technical Assistance Recruitment Service in Geneva and New York.

^cIncludes Electronic Data Processing.

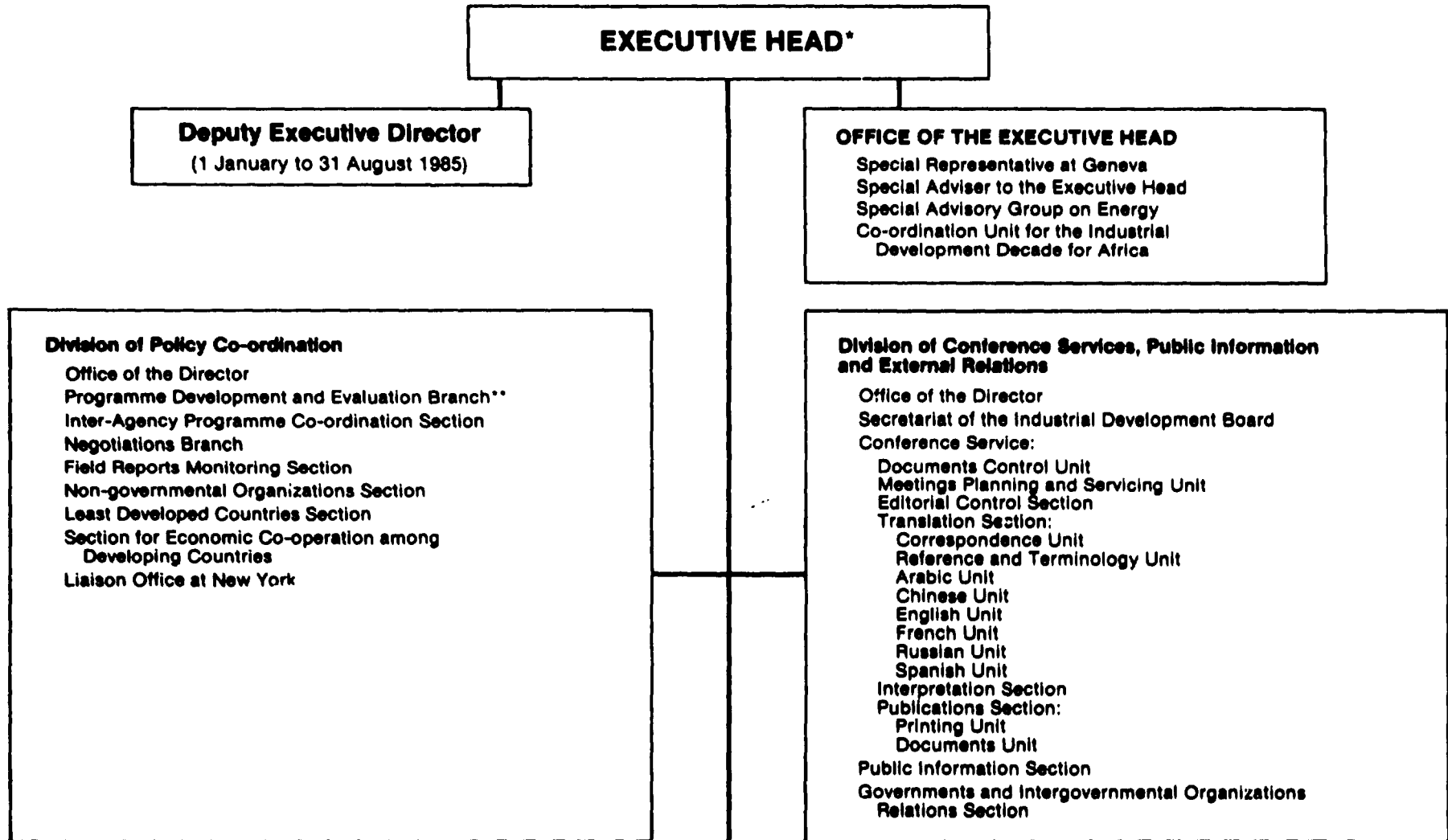
Appendices

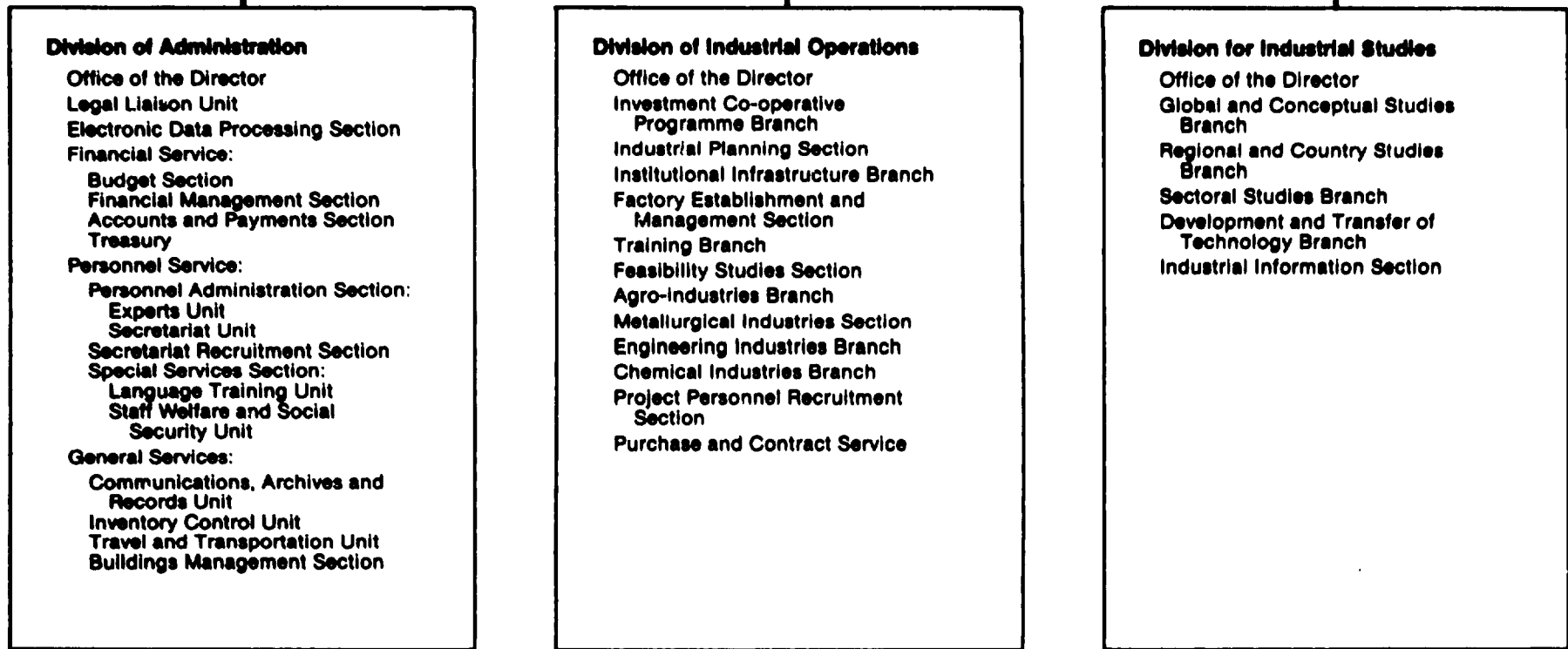
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APPENDIX A

UNIDO organization chart in 1985





*Executive Director of UNIDO as an organ of the United Nations (1 January to 31 August 1985); Director-General of UNIDO as a specialized agency (as of 1 September 1985).

**Evaluation Unit reported to the Deputy Executive Director.

APPENDIX B

Major studies, reports and series publications
issued by UNIDO in 1985^a

<i>Symbol</i>	<i>Title</i>	<i>Language</i>
ID/SER.M/11*	Industry and development No. 11	F
ID/SER.M/12*	Industry and development No. 12	F S
ID/SER.M/13*	Industry and development No. 13	E S
ID/SER.M/14*	Industry and development No. 14	E
ID/SER.M/15*	Industry and development No. 15	E
ID/SER.N/2	Small hydropower series No. 2: Bibliography	E
ID/SER.N/3	Small hydropower series No. 3: Chinese experiences in mini-hydropower generation	E
ID/187	Development and transfer of technology series No. 1. National approaches to the acquisition of technology	C
ID/217	Industrial priorities in developing countries: the selection process in Brazil, India, Mexico, Republic of Korea and Turkey	C
ID/2-8*	Development banking in the 1980s	C
ID/289	Development and transfer of technology series No. 17. Technology exports from developing countries (I): Argentina and Portugal	F S
ID/297*	Formulation of pesticides in developing countries	F S
ID/312	Development and transfer of technology series No. 19. Technological perspectives in the machine-tool industry and their implications for developing countries	E
ID/316	Development and transfer of technology series No. 20. Bauxite testing laboratories	E
ID/320*	Rice bran: an under-utilized raw material	E
ID/324	Development and transfer of technology series No. 21. The economic use of aluminium	E
ID/325*	Input-output tables for developing countries. Volume I	E
ID/326	Development and transfer of technology series No. 22. Informatics for industrial development	E
ID/328*	Handbook of industrial statistics 1984	E/F

<i>Symbol</i>	<i>Title</i>	<i>Language</i>
ID/329 (ID/WG.427/13)	Report of the Second Consultation on the Food-processing Industry with Special Emphasis on Vegetable Oils and Fats, Copenhagen, Denmark, 15-19 October 1984	C
ID/330	Popular manual for wooden house construction	E
ID/331*	Industry in the 1980s. Structural change and interdependence. Regular issue of the biennial Industrial Development Survey	E F S
ID/332* (UNIDO/LIB/SER.B/57)	Industrial development abstracts. Nos. 13901-14200	E (F/R/S introduction)
ID/333*	Industry and development. Global report 1985	E
ID/335 (ID/WG.434/8)	Report of the First Consultation on the Building Materials Industry, Athens, Greece, 26-30 March 1985	A C E F R S
ID/337* (UNIDO/LIB/SER.B/58)	Industrial development abstracts. Nos. 14201-14500	E (F/R/S introduction)
ID/338 (ID/WG.442/5)	Report of the Second Consultation on the Capital Goods Industry with Special Emphasis on Energy-related Technology and Equipment, Stockholm, Sweden, 10-14 June 1985	A C E F R S
ID/339* (UNIDO/LIB/SER.B/59)	Industrial development abstracts. Nos. 14501-14800	E (F/R/S introduction)

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

APPENDIX D

Distribution of staff in the Professional and higher category

TABLE 1. DISTRIBUTION OF PROFESSIONAL AND HIGHER CATEGORY STAFF OF UNIDO, INCLUDING STAFF WITH FIXED-TERM CONTRACTS OF LESS THAN ONE YEAR, BY NATIONALITY (AS AT 31 DECEMBER 1985)

<i>Region/country</i>	<i>Occupied posts subject to geographical distribution</i>	<i>Number</i>	<i>Occupied posts not subject to geographical distribution^a</i>	<i>Number</i>	<i>Total</i>
<i>Africa</i>					
Algeria	1 D-2, 1 P-4, 1 P-3	3	1 P-4	1	4
Angola	1 P-3	1	—	—	1
Burkina Faso	2 P-3	2	—	—	2
Burundi	1 P-4	1	—	—	1
Cameroon	1 P-5, 2 P-4	3	—	—	3
Congo	1 D-2	1	—	—	1
Côte d'Ivoire	1 P-3, 1 P-2 ^b	2	—	—	2
Egypt	1 D-1, 1 P-4	2	3 L-5, 2 P-4, 1 L-3	6	8
Ethiopia	1 D-1, 1 P-5	2	—	—	2
Gambia	1 P-3	1	—	—	1
Guinea	1 P-5, 1 P-4	2	—	—	2
Lesotho	1 P-3	1	—	—	1
Libyan Arab Jamahiriya	1 P-4, 1 P-3	2	—	—	2
Madagascar	1 P-4, 1 P-3	2	—	—	2
Mali	1 P-5	1	—	—	1
Morocco	1 P-5, 1 P-4, ^c 1 P-3	3	—	—	3
Niger	1 P-3	1	—	—	1
Nigeria	1 D-1	1	—	—	1
Rwanda	1 P-3	1	—	—	1
Seychelles	1 P-3	1	—	—	1
Sierra Leone	1 P-3	1	—	—	1
Somalia	1 P-5, 1 P-4	2	—	—	2
Sudan	1 D-1, 1 P-5	2	1 P-2	1	3
Togo	1 P-3	1	—	—	1
Tunisia	1 P-5	1	—	—	1
Uganda	1 P-4	1	—	—	1
United Republic of Tanzania	1 P-3	1	—	—	1
Zaire	1 P-4	1	—	—	1
Zambia	1 P-3	1	—	—	1
Zimbabwe	1 P-2	1	—	—	1
	TOTAL	45		8	53
<i>Asia and the Pacific</i>					
Australia	1 P-5, 2 P-4	3	—	—	3
Bangladesh	1 P-4	1	1 L-6	1	2
Burma	1 P-5, 1 P-4	2	—	—	2
China	1 D-1, 2 P-5, 2 P-4	5	1 P-5, 1 P-4, 2 P-3, 2 P-2	6	11
India	1 P-5, 1 P-2	2	2 L-7, 1 L-6, 2 L-5	5	7
Japan	1 D-1, 2 P-5, 3 P-4, 4 P-3, 3 P-2	13	—	—	13
Malaysia	1 P-4	1	—	—	1

TABLE I (continued)

<i>Region/country</i>	<i>(Occupied posts subject to geographical distribution</i>	<i>Number</i>	<i>Occupied posts not subject to geographical distribution^a</i>	<i>Number</i>	<i>Total</i>
<i>Asia and the Pacific (continued)</i>					
Nepal	1 P-5	1	—	—	1
New Zealand	1 P-4, 1 P-3	2	—	—	2
Pakistan	—	—	1 L-6, 1 L-5	2	2
Philippines	1 P-5, 1 P-4	2	—	—	2
Sri Lanka	—	—	1 L-7, 1 L-5	2	2
Viet Nam	—	—	1 L-5	1	1
	TOTAL	32		17	49
<i>Eastern Europe</i>					
Bulgaria	1 P-4, 1 P-3	2	—	—	2
Byelorussian SSR	1 P-4, 3 P-3	4	—	—	4
Czechoslovakia	1 P-4, 1 P-2	2	—	—	2
German Democratic Republic	2 P-5, 1 P-4	3	—	—	3
Hungary	1 D-1, 2 P-5, 2 P-4	5	—	—	5
Poland	1 P-5, 3 P-4, 1 P-3	5	1 L-6, 1 L-5	2	7
Romania	1 P-5, 1 P-4	2	—	—	2
Ukrainian SSR	1 P-5, 2 P-4	3	—	—	3
USSR	1 D-2, 1 D-1, 3 P-5, 10 P-4, 10 P-3, 1 P-2	26	1 P-5, 2 P-4, 5 P-3, 1 P-2	9	35
Yugoslavia	1 D-1, 1 P-5, 1 P-4, 2 P-3	5	—	—	5
	TOTAL	57		11	68
<i>Western Europe</i>					
Austria	1 D-1, 1 P-5, 7 P-4, 8 P-3, 2 P-2	19	1 L-4, 1 P-4, 1 P-3 ^d	3	22
Belgium	1 P-5, 3 P-4, 2 P-5	6	1 P-5	1	7
Denmark	2 P-5, 2 P-4	4	—	—	4
Finland	2 P-5, 3 P-4, 1 P-2	6	—	—	6
France	1 P-5, 6 P-4, 2 P-3, 2 P-2	11	1 L-6, 5 P-4, 7 P-3, 1 P-2	14	25
Germany, Federal Republic of	1 D-2, 1 D-1, 8 P-5, 6 P-4, 6 P-3, 3 P-2	25	1 L-7	1	26
Greece	3 P-3	3	—	—	3
Ireland	1 D-1, 1 P-5, 1 P-4, 1 P-2	4	1 P-4, 1 P-3	2	6
Italy	2 D-1, 2 P-5, 3 P-4, 2 P-3, 1 P-2	10	—	—	10
Malta	2 P-4	2	—	—	2
Netherlands	1 P-4, 3 P-3, 1 P-2	5	—	—	5
Norway	1 D-1, 3 P-4	4	—	—	4
Portugal	2 P-5, 2 P-4, 1 P-3	5	—	—	5
Spain	1 P-5, 1 P-2	2	1 P-5, 3 P-4, 2 P-3	6	8
Sweden	2 D-1, 4 P-5, 2 P-4	8	—	—	8
Switzerland	1 P-5, 1 P-2	2	1 P-4	1	3
United Kingdom	1 D-1, 2 P-5, 4 P-4, 1 P-3, 3 P-2, 1 P-1	12	2 P-5, 1 P-4, 4 P-3, 1 P-2	8	20
	TOTAL	128		36	164
<i>Latin America</i>					
Argentina	2 P-3	2	1 P-3, 2 P-2	3	5
Bolivia	1 P-5	1	1 P-5	1	2
Brazil	2 P-5, 1 P-4, 1 P-2	4	—	—	4
Colombia	2 P-4, 2 P-3	4	1 P-4	1	5

<i>Region/country</i>	<i>Occupied posts subject to geographical distribution</i>	<i>Number</i>	<i>Occupied posts not subject to geographical distribution^a</i>	<i>Number</i>	<i>Total</i>
Costa Rica	1 P-4, 1 P-3	2	—	—	2
Cuba	1 P-4, 1 P-3	2	—	—	2
Ecuador	1 P-3	1	1 P-5	1	2
El Salvador	2 P-5, 1 P-4	3	—	—	3
Guatemala	2 P-3	2	—	—	2
Haiti	1 D-1	1	—	—	1
Mexico	1 D-1	1	—	—	1
Panama	1 P-3	1	—	—	1
Peru	3 P-4 ^b	3	—	—	3
Venezuela	1 P-5, 1 P-2	2	—	—	2
	TOTAL	29		6	35
<i>Middle East</i>					
Afghanistan	1 P-4	1	—	—	1
Cyprus	1 P-4	1	—	—	1
Democratic Yemen	2 P-4	2	—	—	2
Iran (Islamic Republic of)	1 D-1, 1 P-5, 1 P-4, 2 P-3	5	—	—	5
Iraq	2 P-5, 1 P-4	3	—	—	3
Lebanon	2 P-5	2	—	—	2
Syrian Arab Republic	2 P-5	2	1 P-4, 1 P-2	2	4
Turkey	1 D-1, 3 P-4, 2 P-3, 1 P-2	7	—	—	7
Yemen	1 P-5	1	—	—	1
	TOTAL	24		2	26
<i>North America and the Caribbean</i>					
Barbados	1 P-2	1	—	—	1
Canada	1 D-1, 2 P-5, 3 P-4, 3 P-3 ^c	9	—	—	9
Grenada	1 P-4	1	—	—	1
Guyana	1 P-5, 1 P-3	2	—	—	2
Jamaica	1 P-5	1	—	—	1
Saint Vincent and the Grenadines	1 P-4	1	—	—	1
Trinidad and Tobago	1 P-5	1	—	—	1
United States	1 D-2, 3 D-1, 8 P-5, 14 P-4, 9 P-3, 4 P-2, 1 P-1	40	1 L-6, 2 P-4, 1 P-3, 2 P-2, 1 L-3	7	47
	TOTAL	56		7	63
Stateless	—	—	1 P-4	1	1
GRAND TOTAL	(98 nationalities)	371	(25 nationalities)	88	459

^aConsists mainly of staff in posts with special language requirements but also includes 5 interregional advisers and 15 special technical advisers.

^bIncludes 1 P-2 on secondment to JIU, Geneva.

^cIncludes 1 P-4 on secondment to UNDP, Bahrain.

^dIncludes 1 P-3 on secondment to UNESCO, Paris.

^eIncludes 1 P-4 on assignment as UNIDO SIDFA in Madagascar.

^fIncludes 1 P-5 on assignment as UNIDO SIDFA in Barbados.

^gIncludes 1 P-3 on assignment to United Nations Headquarters, New York.

^hIncludes 1 P-4 on assignment as UNIDO SIDFA in Honduras.

ⁱIncludes 1 P-3 on secondment to UNHCR, Pakistan.

^jIncludes 1 P-4 on loan to IAEA.

Appendix D

TABLE 2. DISTRIBUTION OF PROFESSIONAL AND HIGHER CATEGORY STAFF OF UNIDO, INCLUDING STAFF WITH FIXED-TERM CONTRACTS OF LESS THAN ONE YEAR, BROKEN DOWN ACCORDING TO MEMBER STATES OF UNIDO AS A SPECIALIZED AGENCY AS AT 31 DECEMBER 1985

Country	Occupied posts subject to geographical distribution	Number	Occupied posts not subject to geographical distribution ^a	Number	Total
<i>Countries included in List A</i>					
Afghanistan	1 P-4	1	—	—	1
Algeria	1 D-2, 1 P-4, 1 P-3	3	1 P-4	1	4
Angola	1 P-3	1	—	—	1
Bangladesh	1 P-4	1	1 L-6	1	2
Burkina Faso	2 P-3	2	—	—	2
Burundi	1 P-4	1	—	—	1
Cameroon	1 P-5, 2 P-4	3	—	—	3
China	1 D-1, 2 P-5, 2 P-4	5	1 P-5, 1 P-4, 2 P-3, 2 P-2	6	11
Congo	1 D-2	1	—	—	1
Côte d'Ivoire	1 P-3, 1 P-2 ^b	2	—	—	2
Democratic Yemen	2 P-4	2	—	—	2
Egypt	1 D-1, 1 P-4	2	3 L-5, 2 P-4, 1 L-3	6	8
Ethiopia	1 D-1, 1 P-5	2	—	—	2
Guinea	1 P-5, 1 P-4	2	—	—	2
India	1 P-5, 1 P-2	2	2 L-7, 1 L-6, 2 L-5	5	7
Iran (Islamic Republic of)	1 D-1, 1 P-5, 1 P-4, 2 P-3	5	—	—	5
Iraq	2 P-5, 1 P-4	3	—	—	3
Lebanon	2 P-5	2	—	—	2
Lesotho	1 P-3	1	—	—	1
Libyan Arab Jamahiriya	1 P-4, 1 P-3	2	—	—	2
Madagascar	1 P-4, 1 P-3	2	—	—	2
Malaysia	1 P-4	1	—	—	1
Mali	1 P-5	1	—	—	1
Morocco	1 P-5, 1 P-4, ^c 1 P-3	3	—	—	3
Nepal	1 P-5	1	—	—	1
Niger	1 P-3	1	—	—	1
Nigeria	1 D-1	1	—	—	1
Pakistan	—	—	1 L-6, 1 L-5	2	2
Philippines	1 P-5, 1 P-4	2	—	—	2
Rwanda	1 P-3	1	—	—	1
Seychelles	1 P-3	1	—	—	1
Sierra Leone	1 P-3	1	—	—	1
Somalia	1 P-5, 1 P-4	2	—	—	2
Sri Lanka	—	—	1 L-7, 1 L-5	2	2
Sudan	1 D-1, 1 P-5	2	1 P-2	1	3
Syrian Arab Republic	2 P-5	2	1 P-4, 1 P-2	2	4
Togo	1 P-3	1	—	—	1
Tunisia	1 P-5	1	—	—	1
Uganda	1 P-4	1	—	—	1
United Republic of Tanzania	1 P-3	1	—	—	1
Viet Nam	—	—	1 L-5	1	1
Yemen	1 P-5	1	—	—	1
Yugoslavia	1 D-1, 1 P-5, 1 P-4, 2 P-3	5	—	—	5
Zaire	1 P-4	1	—	—	1
Zambia	1 P-3	1	—	—	1
Zimbabwe	1 P-2	1	—	—	1
		TOTAL		27	104

Country	Occupied posts subject to geographical distribution	Number	Occupied posts not subject to geographical distribution ^a	Number	Total
<i>Countries included in List B</i>					
Australia	1 P-5, 2 P-4	3	—	—	3
Austria	1 D-1, 1 P-5, 7 P-4, 8 P-3, 2 P-2	19	1 L-4, 1 P-4, 1 P-3 ^d	3	22
Belgium	1 P-5, 3 P-4, ^e 2 P-3	6	1 P-5	1	7
Canada	1 D-1, 2 P-5, 3 P-4, 3 P-3 ^f	9	—	—	9
Cyprus	1 P-4	1	—	—	1
Denmark	2 P-5, 2 P-4	4	—	—	4
Finland	2 P-5, 3 P-4, 1 P-2	6	—	—	6
France	1 P-5, 6 P-4, 2 P-3, 2 P-2	11	1 L-6, 5 P-4, 7 P-3, 1 P-2	14	25
Germany, Federal Republic of	1 D-2, 1 D-1, 8 P-5, 6 P-4, 6 P-3, 3 P-2	25	1 L-7	1	26
Greece	3 P-3	3	—	—	3
Ireland	1 D-1, 1 P-5, ^g 1 P-4, 1 P-2	4	1 P-4, 1 P-3	2	6
Italy	2 D-1, 2 P-5, 3 P-4, 2 P-3, 1 P-2	10	—	—	10
Japan	1 D-1, 2 P-5, 3 P-4, 4 P-3, 3 P-2	13	—	—	13
Malta	2 P-4	2	—	—	2
Netherlands	1 P-4, 3 P-3, 1 P-2	5	—	—	5
New Zealand	1 P-4, 1 P-3	2	—	—	2
Norway	1 D-1, 3 P-4	4	—	—	4
Portugal	2 P-5, 2 P-4, 1 P-3	5	—	—	5
Spain	1 P-5, 1 P-2	2	1 P-5, 3 P-4, 2 P-3	6	8
Sweden	2 D-1, 4 P-5, 2 P-4	8	—	—	8
Switzerland	1 P-5, 1 P-2	2	1 P-4	1	3
Turkey	1 D-1, 3 P-4, 2 P-3, 1 P-2	7	—	—	7
United Kingdom	1 D-1, 2 P-5, 4 P-4, 1 P-3, 3 P-2, 1 P-1	12	2 P-5, 1 P-4, 4 P-3, ^h 1 P-2	8	20
United States	1 D-2, 3 D-1, 8 P-5, 14 P-4, ⁱ 9 P-3, 4 P-2, 1 P-1	40	1 L-6, 2 P-4, 1 P-3, 2 P-2, 1 L-3	7	47
	TOTAL	203		43	246

Countries included in List C

Argentina	2 P-3	2	1 P-3, 2 P-2	3	5
Barbados	1 P-2	1	—	—	1
Bolivia	1 P-5	1	1 P-5	1	2
Brazil	2 P-5, 1 P-4, 1 P-2	4	—	—	4
Colombia	2 P-4, 2 P-3	4	1 P-4	1	5
Cuba	1 P-4, 1 P-3	2	—	—	2
Ecuador	1 P-3	1	1 P-5	1	2
Guatemala	2 P-3	2	—	—	2
Guyena	1 P-5, 1 P-3	2	—	—	2
Haiti	1 D-1	1	—	—	1
Jamaica	1 P-5	1	—	—	1
Mexico	1 D-1	1	—	—	1
Panama	1 P-3	1	—	—	1
Peru	3 P-4 ^j	3	—	—	3
Trinidad and Tobago	1 P-5	1	—	—	1
Venezuela	1 P-5, 1 P-2	2	—	—	2
	TOTAL	29		6	35

TABLE 2 (continued)

Country	Occupied posts subject to geographical distribution	Number	Occupied posts not subject to geographical distribution ^a	Number	Total
<i>Countries included in List D</i>					
Bulgaria	1 P-4, 1 P-3	2	—	—	2
Byelorussian SSR	1 P-4, 3 P-3	4	—	—	4
Czechoslovakia	1 P-4, 1 P-2	2	—	—	2
German Democratic Republic	2 P-5, 1 P-4	3	—	—	3
Hungary	1 D-1, 2 P-5, 2 P-4	5	—	—	5
Poland	1 P-5, 3 P-4, 1 P-3	5	1 L-6, 1 L-5	2	7
Romania	1 P-5, 1 P-4	2	—	—	2
Ukrainian SSR	1 P-5, 2 P-4	3	—	—	3
USSR	1 D-2, 1 D-1, 3 P-5, 10 P-4, 10 P-3, 1 P-2	26	1 P-5, 2 P-4, 5 P-3, 1 P-2	9	35
	TOTAL	52		11	63
<i>Non-Members of UNIDO as of 31 December 1985</i>					
Burma	1 P-5, 1 P-4	2	—	—	2
Costa Rica	1 P-4, 1 P-3	2	—	—	2
El Salvador	2 P-5, 1 P-4	3	—	—	3
Gambia	1 P-3	1	—	—	1
Grenada	1 P-4	1	—	—	1
Saint Vincent and the Grenadines	1 P-4	1	—	—	1
	TOTAL	10		—	10
Stateless	—	—	1 P-4	1	1
GRAND TOTAL	(98 nationalities)	371	(25 nationalities)	88	459

^aConsists mainly of staff in posts with special language requirements but also includes 5 interregional advisers and 15 special technical advisers.

^bIncludes 1 P-2 on secondment to JIU, Geneva.

^cIncludes 1 P-4 on secondment to UNDP, Bahrain.

^dIncludes 1 P-3 on secondment to UNESCO, Paris.

^eIncludes 1 P-4 on assignment as UNIDO SIDFA in Madagascar.

^fIncludes 1 P-3 on secondment to UNHCR, Pakistan.

^gIncludes 1 P-5 on assignment as UNIDO SIDFA in Barbados.

^hIncludes 1 P-3 on assignment to United Nations Headquarters, New York.

ⁱIncludes 1 P-4 on loan to IAEA.

^jIncludes 1 P-4 on assignment as UNIDO SIDFA in Honduras.

APPENDIX E

Industrial investment projects promoted by UNIDO
in 1985

<i>Recipient country/short project title</i>	<i>Total project cost (in millions of US dollars)</i>	<i>Recipient country/short project title</i>	<i>Total project cost (in millions of US dollars)</i>
<i>Antigua and Barbuda</i>		<i>India</i>	
Grape and grape juice production	0.50	Hydro turbines	6.00
<i>Botswana</i>		Process control valves	n.a.
Water rehabilitation plant	15.00	Petroleum valves	n.a.
<i>China</i>		Coal handling equipment	n.a.
Bicycle reflectors production	3.00	Capacitors	n.a.
Polyester factory	20.00	<i>Indonesia</i>	
Machine-building factory	1.00	Automobile engines	240.00
Light trucks (1.25-1.75 tons)	0.30	Pump manufacturing (iron casting)	5.00
Antibiotics	0.30	Liquid-frozen eggs	6.20
Knitting machines	0.30	Ferro-silicon	54.40
Glass fibre	1.00	<i>Jamaica</i>	
Ferrite cores plant	0.25	Detergents and soap production	1.20
Integrated circuits	0.20	<i>Jordan</i>	
Thyristors (silicon-controlled rectifiers) production	6.00	Truck repair workshop	4.40
Wheelbarrow production	n.a.	Commercial and workshop centre	10.00
Seaweed processing	n.a.	<i>Madagascar</i>	
Marble extraction and processing	n.a.	Rice mill	1.04
Perlite	n.a.	<i>Malawi</i>	
Pork carving machines	n.a.	Maize mill plant	1.20
Prefabricated buildings	n.a.	Animal mill plant	0.70
Potato-processing machinery	n.a.	Vegetable oil solvent extraction	6.80
Bread production plant	n.a.	Tannery	1.56
Heat-resistant glue	n.a.	Glass manufacturing project	4.70
Shoe manufacturing	n.a.	Pharmaceutical plants	1.80
Holiday sites and river passenger boats	n.a.	Tyre repair workshop	0.10
Cosmetics	n.a.	Crown cork plant	0.20
Sport goggles	n.a.	Plastic bottles for cosmetics	0.30
Automobile factory	100.00	Lime processing plant	1.50
Brewery	16.00	<i>Nepal</i>	
<i>Costa Rica</i>		Transistor radios and voltage stabilizers	0.97
Eel breeding and processing	3.60	Diesel engines, irrigation pumps	0.42
<i>Ecuador</i>		Electric motors manufacturing plant	3.00
Workshop for repair and overhauling of buses	4.80	<i>Niger</i>	
<i>Egypt</i>		Sorghum millet mill	0.76
Pharmaceuticals plant	1.60	<i>Nigeria</i>	
Paint plant	1.30	Prefabricated concrete plant	1.40
Pump factory (expansion of)	0.70		
<i>Guinea</i>			
Tomato canning	6.25		

Appendix E

<i>Recipient country/short project title</i>	<i>Total project cost (in millions of US dollars)</i>	<i>Recipient country/short project title</i>	<i>Total project cost (in millions of US dollars)</i>
<i>Pakistan</i>		<i>Uganda</i>	
Activated carbon manufacturing	5.20	Truck maintenance and repair service	24.00
Machine-tool manufacturing	1.50	TV assembly and repair service	0.60
<i>Peru</i>		Maize mill	0.84
Workshop for the disabled	1.30	Soap factory	1.00
<i>St. Lucia</i>		Waste plant for tea plantations	1.00
Hydraulic hoses	0.12	Wolframite mining	12.00
Steel rods and corrugated sheets	0.20	Marble mining	8.00
Scuba-diving suits	0.25	Bulb factory	1.00
Automotive batteries	0.01	Fish factory	1.30
Citrus and passion fruit	0.25	Extension of coffee processing plant	1.20
<i>Senegal</i>		Organic waste plant for national coffee association	1.10
Fishing vessels	1.00	<i>United Republic of Tanzania</i>	
<i>Somalia</i>		Salt extraction and refinery plant	2.00
Waste water plant	0.90	Caustic soda project	6.00
Feed mill, cattle fattening farming	3.40	Parquet flooring manufacturing plant	0.36
Meat factory (slaughter-house rehabilitation)	1.60	Organic waste, energy and fertilizer plant	1.00
Salt factory rehabilitation	1.00	<i>Yemen</i>	
<i>Sudan</i>		Bulb factory	1.10
Computer centre for hardware and software	0.16	Carpet factory	0.72
Wheat mill	0.50	Cattle farming	2.40
Organic fertilizer plant	6.00	Bottling plant	0.88
<i>Tunisia</i>		Five wheat mills	4.40
Factory for plastic toys	0.36	<i>Zambia</i>	
		Cosmetics factory	0.07
		TOTAL	630.47

Note: n.a. = information not available.

APPENDIX F

Senior Industrial Development Field Advisers (SIDFAs) and Junior Professional Officers (JPOs) in 1985

TABLE I. COUNTRIES AND TERRITORIES COVERED BY SIDFAs AND JPOs^a
(By region)

<i>SIDFA duty station and countries/territories covered</i>	<i>Donor country supplying JPO coverage</i>	<i>SIDFA duty station and countries/territories covered</i>	<i>Donor country supplying JPO coverage</i>
Africa		Lusaka	
Addis Ababa		Zambia	Finland
Ethiopia*	Netherlands/Italy ^b	Botswana*	
Antananarivo		Zimbabwe	Norway
Madagascar	Denmark	Maputo	
Comoros*		Mozambique	Sweden
Mauritius		Lesotho*	Sweden
Conakry		Swaziland	
Guinea*	Netherlands	Yaoundé	
Cape Verde*		Cameroon	Netherlands ^c
Guinea-Bissau*		Central African Republic*	
Dakar		Chad*	
Senegal	Belgium/Federal Republic of Germany ^b	Equatorial Guinea*	
Gambia*		Gabon	
Mali*		The Americas	
Mauritania		Brasilia	
Dar es Salaam		Brazil	Federal Republic of Germany ^b
United Republic of Tanzania*	Norway/Denmark ^b	Paraguay	
Malawi*	Finland	Bridgetown	
Seychelles		Barbados	Netherlands ^b
Freetown		Antigua and Barbuda	
Sierra Leone*	Denmark	British Virgin Islands	
Ghana	Italy	Dominica/Montserrat	
Liberia	Denmark	Grenada	
Kinshasa		Guyana	Netherlands ^c
Zaire	Belgium	St. Christopher and Nevis	
Burundi*		St. Lucia/	
Congo		St. Vincent and the Grenadines	
Rwanda*	Federal Republic of Germany/ Netherlands ^b	Suriname/ Netherlands Antilles	
Lomé		Trinidad and Tobago	Federal Republic of Germany/Italy ^b
Togo*	Netherlands ^c	Kingston	
Benin*	Italy	Jamaica	Federal Republic of Germany ^b
Burkina Faso*	Netherlands/Belgium ^b	Bahamas/Bermuda	
Côte d'Ivoire		Cayman Islands	
Niger*		Dominican Republic	Italy
Luanda		Haiti*	Netherlands
Angola	Denmark	Turks and Caicos Islands	
Sao Tome and Principe*			

TABLE I (continued)

<i>SIDFA duty station and countries/territories covered</i>	<i>Donor country supplying JPO coverage</i>	<i>SIDFA duty station and countries/territories covered</i>	<i>Donor country supplying JPO coverage</i>
The Americas (continued)		Beijing	
La Paz		China	
Bolivia	Italy/Finland/ Denmark ^d	Democratic People's Republic of Korea (<i>ad hoc</i>)	
Argentina	Belgium		
Uruguay	Netherlands		
Lima		Colombo	
Peru	Netherlands/Federal Republic of Germany ^b	Sri Lanka	Sweden ^b
		Maldives*	
		Nepal* (<i>ad hoc</i>)	Netherlands
Chile		Dhaka	
Colombia		Bangladesh*	Netherlands
Ecuador	Denmark		
Mexico City		Islamabad	
Mexico	Federal Republic of Germany	Pakistan	Norway
Cuba	Federal Republic of Germany ^b		
Nicaragua	Finland	Jakarta	
Venezuela (<i>ad hoc</i>)	Netherlands ^c	Indonesia	Japan
		Philippines	Netherlands
Tegucigalpa		New Delhi	
Honduras	Netherlands	India	
Belize		Bhutan* (<i>ad hoc</i>)	
Costa Rica	Switzerland	Rangoon	
El Salvador	Japan	Burma	
Guatemala		Lao People's Democratic Republic* (<i>ad hoc</i>)	
Panama		Viet Nam (<i>ad hoc</i>)	
Arab States		Seoul	
Khartoum		Republic of Korea	
Sudan*	Netherlands/Federal Republic of Germany ^b	Suva	
Democratic Yemen* (<i>ad hoc</i>)	Netherlands ^c	Fiji	
Yemen*	Federal Republic of Germany	Cook Islands	
		Kiribati	
		Nauru	
		Niue	
		Papua New Guinea	
		Samoa*	
		Solomon Islands	
		Tonga	
		Trust Territory of Pacific Islands (Ponape, Kosrae, Truk, Yap)	
		Tuvalu	
		Vanuatu	
Asia and the Pacific			
Bangkok			
Thailand	Japan ^b		
Brunei Darussalam			
Malaysia	Denmark/ Netherlands ^b		

Note: An asterisk indicates that the country is included in the list of least developed countries.

^aFor countries covered by JPO only, see table 2.

^bTwo consecutive JPOs in course of 1985.

^cJPO from a developing country.

^dThree consecutive JPOs in course of 1985.

TABLE 2. COUNTRIES COVERED BY JPO ONLY

<i>Region/country</i>	<i>JPO donor country</i>
<i>Africa</i>	
Nigeria	Netherlands/Japan ^a
<i>Arab States</i>	
Tunisia	Belgium
<i>Europe</i>	
Turkey	Federal Republic of Germany

^aTwo consecutive JPOs in course of 1985.

TABLE 3. LIST OF COUNTRIES AND TERRITORIES COVERED FROM UNIDO HEADQUARTERS

<i>Region/country/territory covered</i>	<i>Region/country/territory covered</i>
<i>Africa</i>	Qatar
Kenya	Saudi Arabia
Uganda*	Somalia*
	Syrian Arab Republic
	United Arab Emirates
<i>Arab States</i>	
Algeria	<i>Asia and the Pacific</i>
Bahrain	Afghanistan*
Djibouti*	Hong Kong
Egypt	Iran (Islamic Republic of)
Iraq	Mongolia
Jordan	Singapore
Kuwait	
Lebanon	<i>Europe</i>
Libyan Arab Jamahiriya	Cyprus
Morocco	Malta
Oman	

Note: An asterisk indicates that the country is included in the list of least developed countries.

TABLE 4. JPO DONOR COUNTRIES

<i>Country</i>	<i>Number of JPOs</i>
Belgium	5
Denmark	9 ^a
Finland	4
Germany, Federal Republic of	16 ^a
Italy	6
Japan	5
Netherlands	22 ^{a, b}
Norway	3
Sweden	4
Switzerland	1
TOTAL	75

^aOne JPO placed at UNIDO Headquarters.

^bSix JPOs from developing countries.

APPENDIX G

Geographical distribution of experts

(Listed in descending order)

TABLE I. 1 JANUARY TO 31 DECEMBER 1985

<i>Country</i>	<i>Number of appointments</i>	<i>Country</i>	<i>Number of appointments</i>
United Kingdom	161	Peru	9
France	135	Tunisia	9
Poland	135	Republic of Korea	8
United States of America	104	Pakistan	7
Germany, Federal Republic of	83	Panama	7
India	78	Cameroon	6
Austria	68	Denmark	6
Hungary	53	German Democratic Republic	6
Czechoslovakia	44	Indonesia	6
Belgium	41	Israel	6
Sweden	39	Jordan	6
Italy	36	Niger	6
Spain	30	Romania	6
Netherlands	28	Senegal	6
Brazil	27	Zimbabwe	5
Mexico	25	Kenya	4
Switzerland	23	Liberia	4
Yugoslavia	23	Malaysia	4
USSR	20	Turkey	4
Bangladesh	19	El Salvador	3
Japan	19	Greece	3
Egypt	18	Rwanda	3
Portugal	18	Benin	2
Sri Lanka	18	China	2
Argentina	17	Cuba	2
Australia	17	Ecuador	2
Canada	17	Ghana	2
Chile	15	Honduras	2
Ethiopia	15	Mauritania	2
Morocco	15	Nicaragua	2
Philippines	15	United Republic of Tanzania	2
Norway	14	Stateless	2
Côte d'Ivoire	13	Bolivia	1
Venezuela	13	Iraq	1
Bulgaria	11	Jamaica	1
Zaire	11	Libyan Arab Jamahiriya	1
Ireland	10	Madagascar	1
Nigeria	10	Sudan	1
Algeria	9	Syrian Arab Republic	1
Colombia	9	Togo	1
Finland	9	Viet Nam	1
New Zealand	9	Zambia	1
		TOTAL	1 628

TABLE 2. 1971-1985

<i>Country</i>	<i>Number of appointments</i>	<i>Country</i>	<i>Number of appointments</i>
United Kingdom	1 618	Mali	18
United States of America	1 044	Stateless	17
France	932	Bolivia	16
Poland	932	Côte d'Ivoire	16
India	810	Morocco	15
Germany, Federal Republic of	712	Zaire	15
Austria	428	China	14
Sweden	395	Ecuador	14
Belgium	391	Greece	13
Italy	329	Iraq	13
Egypt	303	Jamaica	13
Hungary	283	Malaysia	13
Netherlands	282	Sudan	11
Yugoslavia	275	Cameroon	10
Argentina	225	El Salvador	10
Spain	212	Iran (Islamic Republic of)	10
Denmark	204	Nigeria	10
USSR	186	Jordan	9
Canada	175	Mauritius	9
Switzerland	167	Haiti	8
Czechoslovakia	158	Nicaragua	8
Finland	145	Niger	8
Chile	137	Ghana	7
Japan	134	Panama	7
Romania	131	Togo	7
Norway	130	Zimbabwe	6
Australia	127	Cuba	5
Israel	113	Lebanon	5
Brazil	108	Benin	4
Ireland	87	Kenya	4
Sri Lanka	86	Liberia	4
Mexico	76	Guatemala	3
Pakistan	73	Madagascar	3
Philippines	70	Malta	3
New Zealand	66	Rwanda	3
Peru	61	United Republic of Tanzania	3
Bulgaria	58	Viet Nam	3
Portugal	50	Barbados	2
Colombia	32	Burma	2
Turkey	29	Byelorussian SSR	2
Venezuela	28	Honduras	2
Tunisia	27	Mauritania	2
Bangladesh	26	Paraguay	2
Syrian Arab Republic	26	Thailand	2
German Democratic Republic	25	Costa Rica	1
Algeria	24	Guyana	1
Republic of Korea	23	Libyan Arab Jamahiriya	1
Senegal	20	Nepal	1
Uruguay	19	Sierra Leone	1
Ethiopia	18	Zambia	1
Indonesia	18		
		TOTAL	12 385

APPENDIX H

Intergovernmental and international non-governmental organizations

TABLE I. INTERGOVERNMENTAL ORGANIZATIONS ASSOCIATED WITH THE WORK
OF THE INDUSTRIAL DEVELOPMENT BOARD OF UNIDO
AS A UNITED NATIONS ORGAN

(31 May 1985: 46 organizations)

<i>Name of organization</i>	<i>Abbreviation/ acronym</i>	<i>Application considered (year)</i>	<i>Symbol of document containing application</i>
African Development Bank	ADB	1976	ID/B/164
African Intellectual Property Organization ^d	OAPI	1967	<i>b</i>
African Regional Centre for Technology	ARCT	1982	ID/B/273
African Regional Organization for Standardization	ARSO	1983	ID/B/304
Agency for Cultural and Technical Co-operation	ACCT	1976	ID/B/164
Arab Federation for Technical Education	AFTE	1985	ID/B/345
Arab Fund for Economic and Social Development	AFESD	1977	ID/B/177
Arab Industrial Development Organization	AIDO	1983	ID/B/304
Arab League Educational, Cultural and Scientific Organization	ALECSO	1978	ID/B/201
Arab Organization for Mineral Resources	OARM	1982	ID/B/273
Arab Organization for Standardization and Metrology	ASMO	1976	ID/B/164
Asian Productivity Organization	APO	1969	ID/B/59
Caribbean Development Bank	CARIBANK	1976	ID/B/164
Central African Customs and Economic Union	UDEAC	1976	ID/B/164
Central African States Development Bank	CASDB	1981	ID/B/264/Add.1
Commonwealth Secretariat	CS	1979	ID/B/218
Council for Mutual Economic Assistance	CMEA	1971	ID/B/86/Add.3
Council of Arab Economic Unity	CAEU	1971	ID/B/86/Add.1
European Economic Community	EEC	1967	<i>b</i>
European Investment Bank	EIB	1969	ID/B/59
Gulf Organization for Industrial Consulting	GOIC	1978	ID/B/261
Inter-Arab Investment Guarantee Corporation	IAIGC	1977	ID/B/177/Add.2
Intergovernmental Committee for Migration	ICM	1981	ID/B/264
Intergovernmental Council of Copper Exporting Countries	CIPEC	1971	ID/B/86
International Center for Public Enterprises in Developing Countries	ICPE	1980	ID/B/239
International Commission for Food Industries ^c	CIIA	1968	ID/B/33
International Institute for Cotton	IIC	1971	ID/B/86
International Institute of Refrigeration	IIR	1985	ID/B/345
International Jute Organization		1985	ID/B/345
International Olive Oil Council	IOOC	1980	ID/B/239
Islamic Centre for Development of Trade	ICDT	1985	ID/B/345
League of Arab States	LAS	1970	ID/B/73
Mano River Union	MRU	1980	ID/B/239
Organization for the Development of the Senegal River ^d	OMVS	1971	ID/B/86/Add.1

<i>Name of organization</i>	<i>Abbreviation/ acronym</i>	<i>Application considered (year)</i>	<i>Symbol of document containing application</i>
Organization for Economic Co-operation and Development	OECD	1971	ID/B/86/Add.5
Organization of African Unity	OAU	1970	ID B/73/Add.1 and Corr.1
Organization of American States	OAS	1967	^b
Organization of Arab Petroleum Exporting Countries	OAPEC	1975	ID/B/152
Permanent Consultative Committee of the Maghreb	PCCM	1968	ID/B/33
Permanent Secretariat of the General Treaty on Central American Economic Integration	SIECA	1969	ID/B/59/Add.1
South Asia Co-operative Environment Programme	SACEP	1985	ID/B/345
Statistical, Economic and Social Research and Training Centre for Islamic Countries	SESRTCIC	1980	ID/B/239/Add.1
Union of African Railways	UAR	1984	ID/B/C.3/124
West Africa Rice Development Association	WARDA	1980	ID/B/239
West African Development Bank	WADB	1978	ID/B/201
West African Economic Community	CEAO	1976	ID/B/164

Note: The following organization, included in previous lists of IGOs associated with the work of the IDB ceased to exist in March 1985: Common African and Mauritian Organization.

^aFormerly African and Malagasy Industrial Property Office (OAMPI).

^bNo mimeographed background information was provided.

^cFormerly International Agriculture and Food Industries Committee (IAFIC).

^dBefore 1972: Organization of Senegal Riparian States (OERS).

TABLE 2. INTERNATIONAL NON-GOVERNMENTAL ORGANIZATIONS
HAVING CONSULTATIVE STATUS WITH UNIDO AS A UNITED NATIONS ORGAN
(31 May 1985: 84 organizations)

<i>Name of organization</i>	<i>Abbreviation/ acronym</i>	<i>Consultative status granted (year)</i>	<i>Symbol of document containing application</i>
African Technical Association	ATA	1985	ID/B/345
Afro-Asian Peoples' Solidarity Organization	AAPSO	1978	ID/B/201
Arab Federation for Food Industries	AFFI	1983	ID/B/304
Arab Federation of Chemical Fertilizer Producers	AFCFP	1976	ID/B/164
Arab Iron and Steel Union	AISU	1976	ID/B/201/Add.1
Arab Sugar Federation	ASF	1980	ID/B/239
Association for the Advancement of Agricultural Sciences in Africa	AAASA	1982	ID/B/273/Add.1
Association of African Development Finance Institutions	AADFI	1979	ID/B/218
Association of International Trade Fairs of America	AFIDA	1980	ID/B/239/Add.1

TABLE 2 (continued)

<i>Name of organization</i>	<i>Abbreviation/ acronym</i>	<i>Consultative status granted (year)</i>	<i>Symbol of document containing application</i>
Association of Latin American Industrialists	AILA	1980	ID/B/239/Add.1
Centre d'Etudes de l'Azote	CEA	1978	ID/B/201/Add.1
Club de Dakar		1980	ID/B/239
European Federation of Management Consultants' Associations	FEACO	1974	ID/B/131
European Federation of National Engineering Associations	FEANI	1979	ID/B/218 and Corr.1
European Federation of National Maintenance Societies	EFNMS	1976	ID/B/164
European Organization for Quality Control	EOQC	1985	ID/B/345
European Union of Coachbuilders	UEC	1971	ID/B/86/Add.1
European Union of Public Relations	UERP	1976	ID/B/164
Federation of African Consultants	FECA	1985	ID/B/345
Institute for the Development of International Co-operation	IDCI	1985	ID/B/345
International Association for Cereal Science and Technology ^a	ICC	1972	ID/B/106
International Association for the Exchange of Students for Technical Experience	IAESTE	1970	ID/B/73
International Association for the Protection of Industrial Property	AIPPI	1968	ID/B/32/Add.1
International Association of Crafts and Small and Medium-Sized Enterprises	IACME	1968	ID/B/32/Add.1
International Association of Islamic Banks	IAIB	1985	ID/B/345
International Chamber of Commerce	ICC	1967	<i>b</i>
International Christian Union of Business Executives	UNIAPAC	1968	ID/B/32
International Committee for Plastics in Agriculture	CIPA	1974	ID/B/131
International Confederation of Free Trade Unions	ICFTU	1967	<i>b</i>
International Co-operative Alliance	ICA	1971	ID/B/86
International Council for Building Research Studies and Documentation	CIB	1984	ID/B/C.3/124
International Council of Societies of Industrial Design	ICSID	1974	ID/B/131
International Council of Women	ICW	1982	ID/B/273
International Council on Archives	ICA	1982	ID/B/273
International Electrotechnical Commission	IEC	1980	ID/B/239/Add.1
International Federation for Documentation	FID	1970	ID/B/73
International Federation for Medical and Biological Engineering	IFMBE	1984	ID/B/C.3/124
International Federation of Agricultural Producers	IFAP	1984	ID/B/C.3/124
International Federation of Automatic Control	IFAC	1969	ID/B/60
International Federation of Inventors' Associations	IFIA	1977	ID/B/177
International Federation of Pharmaceutical Manufacturers Associations	IFPMA	1977	ID/B/177
International Fertilizer Industry Association ^c	IFA	1974	ID/B/131
International Measurement Confederation	IMEKO	1975	ID/B/152
International Organization for Standardization	ISO	1970	ID/B/73

<i>Name of organization</i>	<i>Abbreviation/ acronym</i>	<i>Consultative status granted (year)</i>	<i>Symbol of document containing application</i>
International Organization of Consumers Unions	IOCU	1971	ID/B/86
International Organization of Employers	IOE	1967	<i>b</i>
International Organization of Experts	ORDINEX	1985	ID/B/345
International Savings Banks Institute	ISBI	1971	ID/B/86
International Society for Engineering Education	IGIP	1985	ID/B/345
International Union for Conservation of Nature and Natural Resources	IUCN	1971	ID/B/86/Add.1
International Union of Architects	UIA	1969	ID/B/60
International Union of Food Science and Technology	IUFoST	1980	ID/B/239
International Union of Independent Laboratories	UILI	1971	ID/B/86/Add.4
International Union of Leather Technologists and Chemists Societies ^d	IULTCS	1975	ID/B/152
Islamic Chamber of Commerce, Industry and Commodity Exchange		1985	ID/B/345
Latin American Association of Development Financing Institutions	ALIDE	1974	ID/B/131
Latin American Association of Food Processors	ALICA	1985	ID/B/345
Latin American Association of Pharmaceutical Industries	ALIFAR	1982	ID/B/273
Latin American Federation of the Pharmaceutical Industry	FIFARMA	1979	ID/B/218/Add.1
Latin American Iron and Steel Institute	ILAFA	1972	ID/B/106/Add.1
Latin American Petrochemical Association ^e	APLA	1980	ID/B/239
Latin American Plastics Institute	ILAP	1974	ID/B/131
Licensing Executives Society International (International)	LES	1978	ID/B/201
Mutual Assistance of the Latin American Government Oil Companies	ARPEL	1974	ID/B/131/Add.1
Organization of African Trade Union Unity	OATUU	1983	ID/B/304
Pan American Standards Commission	COPANT	1983	ID/B/304
"Pio Manzu" International Research Centre		1980	ID/B/239
Society for International Development	SID	1984	ID/B/C.3/124
Society of Chemical Industry	SCI	1972	ID/B/106
Third World Foundation for Social and Economic Studies		1982	ID/B/273
Union of Industries of the European Community	UNICE	1969	ID/B/60
Union of International Fairs	UFI	1978	ID/B/201
Union of International Technical Associations ^f	UITA	1970	ID/B/73
Union of Producers, Conveyors and Distributors of Electric Power in Africa	UPDEA	1976	ID/B/164
World Assembly of Small and Medium Enterprises	WASME	1983	ID/B/304
World Association for Element-Building and Prefabrication	WAEP	1981	ID/B/264
World Association of Industrial and Technological Research Organizations	WAITRO	1972	ID/B/106
World Confederation of Labour ^g	WCL	1968	ID/B/32
World Council of Management ^h	CIOS	1967	<i>b</i>
World Federation of Development Financing Institutions	WDFDI	1984	ID/B/304 and ID/B/C.3/124

TABLE 2 (continued)

<i>Name of organization</i>	<i>Abbreviation/ acronym</i>	<i>Consultative status granted (year)</i>	<i>Symbol of document containing application</i>
World Federation of Engineering Organizations	WFEO	1969	ID/B/60
World Federation of Trade Unions	WFTU	1967	^b
World Packaging Organization	WPO	1975	ID/B/152
World Peace Council	WPC	1977	ID/B/177

Note: The following four organizations, included in lists of NGOs in consultative status with UNIDO issued to the Board prior to 1984, have ceased to exist: Afro-Asian Organization for Economic Co-operation (AFRASEC), European Centre for International Co-operation (CECI), European Oceanic Association (EUROCEAN), International Centre for Industry and the Environment (ICIE).

^aBefore October 1984: International Association for Cereal Chemistry.

^bBackground information on aims and activities circulated informally by the Executive Director to delegates attending first session of the Board (cf. A/6715/Rev.1, para. 312).

^cBefore 1984: International Association of the Phosphate Industry (ISMA).

^dBefore 1984: International Union of Leather Chemists' Societies (IULCS).

^eBefore 1984: Latin American Petrochemical Institute.

^fBefore 1981: Union of International Engineering Organizations (UIEO).

^gBefore October 1968: International Federation of Christian Trade Unions (ICFTU).

^hBefore 1976: International Council for Scientific Management.

APPENDIX I

United Nations Industrial Development Fund (UNIDF)

TABLE I. UNIDF STATEMENT OF PLEDGES FOR THE PERIOD 1978-1985 AS AT 31 DECEMBER 1985

(In US dollars)

Country/organization	Total pledges for 1978-1984	Pledges for 1985	Exchange adjustments	Collections during 1978-1985	Total unpaid pledges
<i>General contributions</i>					
Afghanistan	8 000	1 500	—	8 000	1 500
Algeria	449 000	40 000	—	489 000	—
Angola	60 000	10 000	—	60 000	10 000
Argentina	337 000	—	—	337 000	—
Austria	240 174	45 045	(10 167)	275 052	—
Bahrain	35 000	5 000	—	35 000	5 000
Bangladesh	14 279	2 420	—	16 699 ^a	—
Barbados	11 000	2 000	—	13 000	—
Benin	25 428	—	(286)	25 142	—
Bhutan	7 266	1 320	—	7 266	1 320
Bolivia	6 000	1 000	—	5 000	2 000
Botswana	22 344	2 769	(1 820)	23 293	—
Brazil	105 000	15 000	—	105 000	15 000
Bulgaria	500 146	101 523	(13 744)	587 925	—
Burkina Faso	27 159	—	(903)	26 256	—
Burma	7 846	1 000	(14)	8 832	—
Burundi	6 339	—	—	6 339	—
Cameroon	21 191	—	(879)	20 312	—
Cape Verde	2 000	—	—	2 000	—
Chad	2 857	—	(2 857)	—	—
Chile	52 000	10 000	—	62 000	—
China	2 143 998	115 830	(60 144)	2 199 684	—
Colombia	32 127	5 700	—	36 402	1 425

TABLE 1 (continued)

Country/organization	Total pledges for 1978-1984	Pledges for 1985	Exchange adjustments	Collections during 1978-1985	Total unpaid pledges
<i>General contributions (continued)</i>					
Congo	23 768	11 000	165	23 507	11 426
Costa Rica	16 857	12 250	—	21 027	8 080
Côte d'Ivoire	44 546	7 833	—	52 379	—
Cuba	210 403	23 333	(2 126)	21 610	—
Cyprus	7 791	1 210	(55)	8 946	—
Czechoslovakia	161 114	—	—	161 114	—
Democratic Yemen	13 088	4 000	—	17 088	—
Djibouti	4 000	—	—	4 000	—
Dominica	3 352	—	(12)	3 340	—
Dominican Republic	5 000	—	—	5 000	—
Ecuador	18 004	6 500	—	19 064	5 440
Egypt	477 884	72 492	—	477 884	72 492
Ethiopia	1 122	1 111	—	2 233	—
Fiji	7 650	1 000	103	8 753	—
Gabon	10 329	—	—	10 329	—
German Democratic Republic	1 018 205	67 550	730	1 086 485	—
Ghana	74 176	—	—	74 176	—
Greece	158 000	36 000	—	158 000	36 000
Guatemala	25 000	5 000	—	30 000	—
Guinea	8 145	108 600	—	116 745	—
Guinea-Bissau	395	—	(7)	388	—
Guyana	8 584	706	17	8 584	723
Haiti	10 000	—	—	10 000	—
Holy See	1 000	—	—	1 000	—
Honduras	2 000	1 000	—	3 000	—
Hungary	484 073	62 779	(3 706)	543 146	—
India	7 012 595	500 000	—	7 012 595	500 000
Indonesia	290 000	50 000	—	340 000	—
Iran (Islamic Republic of)	85 000	—	—	85 000	—
Iraq	1 088 983	—	(16 402)	911 290	161 291
Ireland	74 130	—	—	74 130	—
Jamaica	28 000	4 000	—	28 000	4 000
Jordan	25 637	—	—	25 637	—

Kenya	64 310	17 414	(2 432)	69 292	10 000
Kuwait	425 000	75 000	—	500 000	—
Lao People's Democratic Republic	9 000	1 500	—	9 000	1 500
Lebanon	4 000	—	—	4 000	—
Lesotho	12 000	—	—	12 000	—
Liberia	2 500	—	—	2 500	—
Libyan Arab Jamahiriya	305 000	—	—	305 000	—
Luxembourg	53 364	4 754	(1 851)	56 267	—
Madagascar	37 236	2 042	(1 943)	37 335	—
Malawi	15 383	2 349	(371)	17 361	—
Malaysia	100 000	20 000	—	119 550	450
Mali	1 767	—	844	—	2 611
Malta	9 432	—	(18)	9 414	—
Mauritania	6 208	—	—	6 208	—
Mauritius	7 743	—	(150)	7 593	—
Mexico	146 752	10 497	—	157 249	—
Mongolia	15 595	2 082	(182)	17 495	—
Morocco	73 568	—	(5 231)	63 300	5 037
Mozambique	13 213	4 925	(155)	13 058	4 925
Nepal	4 200	700	—	4 900	—
Nicaragua	1 000	—	—	1 000	—
Niger	—	975	—	975	—
Nigeria	275 000	50 000	—	275 000	50 000
Oman	70 000	12 000	—	70 000	12 000
Pakistan	375 084	79 974	(27 921)	427 137	—
Panama	10 586	2 000	—	12 586	—
Paraguay	30 000	6 000	—	6 000	30 000
Peru	65 000	20 000	—	60 000	25 000
Philippines	148 500	1 000	—	143 494	6 006
Poland	842 771	105 033	(8 687)	939 117	—
Portugal	94 108	15 000	(565)	108 543	—
Qatar	155 000	30 000	—	185 000	—
Republic of Korea	180 000	30 000	—	210 000	—
Romania	161 364	—	—	161 364	—
Rwanda	16 000	4 000	—	20 000	—
Samoa	300	—	—	300	—
Saudi Arabia	7 000 000	1 000 000	—	8 000 000	—
Senegal	27 000	3 000	—	887	29 113
Seychelles	4 714	—	—	4 714	—
Sierra Leone	9 200	2 000	(1 079)	10 027	94

TABLE I (continued)

<i>Country/organization</i>	<i>Total pledges for 1978-1984</i>	<i>Pledges for 1985</i>	<i>Exchange adjustments</i>	<i>Collections during 1978-1985</i>	<i>Total unpaid pledges</i>
<i>General contributions (continued)</i>					
Singapore	4 000	—	—	4 000	—
Somalia	4 808	—	—	2 341	2 467
Sri Lanka	21 000	3 000	—	24 000	—
Sudan	81 719	15 000	—	15 235	81 484
Suriname	6 000	2 000	—	6 000	2 000
Swaziland	7 121	2 051	(836)	6 804	1 532
Syrian Arab Republic	117 011	—	—	117 011	—
Thailand	149 907	20 129	(60)	169 976	—
Togo	23 746	1 053	(1 689)	19 193	3 917
Trinidad and Tobago	139 701	5 025	—	144 726	—
Tunisia	135 267	19 953	(4 175)	151 045	—
Turkey	614 727	—	(62 462)	546 254	6 011
Turkey	2 447	—	(102)	2 345	—
Uganda	4 985 524	586 854	7 492	5 579 870	—
Union of Soviet Socialist Republics	65 000	—	—	65 000	—
United Arab Emirates	14 040	1 111	(1 206)	13 945	—
United Republic of Tanzania	49 432	—	—	49 432	—
Uruguay	124 000	20 963	(37)	144 926	—
Venezuela	5 000	1 000	(506)	4 694	1 000
Viet Nam	5 011	—	—	5 011	—
Yemen	924 988	—	—	923 935	1 053
Yugoslavia	18 429	—	—	15 429	3 000
Zaire	73 605	9 804	(8 749)	74 143	517
Zambia	29 558	8 966	(1 051)	37 473	—
Zimbabwe	30 000	—	—	30 000	—
Non-governmental organizations	33 918 924	3 535 625	(235 029)	36 104 106	1 115 414
Total general contributions	33 918 924	3 535 625	(235 029)	36 104 106	1 115 414

Special-purpose contributions

Argentina	22 400	—	—	22 400	—
Australia	904 396	168 067	(96 476)	946 774	29 213
Austria	3 339 456	466 815	(12 708)	3 793 563	—
Belgium	3 642 651	393 443	16 686	4 052 780	—
Brazil	100 198	—	—	100 198	—
China	740 353	250 000	—	990 353	—
Côte d'Ivoire	376 580	—	(37 389)	304 102	35 089
Czechoslovakia	1 087 361	167 504	(3 498)	1 220 932	30 435
Democratic Yemen	32 000	—	—	32 000	—
Denmark	202 684	—	—	202 684	—
Egypt	236 511	200 000	—	236 511	200 000
Finland	1 577 371	—	(92 353)	1 113 654	371 364
France	3 906 287	904 255	(227 596)	4 582 946	—
German Democratic Republic	807 959	38 411	(30 123)	816 247	—
Germany, Federal Republic of	13 707 432	2 123 050	88 852	15 919 334	—
Hungary	310 204	50 628	583	309 869	51 546
India	—	500 000	—	200 000	300 000
Italy	10 736 595	2 105 263	(417 620)	10 033 568	2 390 670
Japan	4 235 315	961 895	—	5 197 210	—
Malta	15 920	—	—	15 920	—
Netherlands	24 792	441 176	58 232	368 877	155 323
Norway	73 110	—	—	73 110	—
Poland	91 462	92 307	(8 447)	143 271	32 051
Spain	27 000	51 903	—	72 812	6 091
Sweden	4 820 523	297 229	(76 255)	5 041 497	—
Switzerland	4 146 612	1 056 338	(21 760)	3 453 114	1 728 076
Turkey	504 826	247 617	(128 834)	623 609	—
United Kingdom	2 817 147	152 047	(367 377)	2 316 039	285 778
Yugoslavia	286 317	194 596	(136 725)	344 188	—
Non-governmental organizations	155 574	93 367	—	248 941	—
Total special-purpose contributions	58 928 946	10 955 911	(1 492 808)	62 776 413	5 615 636
TOTAL UNIDF	92 847 870	14 491 536	(1 727 837)	98 880 519	6 731 050

^aBangladesh—overpayment of pledges for 1981-1983 of \$7,519 deleted from UNIDF and transferred to Industrial Development Fund.

Appendix I

TABLE 2. STATUS OF RESOURCES OF UNIDF AS AT 31 DECEMBER 1985

(In thousands of US dollars)

	Convertible		Non-convertible	Total
	General purpose	Special purpose		
Income				
Pledges, 1978 to 1985	21 922	65 531	19 887	107 340
Interest and other income	8 467	(5 146)	(2 398)	923
Balance from former General Trust Fund (GTF)	1 967	748	3 000	5 715
TOTAL INCOME	32 356	61 133	20 489	113 978
Approvals				
Projects				
Expenditure, 1978 to 1985	23 157	44 739	16 654	84 550
Commitments, 1986 and future	117	1 712	24	1 853
Not yet implemented	3 228	11 718	969	15 915
Subtotal	26 502	58 169	17 647	102 318
Support costs, 1978 to 1985				
General purpose convertible	3 108	—	—	3 108
Special purpose convertible	—	5 178	—	5 178
Non-convertible ^a	2 239	—	—	2 239
Subtotal	5 347	5 178	—	10 525
Reserve for support costs, 1986 and future				
General purpose convertible	435	—	—	435
Special purpose convertible	—	1 746	—	1 746
Non-convertible ^a	130	—	—	130
Subtotal	565	1 746	—	2 311
TOTAL APPROVALS	32 414	65 093	17 647	115 154
Subtotal	(58)	(3 960)	2 842	(1 176)
Operational reserve	(526)	—	—	(526)
UNENCUMBERED BALANCE	(584)	(3 960)	2 842	(1 702)
Cash position				
Total income	32 356	61 133	20 489	113 978
Uncollected	1 034	7 776	196	9 006
Received	31 322	53 357	20 293	104 972
Disbursements, 1978 to 1985	27 471	47 678	15 397	90 546
CASH BALANCE	3 851	5 679	4 896	14 426
Unliquidated obligations	1 033	2 239	1 257	4 529
Commitments, 1986 and future	117	1 712	24	1 853
Reserve for support costs, 1986 and future	565	1 746	—	2 311
Operational reserve	526	—	—	526
COMMITMENTS	2 241	5 697	1 281	9 219
UNCOMMITTED CASH BALANCE	1 610	(18)	3 615	5 207

^aSupport costs for projects financed from non-convertible currencies are charged to the general convertible segment.

TABLE 3. CUMULATIVE LIST OF PROJECTS APPROVED FOR FINANCING UNDER UNIDF, CLASSIFIED ACCORDING TO THE UNIDF PRIORITY AREA, AS AT 31 DECEMBER 1985

UNIDF priority area	Number of projects	Convertible (excluding overheads) (in US dollars)	Non-convertible US dollar equivalent	Total (in US dollars)	Percentages	
					Desirable allocation ^a	Actual allocation
Special measures for industrial development of the least developed countries	78	6 154 646	2 057 427	8 212 073	10	8
Transfer and adaptation of technology and development of appropriate technology and industrial information	212	18 433 219	927 198	19 360 417	10	19
Economic and technical co-operation among developing countries	70	3 877 816	1 292 335	5 170 151	9	5
Group training and strengthening industrial training institutions in developing countries	358	17 623 711	11 510 307	29 134 018	10	29
Industrial institutional infrastructure	56	3 915 478	428 305	4 343 783	10	4
Industries processing local natural resources including export-oriented industries	79	9 159 894	477 943	9 637 837	12	9
Industries satisfying basic needs and support to rural industries	56	5 479 892	165 743	5 645 635	8	6
Promotional activities	137	18 017 158	659 595	18 676 753	8	18
Other activities	41	2 020 690	134 902	2 155 592	5	2
TOTAL	1 087	84 682 504	17 653 755	102 336 259	82	100

^aThe key to the resource allocations is as follows:

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

APPENDIX J

List of studies undertaken by the Division for Industrial Studies in 1985

Global and Conceptual Studies

International industrial restructuring: global co-operation strategies

This research activity is aimed at designing alternative global co-operation strategies for international industrial restructuring conducive to achieving a higher share of industrial production for the developing countries, including: (a) the development of alternative quantitative industrialization scenarios; and (b) the analysis of the restructuring process at the global and regional level.

Studies completed in 1985:

Structural determinants of South-South trade expansion (UNIDO/IS.589)

Ongoing studies:

A statistical analysis of the source of change in manufacturing value added by industry and region 1963-1980: a decomposition approach

Cost in 1985: \$24,000

Institutional and policy instruments for co-operation

The purpose of this project is to examine institutional policy instruments needed to implement new strategies of industrial co-operation between the South and the North and between different regions and countries within the South.

Studies completed in 1985:

Policy and institutional obstacles to South-South trade in manufactures (UNIDO/IS.584)

External indebtedness: another dimension of the African debt (UNIDO/IS.585)

Ongoing studies:

Policy design and price reform: guidelines with special reference to industry

Cost in 1985: \$13,000

Global modelling and databank development

The objective of this research activity is to service studies on industrial development strategies and policies and on international industrial restructuring devoted to the analysis of the implications of the Lima target, and thus to support national and international bodies in formulating goals for common action.

Studies completed in 1985:

The IDIOM user's handbook for policy-oriented model structures. World modelling working paper (UNIDO/IS.514)

A model for describing the impacts of changed bilateral export structure on production and imports—TIMOD (UNIDO/IS.523)

Towards viable balanced growth strategies: a locational perspective (UNIDO/IS.559)

Ongoing studies:

Analysis of the energy sector in relation to industrialization scenarios for the year 2000

Cost in 1985: \$46,000

Special and conceptual studies on long-term and development issues relating to industrialization

These special studies are undertaken, as requested, on priority issues pertaining to the industrialization of developing countries, and in response to *ad hoc* assignments from the Administrative Committee for Co-ordination, the Committee for Development Planning, the Industrial Development Board and other bodies.

Studies completed in 1985:

The mineral trade potential of the least developed African countries (UNIDO/IS.508)
Social aspects of industrialization: global and regional evidence (UNIDO/IS.534)

Ongoing studies:

Economic size and transport costs: implication for industrialization in the least developed African countries

Cost in 1985: \$39,000

Monitoring progress in industrialization

The objective of this project is to monitor, and issue reports on, progress towards the attainment of the Lima target and other development goals.

Studies completed in 1985:

Industry and Development: Global Report 1985 (ID/333)

Ongoing studies:

Industry and Development: Global Report 1986

Cost in 1985: \$55,700

Industry and Development

The journal attempts to provide a link between practitioners and theorists working on economic and related aspects of industrialization. The focus of the journal is on applied economics, particularly in areas emphasized in the Lima and New Delhi Declarations and Plans of Action.

Issues completed in 1985:

Issues Nos. 14 and 15 of *Industry and Development* were published

Issues Nos. 16 and 17 were completed for publication in 1986

Cost in 1985: No consultancy costs

Regional and Country Studies

Regional and subregional studies and analyses

The objective of this activity is to render economic research services in respect of regional and subregional developments and to identify prospects for regional co-operation in industry. The work is primarily client oriented, and also services other Divisions of UNIDO in support of technical co-operation activities. In addition to the preparation of studies, this activity covers the liaison function with UNIDO's joint industry divisions in the regional commissions and provides programme support to the joint divisions.

Studies completed in 1985:

Small-scale electronics industry as subcontractor in Asia and the Pacific region (UNIDO/IS.549)

Mechanisms for small-scale industry development: ancillarization—development of feeder industries (UNIDO/IS.551)

Scope and outline for ASEAN regional co-operation in the textiles and textile products industry

Appendix J

Ongoing studies:

- Policies and strategies for small-scale industry development in Asia and the Pacific region
- Revised study on the automotive industry in ASEAN: trends and prospects
- Restructuring of the United States textile industry and implications for Latin America
- Prospects for industrial development in Indian Ocean island States
- Energy policies in some European IPF countries on improvement and acceleration of energy conservation activities in industry (jointly with IO/FCTY)
- Industrial policy in East Asia, 1950-1985^a

Cost in 1985: \$10,800

Country surveys and studies

Under this sub-programme element, economic analyses and data are provided to national policy makers on the structure of industry and effect of policies, emerging policy options as well as on resources and prospects for industrialization. This research is carried out on the basis of data on international trends and forces and in response to an increasing demand from national sources. The series of country industrial development reviews, introduced in 1984, was significantly expanded in 1985 not only in response to the requirements of developing country Governments but also in support of UNIDO technical co-operation activities. Each of the 15 reviews issued in 1985 presents a survey and brief analysis of the respective country's industrial sector and provides a substantive basis for UNIDO's operational activities. There is evidence that the series has proven very useful to financial and industrial enterprises, both public and private, and to research institutes and aid agencies in developed countries. The output under this activity additionally reflects work undertaken in the Branch in response to requests for in-depth country analyses for technical assistance programming. Analyses of country industrialization prospects include the identification of international restructuring trends with specific recommendations for policy makers.

Studies completed in 1985:

- Towards an industrial policy in Argentina
- International trends in the machine-tool industry—implications for Argentina (UNIDO/IS.565)
- A framework for technical assistance programming in Pakistan's industry
- Systems of incentives for investments in manufacturing industry (Malaysia, Morocco, Portugal, Republic of Korea, Tunisia, Turkey)
- Industrial development review series: Bahrain (UNIDO/IS.592), Bolivia (UNIDO/IS.564), Chile (UNIDO/IS.579), China (UNIDO/IS.582), India (UNIDO/IS.547), Pakistan (UNIDO/IS.535)

Ongoing studies:

- Restructuring of the Mexican textile industry—requirements and policy options
- Analysis of the manufacturing sector of the Syrian Arab Republic
- Thailand: a framework for technical assistance programming in industry
- Industrial development review series: Burma, Colombia, Cuba, Republic of Korea, Mexico, Pacific island countries, Sri Lanka

Cost in 1985: \$93,700

Industrial redeployment and structural adjustment

The purpose of this activity is to keep under continuous surveillance the industrial restructuring process at the regional and country levels and to examine prospects for and obstacles to redeployment in the changing international division of labour.

Studies completed in 1985:

- International economic restructuring and the territorial community (UNIDO/IS.571)
- Finland in the changing international division of labour (UNIDO/IS.556)
- Survey of government policies in informatics (UNIDO/IS.526)

^aFunded from extra-budgetary sources.

Ongoing studies:

- Restructuring of the textile industry in European CMEA countries
- Restructuring of the leather shoe industry in Sweden

Cost in 1985: \$17,000

Studies related to the Industrial Development Decade for Africa

The objective of this research activity is to keep under review, and assist in, the programme of action for the Industrial Development Decade for Africa.

Studies completed in 1985:

- Industrial co-operation through the Southern African Development Co-ordination Conference (SADCC) (UNIDO/IS.570)
- Overview of mining and mineral resource-based industries in the Southern African Development Co-ordination Conference (SADCC) subregion (UNIDO/IS.560)
- Policies and measures to promote industrial co-operatives in Africa (UNIDO/IS.561)
- Industry and external debt in Africa: a preliminary analysis (UNIDO/IS.536)^a
- Summary report on industry and external debt in Africa (UNIDO/IS.537)
- Morocco—industrial investment policy^a
- Industrial development review series: Nigeria (UNIDO/IS.557), Sudan (UNIDO/IS.541), Swaziland (UNIDO/IS.516), Zambia (UNIDO/IS.520)
- Study of the manufacturing sector in Zimbabwe (DP/ID/SER.A/631 and Add.1 and Add.2)^a

Ongoing studies:

- Study of the manufacturing industry in Guinea-Bissau^a
- Revised study on resource-based industrial development potential in Lesotho
- In-depth study of the manufacturing sector in Mozambique^a
- Analysis of resource-based industrial development potential in Rwanda^a
- Survey of the iron and steel industry in PTA countries^a
- Study on ODA and the manufacturing sector
- Industrial development review series: Côte d'Ivoire, Egypt, Ghana, Mali, United Republic of Tanzania

Cost in 1985: \$93,600

*Sectoral Studies**Food-processing industry**Studies completed in 1985:*

- The vegetable oils and fats industry: the sector in figures (UNIDO/IS.604)
- Manual for the management of integrated agro-industrial food systems (to be issued during 1986)
- A programme for the integrated development of the Peruvian oils and fats production/consumption system (UNIDO/IS.569)
- Tariff and non-tariff measures in the world trade of oilseeds, vegetable oils and related products (UNIDO/IS.519)^b
- Potential contribution of the food agroindustry to food security systems (UNIDO/IS.587)
- Food security and processed foods—a methodological basis for determining the demand (to be issued in early 1986)
- Methodology for the selection of priority subsectors in the food-processing industry and analysis of technological options (to be issued in early 1986)
- Programming of the development of priority subsectors of food-processing systems within national food security systems (UNIDO/IS.586)

^bPrepared jointly with UNCTAD.

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Ongoing studies:

Methodology for analysis and management of integrated agro-industrial food systems

Cost in 1985: \$8,600

Fisheries industry

Ongoing studies:

A typology of the fisheries industrial systems in developing countries

Development strategies for different types of fisheries industrial systems in developing countries

Cost in 1985: \$32,300

Wood and wood-processing industry

Studies completed in 1985:

Development of the wood processing industry in the ESCAP region (to be issued at a later date)

Ongoing studies:

Factors affecting the location of wood-processing facilities in developing countries (in co-operation with IIASA)

Cost in 1985: No consultancy cost

Pharmaceutical industry

Studies completed in 1985:

Technical and economic analysis of the manufacture of ethambutolhydrochloride (UNIDO/IS.588)

Technical and economic analysis of the manufacture of isoniazid (to be issued in early 1986)

The market for pharmaceuticals, review of available statistics, trends and forecasts to 1990 (to be issued in early 1986)

Ongoing studies:

Techno-economic analysis of the manufacture of acetylsalicylic acid

A decision-making model for the selection of pharmaceutical substances for production by organic chemical synthesis

Cost in 1985: \$16,600

Fertilizer industry

Ongoing studies:

Long-term trends in demand and new technological trends in the production of fertilizers

Pre-feasibility study for the establishment of mini-fertilizer plants in four African countries

Cost in 1985: \$25,000

Petrochemical industry

Studies completed in 1985:

The petrochemical industry in developing countries: prospects and strategies (UNIDO/IS.572, Vol. I)

The petrochemical industry: the sector in figures (UNIDO/IS.572/Add. I, Vol. II)

New trends in petrochemical research development (UNIDO/IS.576)

Tariff and non-tariff measures in the world trade of petrochemical products (UNIDO/IS.573)^b

The petrochemical industry in the developing ESCAP region: past review and future prospects (UNIDO/IS.563/Add.2, Vol. III)^c

User's guide and programmer's manual for use on a PC of a model for the techno-economic evaluation of petrochemical processes (to be issued in the course of 1986)

Cost in 1985: \$24,100

Building materials industry:

Studies completed in 1985:

Tariff and non-tariff measures in the world trade of building materials (UNIDO/IS.524)^b

Lime in industrial development: a UNIDO guide to its uses and manufacture in developing countries (UNIDO/IS.555)

The building materials industry: the sector in figures (UNIDO/IS.512/Add.1, Vol. II)

Cost in 1985: \$700

Iron and steel industry:

Studies completed in 1985:

International trade in steel tubes (UNIDO/IS.515)

Human resources and manpower training in industries of developing countries (to be issued in early 1986)

Preliminary analysis of the iron and steel industry in the developing ESCAP region (UNIDO/IS.563/Add.1, Vol. II)^c

Ongoing studies:

Studies on the present conditions of the iron and steel industry in developing countries: ASEAN member countries, Middle East and Western Asia, and Africa

Practical application of the method for determining manpower training requirements to two field projects

Cost in 1985: \$33,600

Capital goods industry:

Studies completed in 1985

Second world-wide study on the capital goods: the sector in figures (UNIDO/IS.505)

Capital goods industry in developing countries: a second world-wide study (UNIDO/IS.530)

Elements of strategies for the capital goods industry in Africa. Report of an expert group meeting for the formulation of strategies and policies for the development of the capital goods industry in Africa, Vienna, Austria, 18-20 June 1985 (UNIDO/IS.538)

Preliminary analysis of the capital goods industry in South-East and East Asia (UNIDO/IS.563, Vol. I)^c

The situation of selected industrial sectors in the developing countries of the ESCAP region: a synthesis paper (UNIDO/IS.577)

Industrial progress of selected sectors in the developing ESCAP region. Final report of the UNIDO/ESCAP Workshop on accelerating growth through co-operation in selected industrial sectors in the developing countries of the ESCAP region, Bangkok, Thailand, 1-5 July 1985 (UNIDO/IS.543)

Analytical report of the first expert group meeting on the capital goods industry in Latin America (UNIDO/IS.567)

^cPrepared jointly with ESCAP.

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Ongoing studies:

- Capital goods requirements in the vegetable oils and fats and in the grain milling industries
- Techno-economic study on the development of capital goods in Arab countries
- Ship repair and maintenance in developing countries

Cost in 1985: \$25,500

Agricultural machinery industry:

Studies completed in 1985:

- The present situation of the agricultural machinery industry in Latin America (UNIDO/IS.581)
- The multi-purpose approach to agricultural machinery manufacturing in Latin America (UNIDO/IS.607)

Cost in 1985: \$14,800

Supporting research and methodological activities

Studies completed in 1985:

- Use and conservation of energy in the cement industry (UNIDO/IS.540)

Ongoing studies:

- Energy use and conservation in the non-ferrous metals industry
- Use and conservation of energy in the production of selected building materials (lime, brick and glass)

Cost in 1985: \$300

Statistics and Survey Unit

Industrial statistics

The objectives of this activity are (a) to extend the coverage and detail of the statistics necessary to support industrial research, (b) to facilitate the storage and provision of these data through the development and maintenance of a cost-efficient computer data base and associated software and (c) to widely disseminate the indicators derived from these data that are not available elsewhere.

Studies completed in 1985:

- International comparative advantage in manufacturing: changing profiles of resources and trade (ID/334)
- A statistical review of the world industrial situation, 1984 (UNIDO/IS.506)
- Africa in figures (UNIDO/IS.517)
- An inventory of industrial statistics: UNIDO data base, 1985 (UNIDO/IS.528)
- Measuring the relative degree of industrialization (UNIDO/IS.491/Rev.1)
- Industrial statistics for research purposes: methodology applied in compiling UNIDO's international data on the number of employees, wages and salaries, gross output and value added (UNIDO/IS.558)

Ongoing studies and related activities:

- Handbook of industrial statistics 1986
- A statistical review of the world industrial situation, 1985
- L'industrie africaine en chiffres, Vol. 2

Cost in 1985: \$9,500

Industrial Development Survey

The objective of the publication is to provide a survey of current problems and progress in the field of industrial development; to review industrialization policies and strategies; to monitor structural changes in both industrialized and developing countries; and to analyse the significance of the trends for the future course of industrial development.

Studies completed in 1985:

Industry in the 1980s: structural change and interdependence (ID/331)

Cost in 1985: \$6,400

*Other activities**Environmental and related studies*

The objective of these studies is to undertake research into (a) environmental protection during the process of industrial development, (b) industrial water use and treatment practice, and (c) industrial emergency contingency planning.

Studies completed in 1985:

Utilization of phosphogypsum produced in the fertilizer industry (UNIDO/IS.533)

Environmental study of the petrochemicals industry (UNIDO/IS.568)

Environmental considerations relating to the petrochemicals industry (UNIDO/IS.580)

Industrial emergency contingency planning (to be issued at a later date)

Ongoing studies:

Solvent recovery in the pharmaceutical industry

Industrial pollution in East Africa^d

Cost in 1985: \$2,000.

*Development and Transfer of Technology**Studies completed in 1985*

Directory of industrial information services and systems in developing countries (UNIDO/IS.205/Rev.1)

Revises, expands and updates the first edition and is intended to promote the full use of existing industrial and technological information facilities in the developing countries.

Bibliography of documents relating to the transfer of technology (UNIDO/IS.228/Add.2)

Supplements UNIDO/IS.228 and lists sales publications, working group papers and other documents compiled by the UNIDO Technology Programme and issued between 1 January 1981 and 31 March 1985. Covers documentation on technology policies and planning; advanced technologies; costs and conditions of technology acquisition; energy technologies; choice of technologies; research and development and adaptation; development of capacities; appropriate technology; and industrial and technological information.

Directory of industrial and technological research institutes (UNIDO/IS.275/Rev.1)

Revises, expands and updates the first edition and is intended to promote R+D cooperation among R+D institutes of developing countries and to reduce the possibilities of duplication.

^dPrepared jointly with FAO and UNEP.

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The UNIDO programme on technological advances (UNIDO/IS.411/Rev.1)

Outlines objectives of the programme and activities in the fields of genetic engineering and biotechnology; microelectronics; lighter-than-air technology systems; space-related technologies, marine technologies and sea-bed mining; materials; and other areas. Lists relevant documentation.

The UNIDO programme of technological advances: microelectronics (UNIDO/IS.445/Rev.1)

Gives background and actions by UNIDO at the international, regional and national levels and lists relevant publications and operational technical assistance projects implemented by UNIDO.

The Brazilian telecommunication industry: accumulation of microelectronic technology in the manufacturing and service sectors (UNIDO/IS.511)

Covers, from a policy analysis point of view, broad developments in telecommunication industry and some related sectors of the economy of Brazil.

The promise of biotechnology and genetic engineering for Africa (UNIDO/IS.513)

Proposals are made to (a) establish a regional biotechnology network to link existing R+D centres, and (b) set up a regional co-operative research and training programme whereby R+D institutes will pool their resources.

The role of the International Centre for Genetic Engineering and Biotechnology in fostering development through applied microbiology (UNIDO/IS.521)

The impacts that the ICGEB could have on the bioconversion of biomass, enhanced oil recovery, food processing and large-scale fermentation processes of chemicals are discussed.

Mid-decade review of the implementation of the Vienna Programme of Action (UNIDO/IS.522)

Reviews implementation of programme relating to science and technology for industrialization. Covers the present state and constraints in developing countries, missing elements in the spheres of infrastructure, training and education; requirements in social policy and technology policy; changed conditions in the world economy; possible elements for a future framework of action; and alternative conceptual, methodological and policy approaches.

The UNIDO programme on microelectronics: an analytical perspective (UNIDO/IS.529)

Analytical review of the role of UNIDO in promoting microelectronics in developing countries. Examines the significance of advanced technology for development; development potential and needs in microelectronics technology; UNIDO activities in this field; meetings, studies, technical assistance, co-operation mechanisms, information. Lists relevant documents.

Technology monitoring in the information technology sector in Argentina (UNIDO/IS.531)

Examines (a) present government policies for industrial promotion and financial aid to enterprises in the fields of electronic data processing, telecommunications industry; (b) present situation of domestic production, research centres and institutes, institutional framework; (c) need for expert information systems, regional co-operation, consultants; and (d) setting up an information technology monitoring group. Recommendations.

An alternate pathway for industrialization: a biomass-based strategy (UNIDO/IS.532)

Biomass processing technologies exist but improvements could result from biotechnology R+D and its applications. Action programmes and proposals for R+D are suggested.

Flexible manufacturing systems—an overview (UNIDO/IS.539)

Gives a brief overview of flexible systems of computer-aided manufacture. Covers definition of FMS; its relationship to the manufacturing spectrum, FMS configurations; influences on configuration; future trends in and benefits of using FMS; diffusion factors; employment issues. Bibliography, diagrams.

Optical fiber production (UNIDO/IS.542)

The study reviews in detail the current status of technologies for production of optical fibers and cables against the general background of production and market trends. Relevant recommendations are given for different groups of developing countries wishing to enter industrial production of optical fiber and cables.

The Brazilian microelectronics industry and its relationship with the communications industry (UNIDO/IS.546)

Covers (a) the impact of microelectronics on communications; (b) the demand for semiconductors; relevant supply of the market; the semiconductor industry; (c) research and development in microelectronics; (d) Brazilian human resources; (e) microelectronics government policy; and (f) the Brazilian electronics market and the world market for electronic products.

Guidelines on application of microcomputers in mineral processing laboratory: technical data for determining the fair price of ores in developing countries (UNIDO/IS.550)

Covers (a) computer application in the exploitation of mineral resources; (b) laboratory equipment, automation, information system and chemical analysis; (c) testing and grading of ores in developing countries for successful marketing of products; and (d) case studies (bauxite, lead, zinc). Outline of microcomputer programmes. Recommendations.

Role of national planning in science and technology: means for changing the technological dominance of industrialized countries—comments on experiences in selected countries (UNIDO/IS.553)

Covers characteristics of technological change; the role of technology at various levels; experience of developed countries; the role of research centres; and planning for science and technology at the national level in China, Ethiopia, Republic of Korea and Viet Nam. Conclusions.

Guidelines for the formulation of a basic policy and development plan for science and technology (UNIDO/IS.554)

Discusses policy measures for a science and technology development plan in developing countries based on experiences in the Republic of Korea. Discusses the problem of assessing latent capabilities and the necessity of providing basic data and mobilizing talents in the country and abroad prior to the formulation of a development plan. Guidelines are suggested for a comprehensive plan for science and technology.

The commercialization of R+D results in developing countries: with special reference to the Democratic Republic of the Sudan (UNIDO/IS.562)

Sudan has established a number of scientific and technological research institutions. Recommendations are made on alternative institutional mechanisms to commercialize the R+D results.

Innovation management in developing countries—applications from the IIASA case study on innovation management (UNIDO/IS.566)

The study examines new concepts in innovation management and their importance for the industrialization of the developing countries. The value of flexible management and the recognition of the work force, as the key element in the industrial innovation and productivity process, are highlighted.

Trends in commercialization of software in developing countries (UNIDO/IS.574)

Describes software as one of the most dynamic components of the informatics market. Analyses software policies in developing countries and concludes that even countries which have initiated concrete strategies for an informatics development have disregarded to a great extent the regulation and promotion of software production, as well as the mechanisms for its transfer. Provides for a detailed analysis on the structure of software agreements within the development context.

Guidelines for the evaluation of contractual arrangements in the hotel industry in developing countries (UNIDO/IS.578)

These guidelines provide for a systematic overview of contractual arrangements used in the hotel industry and analyse contractual provisions defining the services offered by a foreign partner. They also deal with the issue of payments for the services rendered and with such critical issues as contract duration and extension.

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Silicon foundry and design centres in the Arab region: issues and approaches (UNIDO/IS.583)

Report by the UNIDO Secretariat and ESCWA on the state-of-the-art and approaches for establishment of silicon foundry and design centres in the Arab region, containing a summary of facilities and capabilities in the region; survey of national institutions working in the area of microelectronics and assessment of design capabilities in manufacturing facilities in the region. Outline of design and fabrication of customized integrated circuits and approach for strengthening technological capabilities for design and fabrication of semi-conductors.

Information paper: computerized registry information system (CORIS)

Provides the description of the model computerized registry information system developed by UNIDO in co-operation with the Foreign Trade Data Centre in Warsaw. It includes a detailed description of the input and output formats used and it annexes a complete set of these formats.

Ongoing studies:

Guidelines for the evaluation of payments in consultancy and engineering agreements

Technology transfer to developing countries: the joint venture option

Guidelines for guarantee and warranty provisions in technology transfer agreements

Source book on training modules for technology transfer negotiation and acquisition

Review of the state-of-the-art of solar-powered stirling engine

Telecommunications in developing countries

Technological trends in custom and semi-custom integrated circuits and NC machine tools

Technology trends and international technology market structure in microelectronics and renewable energy

Technology trends and international technology market structure in biotechnology

A techno-economic study on a silicon foundry in the Western Asian region

Applications of pattern recognition and image processing to industrial problems in developing countries

Computers in the meat processing industry: a case study of application and implementation experience in a developing country

Survey of conditions to be met to organize upgrading programme on integrated circuits design and production

A report and a study reflecting the findings of mission to selected countries of Latin America and the Caribbean on strengthening of negotiating capabilities in the acquisition of hardware and software as well as proposals for a concrete plan of action

Technology profile on mini-lime plant

Technology profile on mini-cement plant

Study on medium-term programme for INTIB

Directory of industrial development planning institutions in developing countries

Guidelines for the establishment or redesign of industrialized and technological information services and systems

Guidelines on national industrial information policy based on experience of India

Guidelines for the formulation of national industrial and technological information policies

Technical memoranda on mini-paper plants, stabilized earth blocks, grain storage, utilitarian ceramics, windows and doors for low-cost housing

Marine biotechnology and the developing countries

Capability building in biotechnology by developing countries

Marine industrial technology developments and trends

An international approach to biotechnology safety

Cost in 1985: \$40,500

APPENDIX K

UNIDO involvement in country programming

TABLE 1. UNIDO SHARE OF UNDP COUNTRY PROGRAMMES APPROVED BY THE GOVERNING COUNCIL OF UNDP, JUNE 1981 TO JUNE 1985

(By geographical region)

Geographical region	Number of countries for which programmes have been approved	Total IPF allocations	Total amount programmed (in millions of US\$)	Allocation for UNIDO projects	UNIDO share of amount programmed (percentage)	Number of projects	
						Ongoing	New
Africa ^a	50	1 694.80	1 213.66	154.23	12.70	77	133
Americas	39	388.03	347.03	53.55	15.43	24	71
Arab States ^a	19	359.50	428.84	47.13	10.99	18	38
(African Arab States) ^b	(8)	(234.75)	(203.42)	(36.02)	(17.70)	(14)	(31)
Asia and the Pacific	30	1 425.29	1 109.39	195.45	17.61	69	101
Europe	12	80.75	72.81	17.83	24.49	15	32
TOTAL	142	3 713.62	2 968.31	432.17	14.56	189	344

^aIncludes African Arab States.^bFigures deducted since already included under both "Africa" and "Arab States".

TABLE 2. SHARE OF UNIDO IN UNDP COUNTRY PROGRAMMES APPROVED BY THE GOVERNING COUNCIL OF UNDP, JUNE 1981 TO JUNE 1985

(By substantive sections of UNIDO)

UNIDO substantive section	Number of projects		Value of UNDP input (\$000)	Percentage of total value	Distribution of projects by size		
	Ongoing	New			Under \$150 000	\$150 000 to \$1 000 000	Over \$1 000 000
Investment Co-operative Programme	2	5	1 772	0.4	3	4	—
Industrial Planning	14	18	18 660	4.3	5	22	5
Institutional Infrastructure	28	55	62 800	14.5	17	50	16
Factory Establishment and Management	7	25	23 020	5.3	7	17	8
Training	8	5	6 440	1.5	3	8	2
Feasibility Studies	12	27	24 550	5.7	8	25	6
Agro-industries	27	44	46 240	10.7	15	43	13
Metallurgical Industries	20	30	40 920	9.4	13	28	9
Engineering Industries	26	56	107 580	24.9	11	56	15
Chemical Industries	44	79	99 780	23.1	31	74	18
Development and Transfer of Technology	1	—	211	0.1	—	1	—
Unspecified	—	—	200	0.1	—	—	—
TOTAL	189	344	432 173	100.0	113	328	92

Appendix K

TABLE 3. COMPARISON OF APPROVED COUNTRY PROGRAMMES FOR THE THIRD CYCLE (JUNE 1981 TO JUNE 1985) WITH PROGRAMMES OF THE SAME COUNTRIES IN THE SECOND CYCLE (1977-1981)^a

(By geographical region)

Geographical region (Number of country programmes)	Second cycle (1977-1981)				Third cycle (June 1981-June 1985)			
	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 (42) ^b	674.17	594.10	68.78	11.52	1 427.05	1 037.26	136.68	13.17
Americas (38) ^c	308.62	300.63	41.01	13.64	386.38	345.71	53.55	15.48
Arab States (16) ^d	210.50	277.46	26.66	9.60	285.75	394.34	45.90	11.63
(African Arab States (6)) ^{e, f}	(109.75)	(118.65)	(17.40)	(14.66)	(171.00)	(176.59)	(34.99)	(19.81)
Asia and the Pacific (24) ^g	567.77	627.03	84.44	13.47	1 393.75	1 088.61	190.91	17.53
Europe (9) ^h	66.50	65.72	16.12	24.53	62.00	53.64	15.83	29.51
TOTAL (123)	1 717.81	1 746.29	219.31	12.55	3 383.93	2 742.97	407.88	14.87

^aExcluded from the comparison are the following 19 countries:

Africa: Congo, Equatorial Guinea, Nigeria and Uganda (no country programmes in the second cycle), Angola and Zimbabwe (first country programmes in the third cycle);

Americas: Belize (no country programme in the second cycle);

Arab States: Lebanon and Sudan (no country programmes in the second cycle), Djibouti (first country programme in the third cycle);

Asia and the Pacific: Cook Islands, Democratic People's Republic of Korea, Kiribati, Tokelau, Tuvalu and Vanuatu (first country programmes in the third cycle);

Europe: Albania and Cyprus (no country programmes in the second cycle), Hungary (no formal country programme in the second cycle).

^bThe 42 countries in Africa comprise: Algeria, Benin, Botswana, Burkina Faso, Burundi, Cameroon, Cape Verde, Central African Republic, Chad, Comoros, Côte d'Ivoire, Egypt, Ethiopia, Gabon, Gambia, Ghana, Guinea, Guinea-Bissau, Kenya, Lesotho, Liberia, Libyan Arab Jamahiriya, Madagascar, Malawi, Mali, Mauritania, Mauritius, Morocco, Mozambique, Niger, Rwanda, Sao Tome and Principe, Senegal, Seychelles, Sierra Leone, Somalia, Swaziland, Togo, Tunisia, United Republic of Tanzania, Zaire, Zambia.

^cThe 38 countries and territories in the Americas comprise: Antigua and Barbuda, Argentina, Bahamas, Barbados, Bermuda, Bolivia, Brazil, British Virgin Islands, Caribbean Multi-Islands, Cayman Islands, Chile, Colombia, Costa Rica, Cuba, Dominica, Dominican Republic, Ecuador, El Salvador, Grenada, Guatemala, Guyana, Haiti, Honduras, Jamaica, Mexico, Montserrat, Netherlands Antilles, Nicaragua, Panama, Paraguay, Peru, Saint Christopher and Nevis, Saint Lucia, Saint Vincent and the Grenadines, Trinidad and Tobago, Turks and Caicos Islands, Uruguay, Venezuela.

^dThe 16 Arab States comprise: Algeria, Bahrain, Democratic Yemen, Egypt, Iraq, Jordan, Kuwait, Libyan Arab Jamahiriya, Morocco, Oman, Saudi Arabia, Somalia, Syrian Arab Republic, Tunisia, United Arab Emirates, Yemen.

^eThe 6 African Arab States comprise: Algeria, Egypt, Libyan Arab Jamahiriya, Morocco, Somalia, Tunisia.

^fThe 6 African Arab States and Lebanon: figures are deducted since they are already included under both "Africa" and "Arab States".

^gThe 24 countries in Asia and the Pacific comprise: Bangladesh, Bhutan, Burma, China, Fiji, India, Iran (Islamic Republic of), Lao People's Democratic Republic, Malaysia, Maldives, Mongolia, Nepal, Niue, Pakistan, Papua New Guinea, Philippines, Republic of Korea, Samoa, Singapore, Solomon Islands, Sri Lanka, Thailand, Tonga, Viet Nam.

^hThe 9 countries in Europe comprise: Bulgaria, Czechoslovakia, Greece, Malta, Poland, Portugal, Romania, Turkey, Yugoslavia.

APPENDIX L

UNIDO technical assistance to the least developed countries, 1 January to 31 December 1985

TABLE I. DELIVERY, BY COUNTRY AND SOURCE OF FUNDS^a
(In US dollars)

<i>Region/country</i>	<i>Regular programme</i>	<i>UNDP/IPF</i>	<i>SIS</i>	<i>UNDP/Special measures</i>	<i>UNIDF^b</i>	<i>Other sources^c</i>	<i>Total</i>
<i>Africa</i>							
Benin	20 399	87 062	4 801	—	47 958	—	160 220
Botswana	8 840	59 743	35 818	14 196	—	—	118 597
Burkina Faso	63 587	24 064	3 564	—	172 300	—	263 515
Burundi	38 234	516 842	25 359	—	41 475	21 365	643 275
Cape Verde	—	244 127	32 649	—	—	—	276 776
Central African Republic	—	—	—	—	—	—	—
Chad	—	374 031	—	—	—	—	374 031
Comoros	14 002	—	—	—	(120)	70 230	84 112
Equatorial Guinea	—	—	—	—	—	—	—
Ethiopia	11 990	2 682 200	82 644	—	161 930	79 405	3 018 169
Gambia	5 335	7 300	30 806	—	19 305	23 145	85 891
Guinea	1 413 977	454 701	43 233	19 543	96 106	41 118	2 068 678
Guinea-Bissau	—	—	—	—	—	—	—
Lesotho	6 713	82 839	—	—	24 446	—	113 998
Malawi	1 623	80 539	—	200 501	—	—	282 663
Mali	42 938	687 170	—	—	25	41 921	772 054
Niger	425 535	429 547	4 053	48 113	—	—	907 248
Rwanda	122 333	203 426	32 271	(2 825)	(581)	—	354 624
Sao Tome and Principe	92 409	—	—	—	—	—	92 409
Sierra Leone	42 057	342 326	22 091	—	—	—	406 474
Togo	6 769	155 897	—	14 581	18 922	79 236	275 405
Uganda	38 758	189 243	10 045	—	—	—	238 046
United Republic of Tanzania	369 155	564 949	35 885	(969)	54 558	159 313	1 183 891
Subtotal	2 724 654	7 186 006	364 219	293 140	636 324	515 733	11 720 076

TABLE I (continued)

<i>Region/country</i>	<i>Regular programme</i>	<i>UNDP/IPF</i>	<i>SIS</i>	<i>UNDP/Special measures</i>	<i>UNDP^b</i>	<i>Other sources^c</i>	<i>Total</i>
<i>Americas</i>							
Haiti	24 296	73 549	—	—	50 926	—	148 771
<i>Arab States</i>							
Democratic Yemen	141 663	287 883	12 347	—	86 320	—	528 213
Djibouti	16 810	56 867	—	—	—	—	73 677
Somalia	301 548	272 843	(1 114)	—	28 512	16 428	618 217
Sudan	77 104	90 662	9 542	—	43 213	40 956	261 477
Yemen	17 056	11 540	—	—	—	—	28 596
Subtotal	554 181	719 795	20 775	—	158 045	57 384	1 510 180
<i>Asia and the Pacific</i>							
Afghanistan	11 022	87 266	39 437	—	—	—	137 725
Bangladesh	4 603	1 575 099	—	—	221 226	122 424	1 923 352
Bhutan	36 596	961 173	4 605	17 961	(660)	—	1 019 676
Lao People's Democratic Republic	—	199 055	—	—	—	—	199 055
Maldives	4 821	—	—	—	—	—	4 821
Nepal	2 754	614 312	—	(1 895)	—	—	615 171
Samoa	32 648	—	—	—	—	—	32 648
Subtotal	92 444	3 436 905	44 043	16 066	220 566	122 424	3 932 448
<i>Regional, interregional and global projects especially designed for LDCs</i>							
	322 916	1 406	3 733	—	(41 590)	—	286 465
TOTAL	3 718 491	11 417 661	432 770	309 206	1 024 271	695 541	17 597 940

^aThe table does not include regional, interregional and global projects or individual fellowships and group training programmes in which the least developed countries have been involved together with other developing countries and which are usually financed from non-least developed countries funds.

^bExcluding 14 per cent overhead costs.

^cOther sources include trust funds and the United Nations Capital Development Fund.

TABLE 2. NEW PROJECT APPROVALS, BY COUNTRY AND SOURCE OF FUNDS^a

(In US dollars)

<i>Region/country</i>	<i>Regular programme</i>	<i>UNDP/IPF</i>	<i>SIS</i>	<i>IDDA</i>	<i>UNIDF^b</i>	<i>Other sources^c</i>	<i>Total</i>
<i>Africa</i>							
Benin	—	246 904	—	11 776	188 000	—	446 680
Botswana	10 565	280 000	57 000	—	—	20 000	367 565
Burkina Faso	14 000	—	37 400	59 501	—	—	110 901
Burundi	13 000	—	—	—	—	—	13 000
Cape Verde	22 273	834 260	4 250	—	—	—	860 783
Central African Republic	—	—	—	—	—	—	—
Chad	—	791 140	—	—	—	—	791 140
Comoros	4 160	—	—	—	—	119 795	123 955
Equatorial Guinea	—	—	—	—	—	—	—
Ethiopia	20 000	1 927 749	188 465	75 000	4 220	51 686	2 267 120
Gambia	—	—	—	—	—	—	—
Guinea	23 500	265 932	197 400	1 398 932	96 106	—	1 981 870
Guinea-Bissau	—	—	30 000	—	76 500	—	106 500
Lesotho	8 685	—	75 000	—	—	38 483	122 168
Malawi	—	121 700	—	—	—	—	121 700
Mali	41 300	—	26 000	—	229 150	—	296 450
Niger	351 000	—	128 900	58 125	—	—	538 025
Rwanda	121 500	749 600	94 200	105 000	—	—	1 070 300
Sao Tome and Principe	31 500	—	—	19 226	—	—	50 726
Sierra Leone	2 658	—	79 800	41 000	—	39 822	163 280
Togo	1 500	133 500	50 750	—	—	197 000	382 750
Uganda	7 144	208 000	—	6 444	22 150	—	243 738
United Republic of Tanzania	42 023	—	69 900	215 369	21 758	128 950	478 000
Subtotal	714 808	5 558 785	1 039 065	1 990 373	637 884	595 736	10 536 651
<i>Americas</i>							
Haiti	—	98 000	—	—	—	—	98 000

TABLE 2 (continued)

<i>Region/country</i>	<i>Regular programme</i>	<i>UNDP/IPF</i>	<i>SIS</i>	<i>IDDA</i>	<i>UNIDF^b</i>	<i>Other sources^c</i>	<i>Total</i>
<i>Arab States</i>							
Democratic Yemen	29 552	—	68 050	114 218	17 700	—	229 520
Djibouti	51 140	—	—	1	—	—	51 141
Somalia	11 386	262 908	74 500	155 614	145 497	—	649 905
Sudan	33 000	31 000	—	2 937	—	152 122	219 059
Yemen	—	—	—	—	—	—	—
Subtotal	125 078	293 908	142 550	272 770	163 197	152 122	1 149 625
<i>Asia and the Pacific</i>							
Afghanistan	—	—	22 000	17 498	—	—	39 498
Bangladesh	—	3 677 185	—	2 000	—	—	3 679 185
Bhutan	—	31 000	7 000	—	—	125 000	163 000
Lao People's Democratic Republic	—	—	—	11 350	—	—	11 350
Maldives	—	—	—	—	—	—	—
Nepal	—	—	—	—	18 011	—	18 011
Samoa	—	—	—	8 250	—	—	8 250
Subtotal	—	3 708 185	29 000	39 098	18 011	125 000	3 919 294
<i>Regional, interregional and global projects especially designed for LDCs</i>							
	184 745	—	—	668 268	17 970	—	870 983
TOTAL	1 024 631	9 658 878	1 210 615	2 970 509	837 062	872 858	16 574 553

^aThe table does not include regional, interregional and global projects or individual fellowships and group training programmes in which the least developed countries have been involved together with other developing countries and which are usually financed from non-least developed countries funds.

^bExcluding 14 per cent overhead costs.

^cOther sources include trust funds and UNDP Special Measures.

TABLE 3. TOTAL PROJECT APPROVALS (NEW PROJECTS, PLUS ADDITIONAL ALLOCATIONS TO ONGOING PROJECTS, MINUS CANCELLATIONS)^a

(In US dollars)

Region/country	Regular programme	UNDP/IPF	SIS	IDDA	UNIDF ^b	Other sources ^c	Total
<i>Africa</i>							
Benin	(45 464)	83 406	1 275	11 776	188 000	—	238 993
Botswana	10 565	259 027	57 000	—	—	20 000	346 592
Burkina Faso	14 000	(455 062)	72 431	39 501	(13 899)	(1 531)	(324 560)
Burundi	13 523	(53 610)	(5 584)	—	—	—	(45 671)
Cape Verde	22 273	699 327	7 831	—	—	—	729 431
Central African Republic	(275)	—	—	—	—	—	(275)
Chad	—	1 065 206	—	—	—	—	1 065 206
Comoros	17 391	—	—	—	(17 326)	119 795	119 860
Equatorial Guinea	—	—	—	—	—	—	—
Ethiopia	20 000	2 317 600	185 550	75 000	2 503	83 078	2 683 731
Gambia	—	120	4 251	—	—	—	4 371
Guinea	7 366	285 082	192 077	1 398 932	96 106	(8 840)	1 970 723
Guinea-Bissau	—	—	30 000	—	76 500	—	106 500
Lesotho	7 146	86 499	75 000	—	—	38 483	207 128
Malawi	—	104 018	(3 276)	—	—	(28 184)	72 558
Mali	41 300	82 533	26 000	—	229 150	57 477	436 460
Niger	356 500	(60 953)	126 894	58 125	—	23 941	504 507
Rwanda	124 952	791 504	33 004	105 000	—	(3 156)	1 051 304
Sao Tome and Principe	13 683	—	—	19 226	—	—	32 909
Sierra Leone	3 224	831 989	84 216	41 000	—	39 822	1 000 251
Togo	(1 255)	141 500	48 454	—	5 000	197 062	390 761
Uganda	(1 832)	227 999	(5 601)	6 444	22 150	—	249 160
United Republic of Tanzania	(179 226)	565 771	64 105	215 369	25 059	121 898	812 976
Subtotal	423 871	6 971 956	973 627	1 990 373	613 243	659 845	11 652 915
<i>Americas</i>							
Haiti	(9 813)	98 001	—	—	—	—	88 188

TABLE 3 (continued)

<i>Region/country</i>	<i>Regular programme</i>	<i>UNDP/IPF</i>	<i>SIS</i>	<i>IDDA</i>	<i>UN'DF^b</i>	<i>Other sources^c</i>	<i>Total</i>
<i>Arab States</i>							
Democratic Yemen	4 934	770 237	44 914	114 218	53 307	—	987 610
Djibouti	51 140	—	—	1	—	—	51 141
Somalia	(24 147)	572 172	68 353	155 614	144 997	—	916 989
Sudan	43 644	(264 131)	(24 962)	2 937	2 439	152 126	(87 947)
Yemen	(16 404)	(13 381)	—	—	708	—	(29 077)
Subtotal	59 167	1 064 897	88 305	272 770	201 451	152 126	1 838 716
<i>Asia and the Pacific</i>							
Afghanistan	(7 998)	—	10 357	17 498	—	—	19 857
Bangladesh	—	5 294 495	—	2 000	36 823	(120 357)	5 212 961
Bhutan	8 600	80 669	7 000	—	—	125 000	221 269
Lao People's Democratic Republic	—	130 178	—	11 350	—	—	141 520
Maldives	—	—	—	—	—	—	—
Nepal	—	524 046	(8 423)	—	18 011	19	533 653
Samoa	1 250	—	—	8 250	—	—	9 500
Subtotal	1 852	6 029 388	8 934	39 098	54 834	4 662	6 138 768
<i>Regional, interregional and global projects especially designed for LDCs</i>							
	142 501	—	—	668 268	17 970	—	828 739
TOTAL	617 578	14 161 242	1 090 866	2 970 509	887 498	816 633	20 547 326

^aThe table does not include regional, interregional and global projects or individual fellowships and group training programmes in which the least developed countries have been involved together with other developing countries and which are usually financed from non-least developed countries funds.

^bExcluding 14 per cent overhead costs.

^cOther sources include trust funds, the United Nations Capital Development Fund, and UNDP Special Measures.

APPENDIX M

**Expert group meetings, symposia, seminars,
workshops, courses and other meetings of
a non-training character held during 1985**

<i>Date</i>		<i>Place</i>
<i>Office of the Executive Director/Director-General</i>		
13-31 May	Industrial Development Board, nineteenth session	Vienna Austria
14-17 May	Meeting of high-level experts on Africa's external debt in respect of the industrial sector	Vienna Austria
12-17 August	General Conference, first session (part one)	Vienna Austria
13-17 August	Industrial Development Board, first session (part one)	Vienna Austria
30 September-11 October	Programme and Budget Committee, first session	Vienna Austria
4-15 November	Industrial Development Board, first session (part two)	Vienna Austria
2-6 December	Subregional follow-up meeting on the initial integrated industrial promotion programme within the framework of the Industrial Development Decade for Africa (IDDA) ^a	Lomé Togo
9 December	Programme and Budget Committee, resumed first session	Vienna Austria
9-13 December	General Conference, first session (part two)	Vienna Austria
10-11 December	Industrial Development Board, first session (resumed part two)	Vienna Austria
<i>Negotiations</i>		
11-15 February	Symposium on mechanization of harvesting and subsequent processing of agricultural products in tropical Africa and the manufacturing of relevant agricultural implements	Yaoundé Cameroon
28 February-1 March	Informal expert group meeting on medicinal plants	Vienna Austria
18-21 March	Expert group meeting on the restructuring of non-ferrous metals industries	Vienna Austria
26-30 March	First consultation on the building materials industry	Athens Greece
22-24 April	Third meeting of the <i>ad hoc</i> panel of experts on contractual arrangements in the pharmaceutical industry	Vienna Austria
3-5 June	Third meeting of the advisory panel on petrochemicals	Vienna Austria

Appendix M

<i>Date</i>		<i>Place</i>
<i>Negotiations (continued)</i>		
10-14 June	Second consultation on the capital goods industry with special emphasis on energy-related technology and equipment	Stockholm Sweden
9-12 September	Expert group meeting on guidelines for the import, assembly and manufacture of agricultural machinery and training	Vienna Austria
16-18 October	<i>Ad hoc</i> expert group meeting on strategies for more integrated development between the iron and steel and capital goods sectors	Vienna Austria
20-22 November	Eighth session of the leather and leather products industry panel	Vienna Austria
2-6 December	Third consultation on the petrochemical industry	Vienna Austria
17-18 December	OECD Development Centre/UNIDO expert group meeting on the mobilization and allocation of domestic financial resources in developing countries	Vienna Austria
<i>non-governmental Organizations^b</i>		
4-5 March	Round table meeting on co-operation between UNIDO and international trade union organizations for industrial development	Vienna Austria
28-30 August	Forum on the involvement of NGOs in the implementation of the programme for the Industrial Development Decade for Africa ^c	Abidjan Côte d'Ivoire
<i>Programme Development and Evaluation</i>		
15-17 May	Seminar on post-investment	Rabat Morocco
1-4 July	First regional technical meeting of project DP/RER/83/003—European co-operation on industrial energy conservation	Vienna Austria
8-12 July	Seminar on selected technologies (technical advisory services)	Bangui Central African Republic
15-19 July	Seminar on selected technologies (technical advisory services)	Brazzaville Congo
22-26 July	Seminar on selected technologies (technical advisory services)	Yaoundé Cameroon
5-9 August	Seminar on selected technologies (technical advisory services)	Freetown Sierra Leone
12-16 August	Seminar on selected technologies (technical advisory services)	Accra Ghana
16-23 September	Seminar on selected technologies (technical advisory services)	Lagos Nigeria
23-24 October	Seminar on selected technologies (technical advisory services)	Bissau Guinea-Bissau
28 October- 1 November	Seminar on selected technologies (technical advisory services)	Conakry Guinea

Date		Place
<i>Economic Co-operation among Developing Countries</i>		
12-15 March	Solidarity meeting of ministers of industry for co-operation in the industrial development of the Republic of Burundi	Bujumbura Burundi
7-11 May	Round-table ministerial meeting on co-operation among developing countries in the food-processing industries	Novi Sad Yugoslavia
4-6 November	Meeting on enterprise-to-enterprise co-operation in the field of the plastics industry among Latin American countries	Buenos Aires Argentina
18-22 November	High-level intergovernmental meeting on co-operation among developing countries in the field of agro-industry development	Brasilia Brazil
25-28 November	Expert group meeting on the establishment of multinational production enterprises in developing countries	Vienna Austria
2-5 December	Expert group meeting on the preparation of guidelines for the establishment of mini-plants on iron and steel with special emphasis on Africa	Vienna Austria
<i>Focal Point for the Integration of Women</i>		
14-18 October	Expert group meeting on women in agro-industries	Vienna Austria
<i>Regional and Country Studies</i>		
17-20 September	UNIDO/ESCAP <i>ad hoc</i> expert group meeting on policies and strategies for small-scale industry development in Asia and the Pacific region ^d	Seoul Republic of Korea
25-27 September	Expert group meeting on the future of the automotive industry in Latin America ^e	Bogotá Colombia
<i>Sectoral Studies</i>		
4-6 March	Second expert group meeting on capital goods industries in Latin America and the Caribbean ^f	Santiago Chile
18-20 June	Expert group meeting for the formulation of strategies and policies for the development of the capital goods industry in Africa	Vienna Austria
1-5 July	UNIDO/ESCAP workshop on accelerating growth through co-operation in selected industrial sectors in the developing countries of the ESCAP region	Bangkok Thailand
4-9 November	Workshop on managing and programming the integrated development of the vegetable oils and fats industry ^g	Lima Peru
11-13 November	Workshop on programming the development of priority subsectors of the food-processing industries within a food security system ^h	Lima Peru
9-11 December	Expert group meeting on appraisal and identification of sectoral development and strategies in the fisheries industries	Vienna Austria

Appendix M

<i>Date</i>	<i>Technology Programme</i>	<i>Place</i>
11-13 February	Panel of Scientific Advisers for the International Centre for Genetic Engineering and Biotechnology (ICGEB), first meeting	Vienna Austria
18-23 February	National meeting on applications of microelectronics and software	Nairobi Kenya
11-13 March	<i>Ad-hoc</i> expert group meeting for the discussion and preparation of an international collaborative project on upgrading the nutritional value of fermented cassava food	Vienna Austria
11-15 March	Joint UNIDO/NOIP (National Office of Industrial Property) workshop on the evaluation of technology transfer agreements involving equity and non-equity participation	Lagos Nigeria
18-20 March	<i>Ad-hoc</i> expert group meeting for the discussion and preparation of an international collaborative project on the industrial approach to the manufacture and distribution of improved woodstoves	Vienna Austria
1-3 April	Preparatory Committee on the Establishment of the ICGEB, sixth session	New Delhi India
3-7 June	Regional meeting for the initiation of a regional network for microelectronics in the ECLAC region ^g	Caracas Venezuela
20-21 June	Panel of Scientific Advisers for the ICGEB, second meeting	New York United States of America
2 July	Preparatory Committee on the Establishment of the ICGEB, special session	Vienna Austria
15-17 July	Workshop on the preparation of simplified feasibility studies for small hydropower	Manila Philippines
18-20 July	Workshop on guidelines for simplified low-cost civil works design and construction of small hydropower stations	Manila Philippines
22-24 July	Technical Advisory Group on Small Hydropower, special session	Manila Philippines
17-22 September	Workshop on biotechnology in agriculture	New Delhi India
23-27 September	Round table discussion of an advisory group of INTIB (Industrial and Technological Bank) users	Vienna Austria
1-3 October	Inaugural meeting for the pilot project on technological information exchange in Africa ^h	Dakar Senegal
21-25 October	National seminar on transfer of technology ⁱ	Athens Greece
21 October- 8 November	Seminar/study tour on mini-hydropower in China for participants from Latin American and Caribbean countries	Beijing/Hangzhou Shanxi Province Jiangsu Province Zhejiang Province China
2-5 November	Panel of Scientific Advisers for the ICGEB, third meeting	Trieste Italy

<i>Date</i>		<i>Place</i>
12-15 November	Workshop on negotiation of transfer of technology agreements/	Bamako Mali
21-28 November	Preparatory Committee on the Establishment of the ICGEB, seventh session	Havana Cuba
28-29 November	Network co-ordinators for the project on information exchange system for technology transfer in ASEAN countries, first meeting	Manila Philippines
8-13 December	Heads of technology transfer registries, tenth meeting	Cairo Egypt
10-13 December	Workshop on technological services delivery system	Vienna Austria

Investment Co-operative Programme

6 February	Investment opportunities in Zaire	Zurich Switzerland
7 February	Country presentation meeting—Sudan	Tokyo Japan
10 February- 7 March	Country presentation meeting—United Republic of Tanzania	Tokyo Japan
20-26 February	Country presentation meeting—Mexico	Tokyo Japan
27 February	Forum on investment opportunities in developing countries	Cologne Federal Republic of Germany
4-8 March	Regional investment promotion meeting	Khartoum Sudan
7 March	Investment opportunities in Chile	Zurich Switzerland
13-28 March	Promotion of industrial co-operation between France and China	Paris France
19-21 March	Country presentation meeting—Caribbean basin initiative (CBI)	Cologne/Stuttgart Federal Republic of Germany
8-11 April	Country presentation meeting—St. Christopher and Nevis	New York United States of America
23-24 April	Co-operation programme between the French regions and the UNIDO Investment Promotion Service in France	Toulouse France
25 April	Meeting on investment policies in Sri Lanka	Zurich Switzerland
6-7 May	Promotion of co-operation between French and Congolese small- and medium-scale enterprises	Paris France
22-29 May	Promotion of industrial projects	Paris France
3 June	Country presentation meeting—Colombia	Tokyo Japan
7 June	Promotion of industrial co-operation between France and India	Paris France

Appendix M

<i>Date</i>		<i>Place</i>
<i>Investment Co-operative Programme (continued)</i>		
10-11 June	Country presentation meeting—China (Hopeh Province)	New York United States of America
19-20 June	Co-operation programme between the French regions and the UNIDO Investment Promotion Service in France	Paris France
21-25 June	Country presentation meeting—China (Hubei Province)	Vienna Austria
26-27 June	Country presentation meeting—Colombia	Hamburg/Bonn Federal Republic of Germany
17 August	Investment opportunities in Burma	Zurich Switzerland
21-26 August	Investment opportunities in Burma	Cologne Federal Republic of Germany
26 August	Promotion of industrial co-operation between France and India	Paris France
26-27 August	Country presentation meeting—Burma	Vienna Austria
10 September	Country presentation meeting—Tunisia	Lausanne Switzerland
27 September	Country presentation meeting—Ecuador	Berlin (West)
3-4 October	Co-operation programme between the French regions and the UNIDO Investment Promotion Service in France	Marseille France
4 October	Country presentation meeting—China (Fujian Province)	Saarbruecken Federal Republic of Germany
8 October	Country presentation meeting—Ecuador	Tokyo Japan
10-11 October	Country presentation meeting—China (Fujian Province)	Warsaw Poland
10-11 October	Promotion of industrial co-operation between France and Ecuador in preparation of the Investment Forum in Quito	Paris France
12-25 October	Review of possible co-operation in the sugar industry sector between Cuba and the Nord-Pas-de-Calais region	Paris France
14-20 October	Country presentation meeting—China (Fujian Province)	New York United States of America
15 October	Promotion meeting on project proposals for China, Egypt, Fiji, Indonesia, Nepal and Thailand to the Japanese business community	Tokyo Japan
17-18 October	Country presentation meeting—Caribbean basin initiative (CBI)	Paris France
22-24 October	Country presentation meeting—Caribbean basin initiative	Frankfurt/Hamburg Federal Republic of Germany

<i>Date</i>		<i>Place</i>
23 October	Country presentation meeting—China	Tokyo Japan
28-31 October	Forum on agro-industry and fishing	Cali Colombia
29-30 October	Co-operation programme between the French regions and the UNIDO Investment Promotion Service in France	Blois France
4-7 November	Co-operation programme between the French regions and the UNIDO Investment Promotion Service in France	Marseille/Nice France
14 November	Meeting of foreign trade advisers for the Picardie region	Amiens France
18-21 November	Forum for investors	Quito Ecuador
19-22 November	Grenada country presentation meeting	New York United States of America
25-29 November	Investment promotion meeting—China (Fujian Province)	Xiamen China
5-8 December	Industrial forum for Central Africa	Libreville Gabon
<i>Industrial Planning</i>		
25-30 March	National workshop on industrial development strategy within the framework of IDDA ^k	Jinja Uganda
21-25 April	National workshop on industrial development strategy within the framework of IDDA	Nouakchott Mauritania
24-29 June	National workshop on industrial development strategy within the framework of IDDA ^l	Cotonou Benin
14-18 October	National workshop on industrial development strategy within the framework of IDDA	Ouagadougou Burkina Faso
26 October- 2 November	National workshop on industrial development strategy within the framework of IDDA ^m	Niamey Niger
3-6 December	National workshop on industrial development strategy within the framework of IDDA	Freetown Sierra Leone
<i>Institutional Infrastructure</i>		
6-11 February	International workshop on sharing expertise and experience amongst small industrial enterprises in developing countries ⁿ	New Delhi India
11-16 March	Workshop on the development of women industrial entrepreneurs ^o	New Delhi India
<i>Factory Establishment and Management</i>		
1-4 July	First regional technical meeting of project DP/RER/83/003 "European co-operation on industrial energy conservation"	Vienna Austria

Appendix M

<i>Date</i>		<i>Place</i>
<i>Factory Establishment and Management (continue-1)</i>		
14-18 October	First sectoral group meeting on energy conservation in the chemical industry	Bucharest Romania
10-15 November	First sectoral group meeting on energy conservation in building materials industries	Pilsen Czechoslovakia
18-22 November	First sectoral group meeting on energy conservation in iron and steel industry	Prague Czechoslovakia
25-30 November	First sectoral group meeting on energy conservation in the energy sector	Pudapest Hungary
9-13 December	First sectoral group meeting on energy conservation in the food processing industries	Novisad Yugoslavia
<i>Agro-industries</i>		
1-5 July	Expert group meeting on the agro-industry complex of Cuméré, Guinea Bissau	Vienna Austria
2-6 December	Expert group meeting on timber construction	Vienna Austria
<i>Metallurgical Industries</i>		
28 January- 1 February	First expert group meeting on computerized maintenance system in metallurgy ^p	Prague Czechoslovakia
25-29 August	Workshop on demonstration of appropriate technologies and equipment for metallurgical and metal processing industries in Africa ^d	Katowice Poland
<i>Engineering Industries</i>		
22-27 April	Expert group meeting on the development of the metalworking and machine-tools industry ^q	Moscow Union of Soviet Socialist Republics
9-14 December	Experts' meeting on small-scale boatbuilding and boatrepair for the East African countries	Curepipe Mauritius
<i>Chemical Industries</i>		
1-3 April	Industrial workshop on building materials industry ^r	Pilsen Czechoslovakia
15-19 April	World congress on non-metallic minerals ^s	Belgrade Yugoslavia
22-26 April	Regional forum on pesticide toxicology ^t	Baguio City Philippines
6-7 June	Advisory panel on preventive medicine, third meeting	Bilthoven Netherlands
18-22 November	International conference on man-made fibre ^u	Beijing China
18-22 November	Round-table discussions on the development of phosphates and phosphate fertilizer industry in developing countries ^v	Gafsa Tunisia

Date	Governments and Intergovernmental Organizations Relations	Place
21-24 May	Fourth round of discussions with the National Committees for UNIDO	Vienna Austria

^aOrganized jointly with the Organization of African Unity, the Economic Commission for Africa, the Economic Community of West African States and the Government of Togo.

^bIn addition to the two meetings listed under this heading, the Non-governmental Organizations Section co-operated in three meetings listed under the headings Institutional Infrastructure, Metallurgical Industries, and Negotiations.

^cOrganized jointly with the Association of African Development Finance Institutions.

^dIn co-operation with the Non-governmental Organizations Section.

^eOrganized jointly with the Economic Commission for Latin America and the Caribbean.

^fOrganized jointly with the Junta del Acuerdo de Cartagena (JUNAC).

^gCo-sponsored by the Latin American Economic System and the Economic Commission for Latin America and the Caribbean.

^hOrganized jointly with the African Regional Centre for Technology.

ⁱOrganized jointly with the Government of Greece.

^jOrganized jointly with the Government of Mali.

^kOrganized jointly with the Government of Uganda.

^lOrganized in co-operation with UNDP and the Government of Benin.

^mOrganized jointly with the Government of Niger.

ⁿOrganized jointly with the Government of India.

^oOrganized jointly with the World Assembly of Small and Medium Enterprises, the International Council of Women, and in co-operation with the Non-governmental Organizations Section.

^pOrganized jointly with the Institute for Automation and Industrial Management (INORGA—Prague).

^qOrganized jointly with the Government of the Union of Soviet Socialist Republics.

^rOrganized by the UNIDO/Czechoslovakia Joint Programme for International Co-operation in the Field of Ceramics, Building Materials and Non-metallic Minerals Based Industries.

^sOrganized jointly with the Government of Yugoslavia.

^tOrganized jointly with the World Health Organization and the Government of the Philippines.

^uOrganized jointly with the Government of China.

^vOrganized jointly with the Government of Tunisia.

APPENDIX N

Group training and fellowships in 1985

TABLE 1. IN-PLANT GROUP TRAINING PROGRAMMES IN 1985

Field of study	Type of programme			Host country	Number of participants			
	National	Regional	Inter-national		Least developed countries	Female	African participants	All developing countries
Synthetic fibres	—	—	x	Austria	—	—	6	11
Plastics technology	—	—	x	Austria	3	—	3	15
Mould making	—	—	x	Austria	1	—	2	6
Cotton textile industry	—	x	—	Belgium	7	—	12	12
Maintenance—small/medium ships	—	—	x	Belgium	5	—	6	15
Maintenance—railway	—	x	—	Belgium	} 5	—	12	12
			Burkina Faso					
			Côte d'Ivoire					
Diesel engines	—	—	x	China	6	—	8	15
Agricultural machinery	—	—	x	China	6	2	9	13
Diesel engines	—	—	x	Czechoslovakia	2	1	8	18
Maintenance—refrigeration equipment	—	x	—	Egypt	8	—	16	16

Maintenance—refrigeration equipment	—	x	—	France	8	—	18	18
Maintenance—gas/oil transportation networks	—	—	x	Hungary	—	1	4	11
Design—shoe and leather goods	—	—	x	Italy	4	2	3	25
Quality improvement	—	—	x	Japan	1	3	2	14
Training of trainers—foundry industry	—	—	x	Poland	4	—	6	13
Iron and steel industry	—	—	x	Turkey	2	—	6	13
Beet sugar industry	—	—	x	Turkey	1	—	2	10
Small-scale foundry operations	—	—	x	Turkey	8	—	7	11
Cement industry ^a	—	—	x	Turkey	8	1	8	27
Rice processing	—	—	x	USSR	3	—	2	14
Industrial information	—	—	x	USSR	1	14	3	24
Grain milling and storage	—	—	x	USSR	3	1	3	14
Metalworking industry	—	—	x	USSR	6	1	6	15
Fertilizer industry	—	—	x	USSR	2	2	5	14
Electric welding ^a	—	—	x	USSR	4	3	8	27
Iron and steel ^a	—	—	x	USSR	8	—	14	39
Maintenance and repair—railway	—	x	—	United Kingdom	7	—	13	13
Management—agro-industrial enterprises	—	—	x	Yugoslavia	5	—	3	12
TOTAL					118	31	195	447

^aTwo programmes carried out in 1985.

TABLE 2. OTHER GROUP TRAINING PROGRAMMES IN 1985

Field of study	Type of programme			Host country	Number of participants			
	National	Regional	Inter-national		Least developed countries	Female	African participants	All developing countries
Personnel management—iron and steel industry	—	x	—	Algeria	—	—	12	12
EDP applications—iron and steel industry	—	x	—	Algeria	—	—	12	12
Maintenance management—iron and steel industry	—	x	—	Algeria	—	—	30	30
Energy management	—	x	—	Australia	1	1	—	11
Fertilizer plant maintenance	—	—	x	Austria	1	—	6	10
COMFAR seminar (for Bulgarian nationals)	x	—	—	Austria (UNIDO)	—	—	—	4
Project preparation, evaluation and financing	x	—	—	Bangladesh	28	1	—	28
Management—air/water pollution	—	—	x	Belgium	5	5	6	25
Industrial consultancy development	x	—	—	China	—	10	—	53
Computer application in engineering	—	x	—	China	1	2	—	40
Training of trainers	—	x	—	Côte d'Ivoire	7	2	18	18
COMFAR seminar	x	—	—	Cuba	—	4	—	13
Utilization of non-metallic minerals	—	—	x	Czechoslovakia	1	—	11	25
Project management	x	—	—	Democratic People's Republic of Korea	—	5	—	38
Plastics in agriculture	—	x	—	Egypt	4	—	9	9
Energy saving—fertilizer industry	—	—	x	France	—	—	4	20
Project identification	—	—	x	France	12	1	18	20
Industrial planning	—	—	x	France	9	1	15	16
Development—small/medium industry	—	x	—	Gabon	11	—	25	25
Pesticide formulation	—	—	x	German Democratic Republic	6	2	7	20

Industrial planning	—	—	x	German Democratic Republic	6	10	7	24
Printing industry	—	—	x	German Democratic Republic	4	—	12	19
COMFAR seminar	—	—	x	Germany, Federal Republic of	2	—	2	2
Metallurgical industries	—	x	—	Hungary	6	—	21	21
Food processing, quality control and dairy equipment	—	—	x	Hungary	6	3	13	20
Energy conservation—pulp and paper industry	—	x	—	India	—	1	—	211
Consultancy—small-scale industrial enterprises	x	—	—	Italy	—	—	—	13
Laboratory and pilot-scale bauxite processing	—	—	x	Jamaica	—	3	3	35
Industrial planning	—	—	x	Japan	2	2	2	9
Mobile unit—development of small/medium industry	—	x	—	Madagascar	}	6	—	22
				Mauritius				
				Comoros				
Packaging	—	x	—	Morocco	9	2	22	22
Cane sugar industry	—	x	—	Mauritius	4	—	7	7
Energy management	—	—	x	Philippines	11	1	7	15
Coconut wood building	—	x	—	Philippines	1	3	1	16
Appropriate technologies and equipment for metallurgical and metal processing industries	—	x	—	Poland	4	—	18	18
Project preparation, evaluation and financing	—	—	x	Poland	7	9	10	28
Technology acquisition and project preparation	—	—	x	Poland	7	1	16	16
Medicinal herbs	—	—	x	Romania	15	—	16	16
Project preparation, evaluation and financing	—	x	—	Rwanda	14	1	22	22
COMFAR seminar	x	—	—	Sudan	11	—	11	11
Waste paper utilization in pulp and paper making	—	x	—	Thailand	—	1	—	43

TABLE 2 (continued)

Field of study	Type of programme			Host country	Number of participants			
	National	Regional	Inter-national		Least developed countries	Female	African participants	All developing countries
Comparative pulping process, including monopulp process	--	x	—	Thailand	2	3	—	45
Project preparation, evaluation and financing	x	—	—	Togo	21	4	21	21
Management—human resources development	—	—	x	USSR	6	3	6	14
Industrial planning—theory and practice	—	x	—	USSR	14	3	17	17
Maintenance and technical diagnostics of machines	—	—	x	Yugoslavia	3	—	7	14
Mechanical wood processing industries	—	—	x	Yugoslavia	4	2	7	26
COMFAR seminar	x	—	—	Yugoslavia	—	8	—	16
TOTAL					<u>251^a</u>	<u>94^a</u>	<u>443^a</u>	<u>1 172^a</u>

^aThese figures do not include participants in training activities organized locally within the framework of UNIDO-executed field projects.

TABLE 3. NUMBER OF FELLOWSHIPS AND STUDY TOURS STARTED IN 1985,
BY NATIONALITY/HOME AREA, COUNTRY OR TERRITORY

Nationality/home area, country or territory	Number of individuals placed									Total
	UNDP			Regular programme			Other programmes			
	Male	Female	Total	Male	Female	Total	Male	Female	Total	
<i>Africa^a</i>										
Angola	4	—	4	—	—	—	—	—	—	4
Benin	1	—	1	—	—	—	—	—	—	1
Burundi	10	—	10	—	—	—	1	—	1	11
Cameroon	2	—	2	1	—	1	—	—	—	3
Cape Verde	2	—	2	—	—	—	—	—	—	2
Central African Republic	2	—	2	—	—	—	—	—	—	2
Chad	1	—	1	—	—	—	—	—	—	1
Comoros	—	—	—	1	—	1	—	—	—	1
Congo	1	—	1	—	—	—	—	—	—	1
Côte d'Ivoire	4	4	8	2	—	2	3	—	3	13
Ethiopia	96	5	101	5	—	5	4	1	5	111
Gabon	—	1	1	—	—	—	—	—	—	1
Gambia	—	—	—	1	—	1	1	—	1	2
Guinea	18	2	20	1	—	1	—	—	—	21
Guinea-Bissau	2	—	2	—	—	—	—	—	—	2
Kenya	10	6	16	3	3	6	—	1	1	23
Lesotho	—	—	—	—	3	3	—	3	3	6
Liberia	4	1	5	—	2	2	—	—	—	7
Madagascar	16	5	21	1	—	1	—	—	—	22
Malawi	3	—	3	—	—	—	—	—	—	3
Mali	2	—	2	—	—	—	—	—	—	2
Mozambique	15	1	16	—	—	—	2	—	2	18
Niger	13	—	13	—	—	—	—	—	—	13
Nigeria	17	1	18	1	—	1	—	—	—	19
Rwanda	—	—	—	1	—	1	—	—	—	1
Senegal	—	—	—	7	—	7	—	—	—	7
Seychelles	1	—	1	—	—	—	—	—	—	1
Sierra Leone	2	—	2	—	1	1	1	—	1	4
Togo	4	—	4	1	—	1	—	—	—	5
United Republic of Tanzania	8	—	8	4	2	6	27	—	27	41
Zaire	7	—	7	—	—	—	—	—	—	7
Zambia	5	1	6	—	—	—	—	—	—	6
Zimbabwe	3	—	3	—	—	—	3	1	4	7
Total—Africa	253	27	280	29	11	40	42	6	48	368
<i>Americas</i>										
Argentina	11	—	11	—	—	—	—	—	—	11
Bolivia	2	—	2	—	—	—	—	—	—	2
Brazil	8	4	12	4	—	4	4	—	4	20
Chile	11	1	12	—	—	—	—	—	—	12
Costa Rica	3	—	3	1	—	1	—	—	—	4
Cuba	24	4	28	—	—	—	—	—	—	28
Dominican Republic	2	—	2	—	—	—	—	—	—	2
Ecuador	4	—	4	—	—	—	—	—	—	4
El Salvador	3	1	4	—	1	1	—	—	—	5
Guyana	8	—	8	—	—	—	—	—	—	8
Jamaica	1	—	1	—	—	—	—	—	—	1
Mexico	27	1	28	—	—	—	—	—	—	28
Nicaragua	4	2	6	—	—	—	—	—	—	6
Panama	3	—	3	—	—	—	—	—	—	3
Paraguay	3	1	4	—	—	—	—	—	—	4
Peru	10	—	10	1	—	1	2	—	2	13
Trinidad and Tobago	1	—	1	—	—	—	—	—	—	1
Uruguay	1	1	2	—	—	—	—	—	—	2
Venezuela	2	6	8	—	—	—	—	—	—	8
Total—Americas	128	21	149	6	1	7	6	0	6	162

TABLE 3 (continued)

Nationality/home area, country or territory	Number of individuals placed									Total
	UNDP			Regular programme			Other programmes			
	Male	Female	Total	Male	Female	Total	Male	Female	Total	
<i>Arab States</i>										
Algeria	5	1	6	—	—	—	1	—	1	7
Democratic Yemen	5	—	5	4	—	4	—	—	—	9
Egypt	40	3	43	2	4	6	—	—	—	49
Iraq	2	1	3	—	—	—	—	4	4	7
Jordan	4	—	4	—	—	—	—	—	—	4
Libyan Arab Jamahiriya	1	—	1	—	—	—	1	—	1	2
Morocco	9	1	10	—	—	—	—	—	—	10
Oman	1	—	1	—	—	—	—	—	—	1
Qatar	2	—	2	—	—	—	—	—	—	2
Saudi Arabia	1	—	1	—	—	—	—	—	—	1
Somalia	8	—	8	1	—	1	—	—	—	9
Sudan	3	—	3	17	—	17	3	—	3	23
Syrian Arab Republic	1	—	1	—	—	—	—	—	—	1
Tunisia	4	—	4	2	—	2	—	—	—	6
Yemen	—	—	—	—	—	—	1	—	1	1
Total—Arab States	86	6	92	26	4	30	6	4	10	132
<i>Asia and the Pacific</i>										
Afghanistan	2	—	2	1	—	1	—	—	—	3
Bangladesh	10	—	10	—	—	—	—	—	—	10
Bhutan	11	—	11	—	—	—	—	—	—	11
Burma	15	8	23	—	—	—	—	—	—	23
China	100	21	121	4	1	5	22	11	33	159
Democratic People's Republic of Korea	54	—	54	—	—	—	—	—	—	54
Hong Kong	2	—	2	1	—	1	—	—	—	3
India	209	3	212	2	—	2	2	—	2	216
Indonesia	11	1	12	3	—	3	—	—	—	15
Iran (Islamic Republic of)	5	—	5	—	—	—	—	—	—	5
Lao People's Democratic Republic	3	—	3	—	—	—	—	—	—	3
Malaysia	10	1	11	—	1	1	—	—	—	12
Mongolia	3	6	9	—	—	—	5	—	5	14
Nepal	15	2	17	—	—	—	—	—	—	17
Pakistan	19	—	19	1	—	1	—	—	—	20
Philippines	20	8	28	2	2	4	—	1	1	33
Republic of Korea	14	—	14	—	—	—	—	—	—	14
Sri Lanka	37	4	41	—	—	—	10	—	10	51
Thailand	10	8	18	—	—	—	—	—	—	18
Tonga	2	—	2	—	—	—	—	—	—	2
Tuvalu	3	—	3	—	—	—	—	—	—	3
Viet Nam	17	2	19	—	2	2	—	—	—	21
Total—Asia and the Pacific	572	64	636	14	6	20	39	12	51	707
<i>Europe</i>										
Albania	11	—	11	—	—	—	—	—	—	11
Bulgaria	93	14	107	—	—	—	16	—	16	123
Czechoslovakia	50	3	53	—	—	—	—	—	—	53
Hungary	41	8	49	—	—	—	2	—	2	51
Poland	29	1	30	1	—	1	—	—	—	31
Portugal	12	9	21	1	1	2	—	—	—	23
Romania	9	2	11	—	—	—	5	—	5	16

Nationality/home area, country or territory	Number of individuals placed									
	UNDP			Regular programme			Other programmes			
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Total
Turkey	22	5	27	1	—	1	2	—	2	30
Yugoslavia	13	2	15	3	—	3	—	—	—	18
Total—Europe	280	44	324	6	1	7	25	0	25	356
GRAND TOTAL	1 319	162	1 481	81	23	104	118	22	140	1 725 ^b

^aAfrican Arab States (Algeria, Egypt, Libyan Arab Jamahiriya, Morocco, Somalia, Sudan, Tunisia) included under "Arab States".

^bIncluding 207 females; 315 individuals from least developed countries; 474 individuals from African countries (including African Arab States).

TABLE 4. FELLOWSHIPS AND STUDY TOURS STARTED IN 1985, BY COUNTRY, GEOGRAPHICAL AREA OR TERRITORY OF STUDY^{a, b}

Country/geographical area/ territory of study	Number of individuals placed			
	UNDP	Regular programme	Other programmes	Total
Angola	2	—	—	2
Argentina	16	—	—	16
Australia	20	—	2	22
Austria	90	10	2	102
Austria (UNIDO Headquarters)	101	10	17	128
Bahrain	1	—	—	1
Bangladesh	3	—	—	3
Belgium	42	6	—	48
Brazil	47	2	4	53
Bulgaria	19	—	2	21
Burkina Faso	1	—	—	1
Cameroon	2	—	—	2
Canada	32	—	—	32
China	20	4	—	24
Colombia	3	—	—	3
Costa Rica	5	—	—	5
Côte d'Ivoire	5	—	—	5
Czechoslovakia	58	—	8	66
Democratic People's Republic of Korea	5	—	—	5
Denmark	30	5	—	35
Ecuador	1	—	—	1
Egypt	19	6	35	60
Ethiopia	—	2	—	2
Finland	35	—	—	35
France	119	9	9	137
Gabon	2	1	—	3
German Democratic Republic	31	—	3	34
Germany, Federal Republic of	247	5	29	281
Ghana	—	—	1	1
Greece	2	2	—	4
Guinea	—	1	—	1
Hong Kong	4	—	—	4
Hungary	62	1	—	63
India	78	7	—	85
Indonesia	24	—	—	24
Iraq	—	—	2	2
Ireland	23	6	—	29

TABLE 4 (continued)

Country/geographical area/ territory of study	Number of individuals placed			Total
	UNDP	Regular programme	Other programmes	
Israel	2	1	—	3
Italy	79	7	7	93
Jamaica	1	—	—	1
Japan	98	1	11	110
Jordan	3	—	—	3
Kenya	14	9	1	24
Kuwait	11	—	—	11
Luxembourg	1	—	4	5
Malaysia	19	—	—	19
Mali	4	—	—	4
Malta	2	—	—	2
Mauritius	7	2	—	9
Mexico	7	—	—	7
Morocco	24	15	1	40
New Zealand	2	—	—	2
Nepal	18	—	—	18
Netherlands	40	7	7	54
Niger	1	—	1	2
Nigeria	1	—	—	1
Norway	33	—	—	33
Pakistan	14	2	—	16
Panama	18	—	—	18
Peru	3	—	—	3
Philippines	30	—	—	30
Poland	40	—	—	40
Portugal	13	—	—	13
Republic of Korea	11	—	—	11
Romania	13	—	—	13
Rwanda	—	2	—	2
Saudi Arabia	9	—	—	9
Senegal	4	—	2	6
Singapore	4	—	—	4
Spain	35	1	2	38
Sri Lanka	7	—	—	7
Sudan	3	1	—	4
Sweden	72	2	2	76
Switzerland	57	3	4	64
Syrian Arab Republic	2	—	—	2
Thailand	33	3	1	37
Tunisia	9	—	2	11
Turkey	9	2	2	13
Ukrainian SSR	1	—	—	1
Union of Soviet Socialist Republics	18	—	2	20
United Arab Emirates	3	—	—	3
United Kingdom	277	3	15	295
United Republic of Tanzania	9	—	4	13
United States of America	197	6	18	221
Venezuela	4	—	—	4
Yugoslavia	51	—	3	54
Zambia	—	5	—	5
Zimbabwe	—	1	—	1
TOTAL	2 462	150	203	2 815

^aWhere 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.

^bOf these placements, 727 or 25.8 per cent were arranged in developing countries, thus contributing to technical co-operation among developing countries.

APPENDIX O

Selected list of studies under preparation or completed in 1985 (other than those prepared by the Division for Industrial Studies)

OFFICE OF THE EXECUTIVE DIRECTOR/DIRECTOR-GENERAL

Completed studies

Information survey for a study on the present and future energy situation in Africa and its implication for the industrial development

Africa's external debt in respect of the industrial sector: review, conclusions and recommendations

Linkage between industry, agriculture and food production: analysis and proposals for action (UNIDO/OED.140)

Progress report on the implementation of Lagos Plan of Action and the Final Act of Lagos—the Industrial Development Decade for Africa (IDDA) (UNIDO/OED.141)

Ongoing study

Preparatory study on small hydropower plants for developing countries

DIVISION OF INDUSTRIAL OPERATIONS

Feasibility Studies Section

Ongoing study

Manual for the presentation of feasibility studies for small hydropower plants

Agro-industries Branch

Completed study

Timber engineering for developing countries, parts 1 to 5 (UNIDO/IO.606-610)

Metallurgical Industries Section

Completed studies

Guidelines for processing aluminium semi-fabricated products (UNIDO/IO.619)

Study on the establishment of laboratories for aluminium semi-fabricated products (UNIDO/IO.621)

World review on environmental aspects and protection in the bauxite/alumina industry (training kit, complete with teachers guide, slides and video-film)

World review on energy conservation in the bauxite/alumina industry (training kit, complete with teachers guide, slides and video-film)

Chemical Industries Branch

Completed studies

Rice husk ash cements: their development and applications

Study on the development and utilization of the natural gas resources in the Province of Neuquén, Argentina

Appendix O

Developing a used oil recycling activity in developing countries (UNIDO/IO.611)
Working paper on UNIDO technical assistance to industrial auditing-check-up and rehabilitation

Ongoing studies

Techno-economic feasibility study for the production of synthetic oil from coal in India
A story of paper

Engineering Industries Branch

Ongoing study

Offshore drilling support industry

DIVISION OF POLICY CO-ORDINATION

Negotiations Branch

Completed studies

World changes in the structure of the petrochemical industry 1980-1983 (UNIDO/PC.123)
Developing countries' technological capabilities in petrochemicals (UNIDO/PC.125)
Current world situation in petrochemicals (UNIDO/PC.126)
International trade and marketing of petrochemicals (UNIDO/PC.128)

Ongoing studies

Potentials and perspectives of vegetable protein production for human consumption in developing countries
UNIDO model form of turnkey lump sum contract for the construction of a fertilizer plant including guidelines and technical annexures
UNIDO model form of cost-reimbursable contract for the construction of a fertilizer plant including guidelines and technical annexures
UNIDO model form of licensing and engineering services agreement for the construction of a fertilizer plant including guidelines and technical annexures
UNIDO model form of semi-turnkey contract for the construction of a fertilizer plant including guidelines and technical annexures

Field Reports Monitoring Section

Ongoing studies

Manual for UNIDO Junior Professional Officers
Strengthening of the UNDP/UNIDO sectoral support in the industrial field
