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NOTE

In the present document, financial data given for 1981 are based on preliminary accounts available in January 1982. A revised Statistical Annex (yellow pages), giving updated figures for 1981, will be issued as Addendum 2 to this *Report* as soon as the data are available.

ANNUAL REPORT OF THE EXECUTIVE DIRECTOR, 1981

1

CONTENTS

	<i>Page</i>
Abbreviations	v
Preface	1
CHAPTER I INTERGOVERNMENTAL POLICY-MAKING ORGANS	5
Permanent Committee and Industrial Development Board: spring sessions	5
Economic and Social Council	7
Permanent Committee: autumn session	8
General Assembly: thirty-sixth session	9
CHAPTER II SOURCES OF FUNDS	13
Planning and programme development	13
UNDP/Indicative planning figure	15
Special Industrial Services programme	17
United Nations Industrial Development Fund	18
UNIDO regular programme of technical co-operation	20
Trust funds and cost-sharing arrangements	22
Regular budget	22
Overhead costs	25
CHAPTER III INDUSTRIAL STUDIES	27
Global and conceptual studies	27
Regional and country studies	31
Sectoral studies	34
Other activities	38
CHAPTER IV SPECIAL PROGRAMMES	40
Investment Co-operative Programme	40
Energy	50
Technology Programme	53
Industrial Development Decade for Africa, 1980-1990	64
System of Consultations	65
Industrial financing	71
Assistance to the least developed countries	72
Co-operation among developing countries	75

	<i>Page</i>
CHAPTER V INDUSTRIAL OPERATIONS	79
A. Implementation overall in 1981	79
B. Implementation by region	86
Africa	86
The Americas	92
Arab States	98
Asia and the Pacific	103
Europe	109
C. Implementation by field of activity	113
Industrial planning	115
Institutional infrastructure	118
Factory establishment and management	123
Training	125
Feasibility studies	130
Agro-industries	133
Metallurgical industries	137
Engineering industries	141
Chemical industries	146
 CHAPTER VI REVIEWS AND EVALUATIONS	 153
 CHAPTER VII CO-ORDINATION, FIELD AND LIAISON ACTIVITIES AND PUBLIC INFORMATION	 156
Relations with governments and intergovernmental organizations	156
Co-operation with non-governmental organizations and business and industrial institutions	159
New York Liaison	163
UNIDO representation in Geneva	164
Field Adviser and Junior Professional Officer pro- grammes	165
Inter-agency programme co-ordination	167
Public information	170
 CHAPTER VIII GENERAL ADMINISTRATION	 173
Staffing	173
Project personnel	179
Purchase and Contract Service	182
Conference services	183
Common services	184
 STATISTICAL ANNEX	 187
 APPENDICES	 203

ABBREVIATIONS

ACC	Administrative Committee for Co-ordination
AIDO	Arab Industrial Development Organization
ASEAN	Association of South-East Asian Nations
CAD	Computer aided design
CAM	Computer aided manufacturing
CARICOM	Caribbean Community
ECA	Economic Commission for Africa
ECDC	Economic co-operation among developing countries
ECLA	Economic Commission for Latin America
ECOWAS	Economic Community of West African States
ECWA	Economic Commission for Western Asia
EEC	European Economic Community
ESCAP	Economic and Social Commission for Asia and the Pacific
FAO	Food and Agriculture Organization of the United Nations
GATT	General Agreement on Tariffs and Trade
HABITAT	United Nations Centre for Human Settlements
IAEA	International Atomic Energy Agency
ICSC	International Civil Service Commission
ILO	International Labour Organisation
INTIB	Industrial and Technological Information Bank
IPF	Indicative planning figure
IRSI	Industrial research and service institute
ISO	International Organization for Standardization
ITC	International Trade Centre UNCTAD/GATT
JIU	Joint Inspection Unit
JPO	Junior Professional Officer
LIDO	Lima Industrial Development Objective
NGO	Non-governmental organization
OAU	Organization of African Unity
OLADE	Latin American Energy Organization
OMVS	Organization for the Development of the Senegal River
OPEC	Organization of Petroleum Exporting Countries
PPRS	Project Personnel Recruitment Section
R + D	Research and development
SAGE	Special Advisory Group on Energy
SELA	Latin American Economic System
SIDFA	Senior Industrial Development Field Adviser
SIS	Special Industrial Services
TCDC	Technical co-operation among developing countries
TIES	Technological Information Exchange System
UDEAC	Central African Customs and Economic Union
UNCTAD	United Nations Conference on Trade and Development
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization

UNIDF	United Nations Industrial Development Fund
UNIDO	United Nations Industrial Development Organization
VIC	Vienna International Centre
WAEC	West African Economic Community
WHO	World Health Organization

PREFACE

1. Even if we allow ourselves to feel consoled because in the final analysis a catastrophe, in the sense of a major armed conflict, did not take place and to consider that for this reason alone the year whose events we are reviewing was a good year, it can certainly be affirmed that we are more inclined to anxiety than to enthusiasm. For UNIDO, 1981 will have been a gloomy year. To be sure, the Secretariat continued to discharge its tasks normally and the technical assistance delivered (around \$88,500,000) compares favourably with the 1980 level. We may even note some still more positive developments. The work of the Industrial Development Board and of the Permanent Committee, for example, made a valuable contribution inasmuch as a clarification of the concerns and the positions of the various groups of countries is basic to any future progress. Here and there the expression of a sincere desire for co-operation could be noted also. However, it is impossible not to be struck by the considerable difference which persists in the approaches of the different groups of countries. This is already apparent at the level of debate, and the gap becomes even wider when it is a matter of considering the resources to be provided in order to move forward together. In a situation of this kind those who concern themselves only with the present find grounds for hope in the tiniest positive step forward which large international meetings can make possible. They devote all their talents to convincing themselves and others that to be moving in the right direction is just as important as the speed with which one is advancing towards the objective, if not more important. They give the impression of not realizing that, where economic development is concerned, the objective itself increases very fast, every year, in complexity and in volume. In fact, their "realism" very soon proves inadequate because the minute step with which they are satisfied inevitably leaves them further away from the goal which is apparently being pursued. It is not by itself enough for our endeavours to be in the right direction.

2. UNIDO—an organization which is still too modest if we bear in mind the ever-increasing complexity and huge dimensions of the problems to whose solution it is expected to contribute—seems to me to have reflected, to some extent, during 1981, this unsatisfactory general situation with its inherent dangers for the future of international co-operation.

3. The decision to make UNIDO's System of Consultations a permanent activity of the Organization is certainly to be welcomed, but in my opinion it would have been even more important and more significant if there had been the will to gear this instrument to objectives more in line with the real requirements of international co-operation. At the time of the adoption of the rules of procedure for the System the opportunity was not, I feel, taken to

adopt a sufficiently bold approach to enable the System to evolve in the direction of the complete fulfilment of its inherent potential. The UNIDO System of Consultations could, after a period of conclusive experiments, gain by becoming an effective mechanism for promoting and intensifying a concrete dialogue between North and South, permitting new approaches and the conclusion of new agreements in the complex area of industry.

4. It was of course an important and very positive development that a consensus could be reached on major programmes of the Organization following the General Conference at New Delhi; but it meant little in the absence of guarantees that means would be made available to the Secretariat for the concrete translation of the consensus into reality. Thus, in the matter of technical co-operation UNIDO should be responsible for a volume of operations three, or even four, times as great in order to give meaning to the declared intention of the international community to seek gradually to narrow the gap between the developed and the developing countries. In fact this gap is becoming wider every day and one cannot but be concerned at the negative trends of the last few years with regard to the volume of resources allocated to multilateral co-operation, which is being gradually starved of funds. An illustration of this situation is provided by an examination of the figures for UNIDO's technical assistance, which reveals that since 1979 the volume delivered has stagnated or even declined slightly. Unfortunately, the prospects for the next two years are hardly encouraging since, in view of the budgetary decisions of the General Assembly for 1982-1983, managing to maintain technical assistance at the 1979 level would already be a great success for the Organization.

5. It is true that three major United Nations conferences, the Vienna Conference on Science and Technology for Development, the Nairobi Conference on New and Renewable Sources of Energy and the Paris Conference on the Least Developed Countries—to say nothing of the summit meeting at Cancun—have succeeded in producing very praiseworthy statements of intention. But as far as money is concerned, nothing, except promises (and rather vague ones) for the future, whereas what is needed is to tackle, and immediately, questions which are recognized as essential for the harmonious development of international relations. Similarly, the Industrial Development Decade for Africa has been proclaimed by the United Nations General Assembly. But here, too, we may doubt whether the necessary financial effort will be made. In these circumstances it is difficult to see how an organization like UNIDO will be able, in all these fields, to make the really significant contribution that seems to be expected of it.

6. Still more alarming to me is the determined opposition shown up to now by the industrialized countries towards assisting in the creation of supplementary financial instruments to facilitate, promote and accelerate the industrialization of the third world countries, and especially the least endowed among them. More specifically, I am referring here to the proposal put forward by the Secretariat, following the discussions at New Delhi, for the establishment of an International Bank for the Industrial Development of the developing countries. The fact that such a bank would also help the industrial countries emerge from their present recession, assist the workers of those countries in finding jobs and, in so doing, promote the new international distribution of industrial activities

in a context of growth does not seem to have convinced everyone. I suspect that an excessively dogmatic approach, which is too much concerned with leaving certain relationships unchanged, is at the basis of the lack of enthusiasm evident thus far and I fear that the ultimate result of this attitude may be to jeopardize the well-being of millions of workers in the developed countries as well as in the developing countries. And yet it should be clear to everyone that in this domain, as in many others, the world has changed since the Bretton Woods agreements!

7. After these brief comments, I must remember at this point that, despite the seriousness of the subjects for concern, if not anxiety, it would be more in keeping with traditional courtesy to look for grounds for optimism in the confusion of the past year. I should like to find at least one for this short preface. With the new UNIDO Constitution having been ratified by 66 Member States as of 31 December 1981 there are great hopes that the process will be completed in the course of 1982 so that the new specialized agency within the United Nations system can be set up as rapidly as possible. In my opinion, the promising prospects which this transformation of UNIDO will open up for the future of international co-operation in the crucial area of industry and for the future contribution which UNIDO will be able to make in this respect are such as to warrant our emphasizing this favourable development.

8. What conclusions, then, should be drawn in such a context? If, taught by the experience of the past, each of us should avoid harbouring illusions regarding the future, all that remains in this case is to hope—and I do hope—that it will very soon be proved that I have erred on the side of pessimism in connection with subjects—such as those which I have just mentioned briefly—which, we might agree, could become important milestones on the road to the establishment of the new international economic order.

ABD-EL RAHMAN KHANE
Executive Director

Chapter I

INTERGOVERNMENTAL POLICY-MAKING ORGANS

1. As part of the United Nations Secretariat, UNIDO is subject to the directives and monitoring of the General Assembly as well as of a number of other intergovernmental policy-making bodies and subsidiary bodies. The present chapter recounts some of the decisions and recommendations that those organs made during 1981 that had, or are likely to have, a direct bearing on UNIDO and its programme of work.
2. The policy-making bodies below are not listed in hierarchical order but, as far as possible, according to the dates of their sessions at which resolutions and decisions relevant to UNIDO were adopted. This chronological approach might contribute to an easier reading of the historical evolvement of the various recommendations affecting the Organization.
3. The UNIDO Constitution remained open for signature at United Nations Headquarters in New York. As provided by its Article 25, the Constitution enters into force when at least 80 States which have deposited instruments of ratification, acceptance or approval notify the Depositary that they have agreed, after consultation among themselves, that the Constitution shall enter into force. As of 31 December, 121 States had signed the Constitution and 66 had ratified it.

PERMANENT COMMITTEE AND INDUSTRIAL DEVELOPMENT BOARD: SPRING SESSIONS

4. The Permanent Committee—a subsidiary organ of the Industrial Development Board, established by Board resolution 32 (VI) of 2 June 1972—held its fifteenth session in Vienna from 7 to 15 May 1981. According to its mandate, spelled out in the above resolution, the Committee devoted the session to the review of UNIDO activities in the preceding year and the consideration of the Secretary-General's proposed programme budget for UNIDO for the biennium 1982-1983, the draft medium-term plan for the period 1984-1989 and the tentative proposals for the UNIDO regular programme of technical co-operation 1982-1983. It also considered two specific

evaluation items: the progress made by the UNIDO Secretariat in drawing up a system design for internal evaluation; and co-operation between UNIDO, the United Nations Development Programme (UNDP) and other organizations within the United Nations system in the evaluation of specific activities.

5. In examining the proposed programme budget for the biennium 1982-1983, the Committee, *inter alia*, agreed that the provision of adequate resources to UNIDO was particularly necessary in support of activities in the priority areas defined by the Board at its fourteenth session in May 1980. While recognizing the budgetary constraints under which the United Nations regular budget has to operate, it recommended that such provisions be ensured for the coming biennium so as to enable UNIDO to implement its mandate. As regards the draft medium-term plan 1984-1989, the Committee recommended that it be authorized by the Board to resume consideration of that item at its 1981 autumn session. For the UNIDO regular programme, the Committee recommended to the Board that it seek to maintain the real value of that programme and tentatively approve the pattern of allocations proposed by the Secretariat for the biennium 1982-1983. In its review of UNIDO's evaluation efforts, the Committee recommended that effective internal evaluation be installed by the spring of 1982 within the resources allocated to the evaluation unit and that a report on the subject be submitted to its 1982 spring session. The recommendations of the Committee were subsequently adopted by the Board.

6. The Industrial Development Board held its fifteenth session in Vienna on 7 May and 15 to 30 May 1981. Among the main subjects of its 22-item agenda were: the follow-up to the decisions and recommendations of the Third General Conference; the Industrial Development Field Adviser (SIDFA) programme; redeployment; the System of Consultations; the United Nations Industrial Development Fund (UNIDF); greater autonomy for UNIDO; development and transfer of technology; the Industrial and Technological Information Bank (INTIB); and technical assistance to the Namibian and Palestinian peoples.

7. The Board adopted two resolutions. In resolution 53 (XV) on the Special Industrial Services (SIS) programme, the Board invited the Governing Council of UNDP to consider measures whereby the annual level of resources of the SIS programme be at least doubled during the third UNDP country programming cycle, starting in 1982. In resolution 54 (XV) the Board declared the Industrial Development Decade for Africa as one of the most important programmes of the Organization and requested the Executive Director to provide adequate resources for the co-ordination unit for the Decade. The Board also called upon the Executive Director to intensify contacts with, *inter alia*, the African States, the Executive Secretary of the Economic Commission for Africa (ECA), and the Organization of African Unity and to report on action taken to its sixteenth session in May 1982. It also requested the General Assembly to allocate with effect from the 1982-1983 biennium adequate financial resources to assist in the rapid industrialization of Africa, with particular reference to the least developed countries.

8. By adopting the report of the Permanent Committee on the work of its fifteenth session,¹ the Board decided to submit, through the Economic and

¹ID/B/268 and Corr.1.

Social Council, to the General Assembly the Committee's conclusions on the programme budget for 1982-1983 and on the draft medium-term plan 1984-1989 as well as the views and observations on those subjects expressed by delegations during the Committee's fifteenth and forthcoming sixteenth sessions.

9. On the System of Consultations, the Board gave a number of directions to the Secretariat and, *inter alia*, authorized for the biennium 1982-1983 the convening of two global and four sectoral Consultations, while leaving open the possibility of deciding, at its sixteenth session in May 1982, on the convening of additional meetings during that biennium. The Executive Director was requested to submit to the Board at its sixteenth session a report on the System of Consultations, including, *inter alia*, an analysis of the costs, results and achievements of each Consultation already held.

10. As regards UNIDF, the Board approved the proposed programme for 1982. It urged all States to contribute or raise their contributions to the Fund with a view to reaching the agreed desirable funding level of \$50 million annually, and noted with concern the constraints and difficulties under which the Fund had operated since its inception. It also agreed to reconsider at its next session the suggestion of establishing an *ad hoc* working group on the operation of the Fund. During the same session, the Board also adopted conclusions on a number of other topics on its agenda.

ECONOMIC AND SOCIAL COUNCIL

11. The second regular 1981 session of the Economic and Social Council was held in Geneva from 3 to 25 July. The main items on the agenda of relevance to UNIDO were industrial development co-operation, special economic, humanitarian and disaster relief assistance, human rights questions, population questions, food problems, natural resources, environmental problems, assistance to national liberation movements, regional co-operation, and the Transport and Communications Decade in Africa.

12. The Council deliberated matters relating to UNIDO under agenda item 14 "Industrial development co-operation", and adopted resolution 1981/75 in which it, *inter alia*, urged: all States, in particular the developed countries, to contribute or raise their contributions to UNIDF; and all Member States that had not yet done so to sign and ratify the new Constitution of UNIDO before the end of the thirty-sixth session of the General Assembly. The Council declared the Industrial Development Decade for Africa to be one of the most important programmes of UNIDO and requested the Assembly to allocate adequate financial resources, as from the next biennium, to assist the rapid industrialization of Africa. It recommended that the Assembly, at its thirty-sixth session, should ensure adequate resources for priority activities on the basis of the consensus reflected in paragraphs 134-140 of the report of the Permanent Committee on the work of its fifteenth session,² bearing in mind the fact that the provision of

²*Op. cit.*

adequate resources was particularly necessary in support of priority areas in the activities of UNIDO. The Council also invited the Secretary-General to make every effort to increase the share of UNIDO in the cost of the SIDFA programme, as recommended by the Governing Council of UNDP at its twenty-eighth session.

13. A number of other resolutions adopted by the Council at this session also involve action by UNIDO.

14. In resolution 1981/64, concerning the implementation by the United Nations system of the International Development Strategy for the Third United Nations Development Decade, the Council called upon all United Nations organizations and bodies to apply the Strategy for the Decade as a policy framework for their programmes of work and medium-term plans.

15. With regard to international co-operation on the environment, the Council in resolution 1981/73 requested organs and organizations of the United Nations system to take fully into account the view of the Administrative Committee on Co-ordination that the System-wide Medium-term Environment Programme should be seen not only as a document of use to the Governing Council of the United Nations Environment Programme (UNEP), but also, to the extent relevant to their particular mandates, as a document of basic interest to the governing bodies of other United Nations organizations.

16. Dealing with the implementation in the Sudano-Sahelian region of the Plan of Action to Combat Desertification, the Council, in resolution 1981/72, urged all Governments and organizations concerned to intensify their assistance to the countries of the region.

17. Resolution 1981/54 dealing with the implementation of the Declaration on the Granting of Independence to Colonial Countries and Peoples and assistance to the oppressed people of South Africa and their national liberation movement, requested the specialized agencies and other organizations within the United Nations system, *inter alia*, to render increased assistance to the Nationhood Programme for Namibia.

PERMANENT COMMITTEE: AUTUMN SESSION

18. The Permanent Committee held its sixteenth session in Vienna from 16 to 21 November 1981. According to its mandate, the Committee at that session reviewed UNIDO's efforts in co-ordinating the activities in the field of industrial development within the United Nations system. Other items on the Committee's agenda, transferred to it by the Board, were the draft medium-term plan for the period 1984-1989, the International Bank for Industrial Development and the rules of procedure for the System of Consultations. The Fourth General Conference of UNIDO was also briefly discussed by the Committee.

19. As regards the draft medium-term plan, which was the subject of intensive review, the Committee, in accordance with the Board's decision (see para. 8 above), requested the Executive Director to transmit its comments and observations to the relevant bodies for further review and finalization of the plan.

20. With reference to the establishment of an International Bank for Industrial Development, the Committee requested the Executive Director to submit to the Board at its sixteenth session a report indicating latest developments as well as information derived from his usual contacts.

21. At the same session, the Committee adopted the rules of procedure for the System of Consultations as a whole.

GENERAL ASSEMBLY: THIRTY-SIXTH SESSION

22. During the thirty-sixth session of the General Assembly, held at United Nations Headquarters, New York, from 15 September to 18 December 1981, matters directly related to UNIDO were discussed under agenda sub-item 69 (d) "Industrialization". Among the documents before the Assembly in its discussion of UNIDO and its activities were the report of the Industrial Development Board on the work of its fifteenth session (A/36/16) and the report of the Executive Director on the Industrial Development Decade for Africa (A/36/465, annex). In the following paragraphs a brief summary is given of some of the main resolutions and decisions adopted during the session that are directly or indirectly related to UNIDO and its activities.

23. In resolution 36/181 on the revision of the lists of States eligible for membership in the Industrial Development Board, the Assembly decided to include Vanuatu in list A and Antigua and Barbuda and Belize in list C of the annex to resolution 2152 (XXI) of 17 November 1966.

24. Industrial development co-operation was the subject of resolution 36/182. In part I of the resolution (Report of the Industrial Development Board on the work of its fifteenth session), the Assembly urged all States that had not yet done so to ratify the Constitution of UNIDO as soon as possible in order to allow the conversion of the Organization into a specialized agency in 1982; and to contribute or raise their contributions to UNIDF with a view to reaching the agreed desirable funding level of \$50 million annually. The Assembly, strongly supporting the strengthening of the System of Consultations, requested the Board to consider at its sixteenth session the possibility of including in the 1982-1983 biennium consultation meetings in addition to those authorized by it at its fifteenth session (see para. 9 above). The Board was also requested to take up its function in May 1982 as the Preparatory Committee for the Fourth General Conference of UNIDO, to formulate an agenda and other proposals for the Conference, and to submit its recommendations to the Assembly at its thirty-seventh session. The Assembly also requested (a) the Executive Director of UNIDO to continue his efforts regarding the International Bank for Industrial Development in accordance with the relevant decision of the

Permanent Committee at its sixteenth session; and (b) the Board to continue its consideration of the proposal for the Bank with a view to taking a decision thereupon. It also requested the Executive Director to increase, at the request of the developing countries, technical co-operation and the programmes and projects (a) in energy-related industrial technology on the basis, *inter alia*, of agreements reached at the United Nations Conference on New and Renewable Sources of Energy and (b) for the least developed countries as envisaged in the Substantial New Programme of Action for the 1980s for the Least Developed Countries. The Assembly further recommended that the UNIDO Secretariat (a) continue to undertake studies in the field of redeployment of industrial capacities and (b) improve and further develop its relevant programme along the lines recently approved by its policy-making bodies. In the same resolution, the Assembly reiterated the importance of facilitating the restructuring of world industrial production through, *inter alia*, the implementation of its resolution 35/66 and of resolution 131 (V) of the United Nations Conference on Trade and Development. The Assembly also decided to ensure that adequate resources be made available to UNIDO for: (a) priority activities on the basis of the consensus reflected in the Permanent Committee and the Board at recent sessions; and (b) assisting developing countries in the preparation of industrial programmes and projects (i) in energy-related technology and (ii) in line with the Substantial New Programme of Action for the 1980s for the Least Developed Countries.

25. In part II (Industrial Development Decade for Africa) of resolution 36/182, the Assembly declared the Decade as one of the most important UNIDO programmes and decided to allocate—as from the 1982-1983 biennium—adequate financial resources to assist in the rapid industrialization of Africa in line with the Lagos Plan of Action for the Implementation of the Monrovia Strategy for the Economic Development of Africa.³ It requested the Executive Director to provide adequate, including human, resources for UNIDO's co-ordination unit as well as to continue contacts with the organizations within the United Nations system and, in co-operation with the Executive Secretary of ECA, to submit through the Board and the Economic and Social Council, a comprehensive report on the Decade to the Assembly at its thirty-seventh session in 1982.

26. In resolution 36/240A on budget appropriations for the biennium 1982-1983, appropriations of \$72,942,200 were approved for UNIDO (for details, see chap. II, para. 38).

27. In a number of resolutions, UNIDO, among other organizations within the United Nations system, was also asked by the Assembly to bring to the attention of its governing body—the Industrial Development Board—the special needs of the Central African Republic (36/206), Liberia (36/207), Benin (36/208), Sao Tome and Principe (36/209), Chad (36/210), Cape Verde (36/211), Comoros (36/212), Zambia (36/214), Mozambique (36/215), Uganda (36/218), Lesotho (36/219), Gambia (36/220), Botswana (36/222) and Zimbabwe (36/223) and to report the decisions of the Board, and—in some cases—the steps being taken by UNIDO, to the Secretary-General by 15 July 1982.

³A/S-11/14, annex I.

Resolutions were also adopted on the special needs of Nicaragua (36/213), Djibouti (36/216), Guinea-Bissau (36/217) and the drought-stricken areas in Djibouti, Ethiopia, Kenya, Somalia, the Sudan and Uganda (36/221).

28. In resolution 36/70 on assistance to the Palestinian people, the Assembly urged relevant agencies, organizations, organs and programmes within the United Nations system to take the necessary steps, in consultation and co-operation with the Palestine Liberation Organization, for the full implementation of the General Assembly and Economic and Social Council resolutions on that subject.

29. With regard to the third session of the High-level Committee on the Review of Technical Co-operation among Developing Countries, to be held in 1983, the Assembly, in resolution 36/44, requested, *inter alia*, the executive heads, within their sphere of competence, programme and work and available resources and in close co-operation with the UNDP Administrator, to contribute to the preparation of that session and to participate actively therein.

30. The United Nations Conference on New and Renewable Sources of Energy was the subject of resolution 36/193. In section IV of that resolution, the Assembly requested all organs, organizations and bodies of the United Nations system to participate fully in and support the implementation of the Nairobi Programme of Action. It also called upon them to organize their work and rationalize their activities according to established priorities in such a way as to meet the need for implementing the above-mentioned Programme.

31. In resolution 36/194 on the United Nations Conference on the Least Developed Countries, the Assembly called upon, *inter alia*, the organs, organizations and bodies of the United Nations system to take immediate, concrete and adequate steps to implement the Substantial New Programme of Action for the 1980s for the Least Developed Countries as a part of international action for the establishment of the new international economic order, and to respond favourably to invitations to participate in aid consultative groups or other arrangements to be established at the initiative of the least developed countries in accordance with that Programme.

32. Among other resolutions that also have some bearing on the work of UNIDO are: comprehensive outline of a world survey on the role of women in development (36/74); co-operation between the United Nations and the Organization of African Unity (36/80); United Nations Conference on Trade and Development (36/145); specific action related to the particular needs and problems of land-locked developing countries (36/175); Multinational Programming and Operational Planning Centres (36/178); special measures for the social and economic development of Africa in the 1980s (36/180); United Nations Financing System for Science and Technology for Development (36/183); situation of food and agriculture in Africa (36/186); restructuring of the economic and social sectors of the United Nations system (36/187); implementation in the Sudano-Sahelian region of the Plan of Action to Combat Desertification (36/190); international co-operation in the field of the environment (36/192); operational activities for development (36/199); United Nations Development Programme (36/200); implementation of the medium-term and

long-term recovery and rehabilitation programme in the Sudano-Sahelian region (36/203); and strengthening the capacity of the United Nations system to respond to natural disasters and other disaster situations (36/225).

33. Concerning the launching of global negotiations on international economic co-operation for development, no final consensus was reached on the procedures and the agenda. In decision 36/461, the Assembly decided to suspend its thirty-sixth session and to reconvene it, at a date to be announced, to continue, *inter alia*, its consideration of global negotiations.

Chapter II

SOURCES OF FUNDS

PLANNING AND PROGRAMME DEVELOPMENT

1. As the many detailed narratives in the present report collectively indicate, the wide range of activities that UNIDO has been able to design, develop and strengthen since 1975 show significant differences in their contents, rhythms and modalities, but they all aim at the fulfilment of the Organization's primary mandate, namely to stimulate, strengthen and enrich the process of accelerated industrialization of the developing countries with the attainment of the Lima target always in sight. The planning, initiation, development and approval of the various programmes of the Organization comprise one of the two solid blocks of substantive activities of the house; the other comprising the implementation, review and evaluation of these programmes. The techniques of conception, preparation and implementation of these programmes are dictated by their immediate specific objectives; the procedures governing such progression from the beginning till the end are dictated by the specific sources of funds used for financing them. Whereas the substance of these activities is briefly described in many other parts of the document, this chapter provides a synoptic and aggregative narrative of such activities within the context of total operations of the various sources of funds. The largest source being the UNDP indicative planning figure (IPF), most of the projects follow the prescribed UNDP procedure. In addition, one fourth of UNIDO's activities is now being financed from non-IPF sources at the disposal of the Secretariat. These are the Special Industrial Services (SIS) programme, the regular programme of technical co-operation (RP), the United Nations Industrial Development Fund (UNIDF) and the trust funds.

2. In the following paragraphs, a report is given on the development and utilization of the financial resources during the year under review. A summary of the situation with regard to overhead costs is also provided.

3. Table 1 below provides the broad dimensions of the technical co-operation programme developed and implemented in 1981.

4. At this stage it may be useful to examine briefly the growth in the UNIDO technical co-operation programme since 1974 (the year immediately preceding the Second General Conference of UNIDO which was convened at Lima (Peru) in 1975) as shown in table 2 below.

TABLE 1. SUMMARY OF TECHNICAL CO-OPERATION PROGRAMME IN 1981,
BY SOURCE OF FUNDS

(In millions of US dollars)

Source of funds	Approvals	Expenditures
UNDP/IPF	59.2	64.0
UNDP/Programme reserve and special measures	0.9	1.5
UNDP/SIS	1.2	1.6
Regular programme	2.9	3.5
UNIDF	14.4	10.4
United Nations Interim Fund for Science and Technology for Development	6.4	1.7
Trust funds	3.8	4.9
Non-UNIDO funds	0.3	0.9
TOTAL	89.1	88.5

TABLE 2. GROWTH OF THE UNIDO TECHNICAL CO-OPERATION PROGRAMME,
1974-1981

(In millions of US dollars)

Year	Approvals	Expenditures	Annual increase in expenditure (percentage)
1974	44.2	24.1	—
1975	54.0	36.5	51.45
1976	25.2	40.0	9.59
1977	54.1	43.9	9.75
1978	84.0	55.1	25.51
1979	77.3	70.5	27.95
1980	94.3	76.4	8.37
1981	89.1	88.5	15.83

5. There is a story behind the figures in table 2. An unusual surge of activity created by the Lima Conference accelerated expenditures by over 51 per cent and approvals by about 24 per cent. Unfortunately, the UNDP financial crisis of 1976 suddenly blocked that dynamism. Approvals plummeted to less than half of the previous year's level and expenditures, not so susceptible to sudden brakes, were retained in real terms at more or less the level reached in 1975. The situation eased in 1977; approvals revived and came close to the pre-crisis level but the momentum in expenditures took another year to build up despite continuous efforts by the Secretariat. 1978, therefore, presented the first year in which UNDP brakes on expenditures were released and consequently the figures for that year register a 25 per cent growth followed by another increase of about 28 per cent in 1979.

6. As pointed out in the preface to the *Annual Report* for 1979, maintaining that year's performance had subjected the Organization to a severe strain and the denial of an increase in the budgetary resources needed to sustain that positive trend would probably result in a levelling-off of technical assistance in

the coming years.¹ This warning was extended in the preface to the *Annual Report* for 1980: the absence of any substantial increase in real terms in the delivery of technical assistance that year appeared to confirm that the mobilization of the Organization's current human resources could hardly be intensified, and that additional budgetary resources were required to sustain previous growth in this area.²

7. The increase of 15.83 per cent in 1981 is more apparent than real owing to very special circumstances obtaining in the last quarter of that year (i.e. the last year of the second cycle of the UNDP country programming exercise). Each country appeared to be in a hurry to use the funds at its disposal for otherwise they would be lost to the country's IPF. An added worry must have been the gloomy prospects for the biennium 1982-1983 for which UNDP has imposed a cut of about 32 per cent on expenditures owing to unexpectedly low levels of pledges. The concerned countries must have thought that, if obligations against approved projects were not incurred during 1981, the unused funds would have to be surrendered but the requirements of ongoing projects would remain and would eat into the already reduced IPF. These factors contributed to unusual activity close to the end of 1981 and pushed expenditures high. The substance of the analysis is that, after registering substantial growth in 1978 and 1979, largely due to increased productivity, further increase seems to have been arrested and is not likely to be revived without an appropriate increase in regular budget resources.

UNDP/INDICATIVE PLANNING FIGURE

8. In 1981, UNIDG continued to be the third largest executing agency responsible for the implementation of projects financed by the United Nations Development Programme. Whereas chapter V describes in detail the implementation of such projects, the development of the programme from various UNDP sources is narrated here.

Second country programming cycle

9. Activities carried out in 1981 and financed under UNDP/IPFs may be more vividly narrated in the context of the second country programming cycle, which ended on 31 December 1981. Table 3 gives a broad picture of UNIDO performance in the second cycle.

10. The main causes for the 2.1 per cent increase (\$75.3 million) in the actual share over the expected share of UNIDO in the second cycle were:

(a) The growing importance of the industrial sector in many developing countries and its emergence as an important element in their country programmes. Except for the Americas, all regions allocated more resources to

¹ID/B/240, preface, para. 5.

²ID/B/260, preface, para. 5.

TABLE 3. EXPECTED AND ACTUAL SHARE OF UNIDO IN THE SECOND COUNTRY PROGRAMMING CYCLE

Region	Country programmes originally approved by the UNDP Governing Council (January 1976-June 1980)					Actual approvals of UNDP-financed projects at the end of the cycle				
	Number of countries	Expected UNIDO share			Percentage of IPF programmed	Number of countries	Actual UNIDO share			Percentage of IPF programmed
		IPF		Amount			IPF		Amount	
		Total	Pro-grammed				Total	Pro-grammed		
(in millions of US\$)		(in millions of US\$)		(in millions of US\$)						
Africa	37	580.05	491.38	52.28	10.64	41	676.62	711.20	86.09	12.11
Americas	26	311.80	303.37	41.01	13.52	26	312.12	355.21	38.62	10.87
Arab States	15	192.25	261.53	25.46	9.74	17	235.25	282.19	35.88	12.71
Asia and the Pacific	26	657.55	733.32	95.34	13.00	32	672.02	672.66	119.50	17.76
Europe	9	66.50	65.72	16.12	24.53	12	79.25	85.31	25.41	29.78
TOTAL	113	1 808.15	1 855.32	230.21	12.40	128	1 975.26	2 106.57	305.50	14.50

Note. The number of UNIDO projects at the end of the second programming cycle was 785, with a total value of \$305.5 million and an average value of \$389,170.

the industrial sector in their country programmes, 16 countries having allocated more than 25 per cent of their IPF to this sector;

(b) The stabilization of the SIDFA programme, which contributed substantially to the speed and quality of the planning and project development process;

(c) Higher productivity at UNIDO Headquarters.

Third country programming cycle

11. With the advent of the third UNDP country programming cycle, covering the period 1982-1986, considerable attention was focused on participation in the UNDP programming exercise, to which Headquarters and field staff actively contributed. In 1981, 27 programming missions were carried out, covering China, Cuba, Ethiopia, Ghana, Haiti, India, Ivory Coast, Kuwait, Lebanon, Libyan Arab Jamahiriya, Madagascar, Malawi, Mauritania, Mozambique, Niger, Nigeria, Oman, Panama, Peru, Saudi Arabia, Turkey, United Arab Emirates, United Republic of Tanzania, Upper Volta, Uruguay and Zambia. Where such missions were not requested, UNIDO contributed to the programming exercise through the submission of position papers, project ideas and proposals based on the Organization's knowledge and perceptions of national needs and industrial development priorities. The initial results appear encouraging. In the 14 country programmes approved by the Governing Council in June 1981 (see appendix M, table 3), the share of UNIDO grew from \$35 million (second cycle) to \$78 million (third cycle). Examples of countries with a significant increase are Cuba, Nepal and Viet Nam. The subsectors preferred in these programmes included chemical industries, engineering, agro-industries and institutional infrastructure. A nearly complete picture of the role of UNIDO in the third cycle will be available in June 1982, when the UNDP Governing Council will consider 82 country programmes.

SPECIAL INDUSTRIAL SERVICES PROGRAMME

12. In its 15 years of existence, the SIS programme seems to have come up to expectations. It has assisted the industrialization process in the developing countries with both flexibility and speed. It has succeeded in establishing itself as an appropriate mechanism for fulfilling the unanticipated and quite often very special needs of the industrial sectors of the developing countries, which generally operate in rather unfavourable environments. Confidence in the programme has continued to grow, as have the urgent demands on its capacities. In the Industrial Development Board and the General Assembly, many spokesmen from the developing countries have therefore called for an increase in SIS resources.³ Resources have, nevertheless, remained stagnant. Indeed, in real terms they have declined drastically.⁴ The inadequate allocation for the second cycle (1977-1981) of \$17.5 million imposed on the Secretariat a continuous struggle to stay within the ceiling of \$3.5 million a year. It could not, however, do so without severely impairing the momentum of the programme. In the first three years of the cycle (1977-1979), expenditure totalled over \$11.7 million, against a combined ceiling for three years of \$10.5 million. In 1980, efforts to secure some increase in resources were unsuccessful, and the Secretariat was forced to slow down approvals and expenditure. By the end of that year, the over-expenditure had increased to \$1.6 million, compared with \$1.2 million in the previous year. Although some relief came with the approval in June by the Governing Council of an additional allocation of \$0.7 million for the programme, the stringent measures that were adopted to prevent total expenditures in the cycle from exceeding by too much the five-year ceiling of \$17.5 million had cut into the programme's momentum. The following figures show the yearly expenditures in millions of dollars:

1977	1978	1979	1980	1981	Total
3.5	3.6	4.7	3.9	1.6	17.3

13. SIS assistance in 1981 was directed to the following fields:

<i>Field of activity</i>	<i>Percentage</i>
Industrial planning	5.2
Institutional infrastructure	2.6
Factory establishment and management	10.9
Industrial training	4.8
Feasibility studies	5.0
Agro-industries	15.1
Metallurgical industries	19.0
Engineering industries	15.6
Chemical industries	20.6
Development and transfer of technology	1.2
	100.0

³E.g. General Assembly resolution 33/78; Industrial Development Board resolutions 49 (XIV) and 53 (XV).

⁴In 1972, the SIS programme, with a \$3.5 million annual allocation, could obtain 1,400 man-months of expert services at a *pro forma* cost of \$2,500 per month. In 1982 the \$3.5 million would barely suffice for 54 man-months of services at the current *pro forma* cost of \$6,400 a month.

14. At its twenty-eighth session in June 1981, the UNDP Governing Council allocated \$25 million to the SIS programme for the third cycle; this representing an increase of \$7.5 million, or 43 per cent, over the resources allocated for the second cycle. In view, however, of the problems in mobilizing resources there has been a flat across-the-board reduction not only in the IPF but also in other programmes, such as the SIS. For the purpose of forward planning, 80 per cent of the amount allocated for the SIS programme, i.e. a total of \$20.0 million, will be used for the period 1982-1986.

UNITED NATIONS INDUSTRIAL DEVELOPMENT FUND

15. A fairly detailed review of the first three years of UNIDF operation, from 1978 to 1980, was submitted to the Industrial Development Board at its fifteenth session.⁵ It covered the aims, activities, priorities and administration of the Fund since its inception. The document also analysed the characteristics of each of the Fund's three components (general-purpose convertible, special-purpose convertible and non-convertible contributions) and stressed the constraints imposed by the failure to realise the expected volume of resources and by the conditions attached to the use of resources provided.

16. Despite the demonstrated usefulness of the Fund's operation on the whole, 1981 did not see any substantial improvement in its progress towards attaining its original objective by means of a desirable funding level of \$50 million annually. The 1981 pledging conference yielded \$9.33 million, compared with the \$12.73 million pledged in November 1980. Other comparative details are given in table 4 below.

TABLE 4. PLEDGES TO THE UNITED NATIONS INDUSTRIAL DEVELOPMENT FUND FOR 1981-1982

(In thousands of US dollars or dollar equivalent)^a

Year	Total	General-purpose convertible	Special-purpose convertible	Non-convertible
1981	12 733	3 086	7 404	2 243
1982	9 332 ^b	2 891	4 308	2 133

^aCurrencies other than United States dollars converted at the exchange rates prevailing on 31 December 1981.

^bDecrease largely due to the fact that some donor countries had not announced their 1982 pledges by 31 December 1981.

17. To some extent, the figures are not exactly comparable. As in the past, some customary donors have not yet announced their pledges. The total amount pledged for 1982 may therefore go up and might reach last year's level of \$12 million, with an expected increase mainly in the special-purpose component. This is still a far cry from the hope for the desirable annual funding level of \$50 million.

18. The flexibility of the Fund's operations continues to be constrained. The expectations expressed in the annex to General Assembly resolution 31/202

⁵ID/B/266.

regarding UNIDF's enhancing the ability of UNIDO to meet "promptly" and "flexibly" the needs of the developing countries have not been fulfilled because of the restraints imposed by the special-purpose and non-convertible components. These grim facts should not, however, be allowed to overshadow the solid though modest achievements of UNIDF in the cause of industrial development in the developing countries. In 1981, 127 projects were approved, at a total cost of \$16.5 million including overheads. The general-purpose convertible component financed 52 of these projects (\$4.3 million), the special-purpose component financed 43 (\$9.2 million) and the non-convertible component, aided by the general-purpose convertible component, supported 32 (\$3 million).

19. Despite various constraints, the UNIDF programme continued to develop innovative projects with a view to initiating technological development as an additional instrument of the general concern to support as many useful activities as UNIDF resources permitted. To give a few examples, a project to develop the use of solar energy for the distillation of essential oils from Ylang-Ylang flowers in the Comoros had the twin object of upgrading the existing process and saving huge quantities of wood. The special-purpose contributions from the Federal Republic of Germany would finance this project, in addition to the equally useful projects in Somalia (a study on progressive manufacture of pumps) and Egypt (a pilot plant for fibre fractionation of waste paper). Rehabilitation of the milling industry in Angola will be supported by the Italian contribution, which will also finance a tannery effluent treatment plant in Brazil, the development of the leather products industry in the United Republic of Tanzania and integrated development of the food industries in the Andean Group countries. The United Kingdom contribution to the Fund will provide substantial assistance for the Pesticide Research and Development Centre in China. Another interesting programme concerns the development of industrial co-operatives in the United Republic of Tanzania, with financial support from Sweden. The Chinese contribution to the Fund will be used to set up a brick-making plant in the Gambia and a rice-bran extraction plant in Bangladesh.

20. A large variety of seminars, workshops, study tours and expert group meetings intended to stimulate and reinforce the process of industrial development at the global, regional and subregional levels were financed largely from the general-purpose convertible component of the Fund. These activities covered, *inter alia*, agricultural machinery, food processing, preventive maintenance, the telecommunications industry, energy and regional industrial development in Africa; micro-electronics, the design and construction of small hydro plants, petrochemicals, energy conservation in the cane sugar industry and the development of food industries in Latin America. The subjects covered in Asia and the Pacific included the planning of industrial facilities, regulation of technology transfer, strategies for the industrial development of the Pacific island countries and investment promotion in China. At the global level, the highlights of the UNIDF programme supported by the general-purpose convertible component were training programmes on environmental control in the chemical and pharmaceutical industries, the establishment of a coconut-processing technology evaluation and information service, study and investigations on the establishment of an international centre for genetic engineering and bio-technology, and an inventory of the technological capabilities of the developing countries in the fertilizer industry. Additionally, the general-purpose

convertible component financed a sizeable number of country and subregional projects, such as food processing in Mexico, the metalworking industry in Nicaragua, the processing of sheep skins in Uruguay, the use of biogas in water pumping in Botswana and the production of prefabricated modular wooden bridges in Madagascar.

21. The priority areas established by the Industrial Development Board continued to guide the preparation of projects and allocation of the Fund's resources. Due to the practical requirements and programme priorities of specific countries, however, coupled with the special character of certain components of the Fund, some areas were more favoured than others.⁶ Training, for example, was the most popular field. In 1981, 43 training programmes, financed from UNIDF, were organized in 21 different fields. The training programmes benefited 732 participants, including 70 females and 232 participants from the least developed countries. An important feature of the in-plant group training programmes was that out of the 24 countries where these were conducted, 14 were developing countries. This feature is indicative of UNIDO's efforts to contribute to the growth in the developing countries' capabilities to train people from other developing countries.

22. A large number of these in-plant group training programmes and training-oriented activities were financed from non-convertible contributions. The Hungarian contributions made it possible to implement a training programme in maintenance and repair of biomedical equipment and technical consultations on production of drugs in multi-purpose plants. Training programmes in the cement and foundry industries were supported by Turkish contributions. As in the previous years, contributions of the Union of Soviet Socialist Republics financed the implementation of in-plant group training programmes in the fertilizer, metalworking and rice processing industries and in electric welding and industrial information. Training programmes on diesel engines were organized in China and Czechoslovakia, and on the agro-industries and petrochemicals in Yugoslavia and Romania. The contributions of the German Democratic Republic supported similar programmes for pesticides, printing and industrial planning. A seminar was organized, with Chinese assistance, on the wood-based panelling and furniture industry.

UNIDO REGULAR PROGRAMME OF TECHNICAL CO-OPERATION

23. Proposals by the Executive Director for the utilization of the UNIDO regular programme of technical co-operation for the biennium 1980-1981⁷ were reviewed by the Board at its thirteenth (1979) session. At that session, the Board approved the proposed allocations for 1980 and provisionally approved those pertaining to the year 1981.⁸ At its fourteenth (1980) session, the Board approved the proposals of the Executive Director for revised allocations under the UNIDO regular programme for technical co-operation for the years

⁶The subject will be covered extensively in another document to be submitted to the Board under agenda item 13 (United Nations Industrial Development Fund) which will also review the implementation of projects financed under the Fund.

⁷ID/B/224 and Corr.1.

⁸A/34/16, para. 48.

1980-1981,⁹ based on the allocation approved by the General Assembly at its thirty-fourth session. Details of the revised allocations by the six components of the regular programme¹⁰ are given in appendix L.

24. In keeping with the recommendations of the Board at its thirteenth session, the 1980-1981 regular programme differed most notably from that of 1978-1979 in the allocations to the sub-component "Establishment and strengthening of training facilities in developing countries" (which was increased to 10 per cent from the previous level of 3 per cent) and to the component "Special needs of the least developed countries" (which was also raised from 31 to 33 per cent).

25. Appendix L compares the regular programme as approved by the Board and as delivered in the last two years. The support provided by this source of funds to the economic co-operation among developing countries and least developed country programmes is covered in chapter IV. A brief account follows of the activities undertaken under the remaining four components.

26. The development of skills in the various disciplines in the industrial sector being one of the most important programmes of UNIDO, financing for it is sought from almost every source the Organization can tap: UNDP, SIS programme, UNIDF and regular programme. In addition to the individual fellowships and group training programmes, the regular programme funds were used to identify industrial training institutions in developing countries in order to strengthen and enlarge their training capabilities to meet their own requirements and also those of other developing countries. In a few cases identification of such institutes has already been initiated.

27. The regional advisers programme, operating within the joint industry divisions set up within the regional commissions, continued to provide cohesion between the activities of UNIDO on the one hand and those of the commissions on the other and contributed to the development of several joint programmes.

28. Through short-term advisory services, the interregional advisers programme imparted speed and qualitative strength to the technical co-operation and other programmes of UNIDO—for example, the System of Consultations. More details of the activities in this programme are given in chapter V, paragraph 7.

29. The regular programme component "Consultations with Governments" enabled the Organization to hold discussions in Vienna with five ministers and 17 high-level government officials from developing countries, who also obtained first-hand information about UNIDO programmes and operational systems and who, in turn, gave their perception of the industrialization of their respective countries, thereby increasing the Secretariat's capacity to adapt its programmes towards the development plans of those developing countries and their approaches to industrial development.

⁹ID/B/C.3/88/Rev.1; ID/B/247, para. 82; A/35/16, vol. II, para. 39.

¹⁰The six programme components comprise: 1. Training (*a*) individual fellowships, (*b*) group training, (*c*) establishment and strengthening of training facilities in developing countries; 2. Regional advisory services; 3. Short-term advisory services (interregional advisers); 4. Co-operation among developing countries; 5. Consultations with Governments; and 6. Special needs of the least developed countries.

TRUST FUNDS AND COST-SHARING ARRANGEMENTS

30. Following the trend of previous years, a number of Governments of industrialized market economy countries continued to finance associate experts' services through trust fund arrangements. These countries also made trust fund contributions to finance certain large-scale and small-scale projects at the global, regional and national levels.

31. There has been an increase in the number of trust fund agreements between UNIDO and developing countries. Several developing countries, mainly oil-exporting countries, have entered into trust fund agreements with UNIDO to finance the cost of technical co-operation projects of which they have been the recipients. The total amount of this type of financing approved during 1981 came to the equivalent of \$3.8 million. Examples of projects of this type include assistance to cement factories in Jordan, Iraq, the Libyan Arab Jamahiriya and Saudi Arabia; to an aluminium plant in Kuwait; to the Gulf Organization for Industrial Consulting in strengthening industrial advisory services for member countries; and to Iraq in the management of engineering enterprises. In Qatar, all projects are financed by the Government through trust fund agreements.

32. Several developing countries that can afford to finance part of the cost of technical co-operation projects are contributing in local currency and/or hard currency in order to increase the scope of the technical assistance they receive. Turkey, for example, contributed to its overall IPF of \$20 million an additional amount in Turkish lire equivalent to \$8 million. Some countries agreed to provide a 10 to 100 per cent share of the cost of selected projects. In Kuwait, all projects are financed on a hundred-per-cent cost-sharing basis by the Government but are administered by UNDP. Other countries, such as Bahrain, Saudi Arabia and the United Arab Emirates, although they have symbolic IPFs, have begun to finance more projects under hundred-per-cent cost-sharing arrangements administered by UNDP. Examples of these projects, whose number is expected to increase, include assistance to the Shuaiba Area Authority in Kuwait, strengthening of the Saudi Arabian Standards Organization and establishment of an industrial advisory unit in the United Arab Emirates.

REGULAR BUDGET

33. 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 1980-1981 and the proposed programme budget for the biennium 1982-1983. The second heading deals with the running costs of the Vienna International Centre (VIC) (sections 28M, Administrative Services, Vienna; 29C, Conference Services, Vienna; and 29F, Library, Vienna) with regard to performance in 1980-1981 and proposed estimates for 1982-1983.

A. UNIDO

34. On the basis of revised estimates resulting from the Third General Conference of UNIDO and the first performance report for the biennium 1980-1981,¹¹ the General Assembly in resolution 35/226A, of 17 December 1980, approved revised budget appropriations for UNIDO amounting to \$75,369,300 under section 17 of the United Nations regular budget.¹² In this amount, account was taken, *inter alia*, of: (a) adjustments of the exchange rate from AS 14.00 to AS 12.81 per \$1 in 1980 and an estimated AS 13.30 per \$1 in 1981; and (b) higher travel costs resulting from an average inflation rate of 20 per cent in that sector.

35. Following approval of the revised appropriation, fluctuations caused the exchange rate to vary appreciably from the AS 13.30 per \$1 assumed in the performance report. The actual average exchange rate for the first nine months of 1981 was AS 15.68 per \$1, while the October rate (AS 15.50) was assumed to be maintained to the end of the year. The second performance report for the biennium 1980-1981¹³ submitted to the General Assembly at its thirty-sixth session showed a surrender of \$2,520,200 primarily due to a gain in exchange rates (\$4,605,600) which was partially offset by increases in the inflation rate (\$692,200) over assumed levels, and also by increases due to other changes (\$1,393,200).

36. Preparation of the UNIDO programme budget for the biennium 1982-1983 was initiated during the second half of 1980 and completed in March 1981. UNIDO submitted a draft proposed programme budget for review by the Secretary-General in March 1981, and subsequently the proposed programme budget for 1982-1983 was submitted to the Permanent Committee at its fifteenth session.¹⁴ The Permanent Committee's comments¹⁵ were made available to the Committee for Programme and Co-ordination and, in June 1981, to the Advisory Committee on Administrative and Budgetary Questions (ACABQ) which, after reviewing the proposals, recommended to the Fifth Committee a reduction of \$246,400 to be made in the following areas: outside experts (\$97,300); travel (\$127,000); and overtime and night differential (\$22,100).¹⁶

37. The Fifth Committee at its first reading in November 1981 approved the amount of \$83,103,800 as recommended by the ACABQ. Subsequently, this decision was affected by actions taken on the basis of recommendations of the Advisory Committee as follows:

(a) Revised estimates submitted by the Secretary-General to include Arabic language services to subsidiary bodies of the General Assembly and of the Economic and Social Council based at Vienna and adjustments in the exchange rate of the appropriations from \$1 equals AS 13.30 to AS 15.50; and

(b) Financial implications of General Assembly resolution 36/182, of 17 December 1981, on industrial development co-operation.

¹¹A/C.5/25/100.

¹²ID/B/260, chap. VI, para. 32.

¹³A/C.5/36/75/Add.17.

¹⁴ID/B/C.3/106 and Corr.1-3.

¹⁵ID/B/268, paras. 82-140, 222-225.

¹⁶A/36/7.

38. The requirements under section 17 of the programme budget for the biennium 1982-1983 approved by the Fifth Committee (see also General Assembly resolution 36/240A of 18 December 1981) are as follows:

	<u>Increase/(decrease)</u> <i>(in US dollars)</i>	<u>Total</u>
I. <i>Approved by Fifth Committee:</i> (In November 1981 in first readings)		83 103 800
II. <i>Revised estimates:</i>		
Arabic language services	1 013 800	
Effect of changes in rate of exchange	(11 494 500)	
III. <i>Financial implications approved:</i> (General Assembly resolution 36/182)	<u>319 100</u>	
TOTAL	(10 161 600)	<u>72 942 200</u>

B. Vienna International Centre

39. With regard to the biennium 1980-1981, the second performance report,¹⁷ under section 28M (Administrative Services, Vienna) proposed a surrender of \$2,613,600 primarily as a result of more favourable exchange rates than forecast.

40. With regard to the biennium 1982-1983, UNIDO submitted to the Secretary-General in February 1981 proposed estimates amounting to \$41,189,300 under section 28M (Administrative Services, Vienna) to cover the cost of running the Vienna International Centre (VIC). The Advisory Committee in its report¹⁸ recommended that the estimated requirements be reduced by \$1 million for common services (especially communications, supplies and materials) and by \$118,300 for staff costs.

41. The Fifth Committee at its first reading approved an amount of \$40,103,000 which was adjusted by \$5,683,300 to take into account the revised exchange rate (from AS 13.30 to AS 15.50 per \$1). The revised appropriation amounts to \$34,419,700. This amount was increased by \$2,000 to provide for modification of premises at the VIC in connection with the International Year of Disabled Persons.

42. Also for the biennium 1982-1983, the Secretary-General submitted to the General Assembly at its thirty-sixth session estimates amounting to \$3,549,800 under section 29C (Conference Services, Vienna) as compared with a revised appropriation of \$178,600 for 1980-1981.

43. The Fifth Committee approved at its first reading the amount recommended by ACABQ (\$3,549,800). This amount was subsequently increased by:

¹⁷A/C.5/36/75/Add.28.

¹⁸A/36/7.

US dollars

1 449 900	Arabic language services
2 700 000	Consolidated statement of conference-servicing costs
<u>4 149 900</u>	TOTAL increase over initial appropriation
3 549 800	Initial appropriation
<u>7 699 700</u>	TOTAL
(709 200)	Less adjustment for revised exchange rate
6 990 500	TOTAL 1982-1983 resources as appropriated

44. For the Joint Library Service of the VIC which is administered by the International Atomic Energy Agency (IAEA) on behalf of all the organizations and units in the Centre, the Secretary-General submitted under section 29F (Library Service, Vienna) estimates of \$638,900 for the biennium 1982-1983 (consisting of \$192,400 for books and supplies and \$446,500 as the contribution to joint activities) as compared with the revised appropriations of \$549,900 for 1980-1981. The Advisory Committee recommended that the Fifth Committee approve the Secretary-General's estimates. The Fifth Committee approved the amount of \$638,900 as recommended by the Advisory Committee, adjusted for the revised exchange rate to \$548,100.

OVERHEAD COSTS

45. The UNDP Governing Council in decision 81/40, of 30 June 1981, on agency support costs, reiterated its recommendation contained in decision 80/44, of 27 June 1980, that agencies review their operational support systems, working methods, arrangements and staffing with a view to bringing about significant reductions in overall support costs.¹⁹ In decision 81/40, the Governing Council also decided, *inter alia*, that as of 1 January 1982: (a) capital assistance and technical co-operation activities financed from the resources of the United Nations Capital Development Fund and the United Nations Sudano-Sahelian Office shall have separate treatment in the reimbursement process; (b) only autonomous organizations within the United Nations system shall be eligible for support costs flexibility arrangements; (c) the Administrator shall ensure that at no time should an executing agency receive less in total reimbursement under flexibility arrangements for delivering a higher programme level than it received for delivering a lower programme level; and (d) executing agencies which are organizations within the United Nations system and not eligible for support costs flexibility may submit requests for compensation for losses sustained in respect of support costs reimbursements as a result of currency fluctuations. The Governing Council also urged the Administrator and the agencies to continue their efforts to develop a suitable format for *ex post facto* reporting for submission to the Council at its next (twenty-ninth) session in 1982.

¹⁹ID/B/260, chap. VI, paras. 36-38.

46. Implementation of all the points mentioned above has been the subject of intensive discussions in various inter-agency forums during 1981, particularly in the Consultative Committee on Administrative Questions (financial and budgetary matters). Concern was expressed by agencies as regards the nature of the *ex post facto* report on support costs which should not involve the reintroduction of a detailed cost measurement system—a step that the UNDP Governing Council itself ruled out.

Chapter III

INDUSTRIAL STUDIES

1. The work programme of the Division for Industrial Studies continued to follow the emphases set in 1980 in the light of the Third General Conference of UNIDO and the priorities set by the Board at its fourteenth session.¹

GLOBAL AND CONCEPTUAL STUDIES

2. During 1981, research into industrial redeployment and restructuring² was directed towards analysing international production patterns and singling out major trends and pertinent policy issues. These analyses covered both developing and developed countries, and both market and centrally planned economies. With respect to studies on the developing countries, attention was focused on the least developed countries. An overview of the situation of these countries in the international industrial redeployment process, based on research undertaken in the Secretariat, together with information obtained from a number of African countries, is the subject of a report to be issued early in 1982. The report examines specific national and international measures to facilitate participation of the least developed countries in the redeployment process in accordance with their long-term development objectives, and alleviate the current bleak prospects of those countries.

3. In the more advanced developing countries, there is increasing concern over the developmental implications of possible lower growth rates in international production and trade. In this context, research was initiated, in co-operation with the Latin American Economic System (SELA) and the Economic Commission for Latin America (ECLA), to study long-term policy options for Latin America in a global context and elaborate a concept of industrial redeployment commensurate with the needs and aspirations of the region.

4. Noting the increasing interdependence of world industrial production and international trade, the Secretariat examined the implications for industrialization of changes in the pattern of world trade in manufactures. Two factors

¹A/35/16, vol. II, para. 54.

²ID/B/260, chap. IV, para. 2.

contributing to this interdependence are: (a) the increasing proportion of trade in manufactures occurring among affiliated companies; and (b) the increasing tendency to assemble materials and components from developed countries in low-wage developing countries. In reviewing the impact of such "offshore assembly" on international industrial restructuring, the Secretariat requested developed countries to supply information on relevant preferential tariff provisions; the findings will be published early in 1982.

5. Given the significant growth of industrial estates and export-processing zones as platforms for industrialization and exports, the Secretariat continued to review the issues raised by such growth and attempted to assess the importance of the role played by industrial estates and export-processing zones in the developing countries.³

6. The analyses of structural change in the manufacturing industry of developed countries⁴ were continued in two follow-up studies of the situation in Belgium and France. These studies analysed the long-term trends in the industrial adjustment process of these countries, taking into account their various internal socio-economic objectives as well as the external aims.

7. Particular attention was paid to a tendency observed in many developed countries—the slowing down of adjustments and redeployment owing to socio-economic factors. At the Symposium on Industrial Restructuring and Regional Co-operation: The Case of Country Regions, organized jointly with Swedish government authorities in June 1981, senior officials from developing countries and representatives of Swedish industry and government departments discussed the aggravation of regional disparities. The Symposium focused upon the regional aspects of industrial adjustment and international co-operation and demonstrated that prevailing development constraints in peripheral regions could be offset by providing a stimulus from international markets.

8. Detailed analyses were made of the leather and footwear industry—a rapidly declining industry in most advanced countries, and of major importance to the export programme of many developing countries. A series of country studies collected information on such factors as competitive pressure; raw-material supplies; and the views of companies and authorities with regard to likely future developments and redeployment prospects. Pilot country studies were also carried out on the effective integration of women in the development of food processing industries (Sierra Leone, Thailand) and textile industries (Colombia, Indonesia, United Republic of Tanzania).

9. The Secretariat continued its analysis of structural change in the centrally planned economies of Eastern Europe.⁵ Through a series of studies which will continue into 1982, the Secretariat is currently obtaining a picture of specialization trends within the industries of those countries, indicating possible changes in the division of labour between those centrally planned economies and the developing countries in Africa, Asia and Latin America. In the current decade significant changes in the structure of the manufacturing industry of the

³*Ibid.*, para. 7

⁴*Ibid.*, para. 5

⁵*Ibid.*, para. 6.

centrally planned economy countries of Eastern Europe are expected to take place and the studies will highlight the global implications of this restructuring.

10. Through the detailed examination of possible ways of attaining the Lima target and the goals of the International Development Strategy for the Third United Nations Development Decade, work in the modelling field in 1981 became increasingly concerned with providing economic scenarios and analyses for use in wider studies. A joint UNIDO/UNCTAD modelling project, the UNITAD model, was used extensively to develop scenarios for the Third Development Decade.⁶ An expert group meeting, held in Vienna in June 1981, to review the UNITAD model and discuss future modelling activities was attended by representatives of the United Nations system as well as experts in the modelling field, who recommended further use of the model and emphasized its value as a framework for regional analysis.⁷

11. While work continued on the implications of new emerging technologies for the restructuring process,⁸ a study was completed on technology choice. This study entailed the preparation of a wide range of technological alternatives in the form of standardized production vectors derived from input-output data; it will be used in the investigation of scenarios based on alternative technological strategies to be explored with the aid of the UNITAD and LIDO (Lima Industrial Development Objective) models.⁹ Initial findings are expected to be published in the coming year.

12. As great importance is attached to the collection, examination and standardization of input-output data, a computerized data storage and handling system has been developed. A considerable number of input-output tables for developed and developing countries have been incorporated and expansion of this input-output data bank will continue. In co-operation with an institute in the Federal Republic of Germany, tables were prepared for inclusion in a publication to appear in 1982. In addition, a manual on the input-output data-base was prepared in 1981 and will appear in early 1982.

13. As part of the modelling work directed specifically towards the needs of individual countries, experiments continued with a generalized software package for constructing models of national economies. This package was tested using data from a developing country in order to construct a pilot model. A manual was prepared explaining how the system can be used to construct such a model; it will be published early in 1982.

14. As a result of contacts established in 1980 with the Institute of Industrial Economics of the Academy of Social Sciences in Beijing (China),¹⁰ a team of Chinese experts worked with UNIDO in the modelling field in the final months of 1981. The work was intended not only to familiarize the Chinese experts with models and data sources developed within UNIDO, but also to improve the modelling work of UNIDO in respect of its treatment of China.

⁶UNIDO/IS.224.

⁷UNIDO/IS.249.

⁸ID/B/260, chap. IV, para. 7.

⁹*Ibid.*, para. 9; ID/B/240, chap. IV, para. 7.

¹⁰ID/B/260, chap. IV, para. 10.

Investigation was directed in particular towards the expansion of existing models and towards appropriate interpretation of the Lima target in terms of China's share in world manufacturing value added. In view of the increasing importance of China in the world economy, an assessment was made of that country's industrial progress since 1949 and its current prospects. The resultant report¹¹ provides a macro-economic overview, an assessment of China's past and current industrial development, and a preliminary appraisal of China's prospects, options and anticipated constraints with regard to industrialization.

15. Throughout the year, work continued on the development of trade scenarios.¹² An Expert Group Meeting on Trade Development Alternatives of the Developing Countries was held in Budapest (Hungary) in February 1981. Further experiments took place in the development of possible patterns of international trade for 1990, based on alternative assumptions and taking into account existing observed patterns of behaviour in such relationships; a report is being prepared on the topic for issue in 1982. The work on trade scenarios is expected to highlight the policy issues arising in connection with a transformation of existing patterns of world trade, and the findings will be used as background material for studies in the areas of trade policy, finance and regional co-operation.

16. Future modelling work will be directed to an increasing degree towards serving other studies, and providing the source of economic scenarios which serve as focal points or frameworks for more detailed analysis. The economic scenarios generated will provide indicative guidelines, at a regional and sectoral level, for studies on structural change, including those conducted at the country level.

17. The third round of monitoring the progress made by individual Governments and international organizations towards accelerating industrialization in developing countries was launched in September 1981. The format and contents of the questionnaires circulated for this exercise were the subject of consultations with representatives of geographical groups in Vienna. The analysis of the replies is scheduled to begin in January 1982, subject to the number of replies received.

18. Issue No. 6 of the journal *Industry and Development* will appear in print in January 1982;¹³ the main theme of the journal is the modelling approach to policy analysis. Preparation began for the seventh and eighth issues of the journal, also scheduled to appear in 1982.

19. With respect to special global studies, a methodological paper on industrial energy demand was completed and a preliminary descriptive study conducted on the impact of high energy costs on industrialization. The Secretariat initiated studies to determine the extent to which high energy costs impede progress towards the attainment of targets set in the Lima Declaration and Plan of Action, and for the Third Development Decade. In the same area, a study of investment requirements in the energy industries was completed, with special emphasis on power industries.

¹¹UNIDO/IS.258.

¹²ID/B/260, chap. IV, para. 12.

¹³ID/SER.M/6.

20. The Global and Conceptual Studies Branch is developing a new organizational basis for its future work. It is considered that the substantive interconnection of the various programme elements and their convergence of outlook would warrant further dovetailing and consolidation of activities, as well as the publication of analyses in the form of a Global Report. Such a new approach could combine the detailed knowledge of the trends and influences in the restructuring process with normative scenarios from the modelling work and could permit the presentation of a coherent picture of the steps needed to achieve the accelerated industrialization of the developing countries in the light of the Lima target.

REGIONAL AND COUNTRY STUDIES

21. In 1981, considerable progress was made in the development and dissemination of industrial statistics¹⁴ prepared by the Regional and Country Studies Branch. To an increasing degree the statistics are fulfilling a service function for users within and outside UNIDO. The data developed and produced not only serve the requirements of the biennial *Industrial Development Survey*, they also form the basis for the preparation of country briefs and studies, global studies of industrial sectors and other special studies undertaken by the Secretariat. Various international bodies used data supplied by UNIDO, including the Economic Commission for Africa (ECA), ECLA, the secretariat of the General Agreement on Tariffs and Trade (GATT), the Inter-American Development Bank and the World Bank which once again incorporated UNIDO data in its annual *World Development Report*. In order to facilitate further collaboration in the field of industrial statistics, UNIDO and the United Nations Statistical Office held preliminary discussions in October 1981 with a view to bringing about an efficient division of labour between the two organizations and other international bodies working in the field of industrial statistics. Under the arrangements discussed, UNIDO would be able to supply industrial statistics in machine-readable form on an annual basis to both international organizations and other outside users.

22. "A statistical review of the world industrial situation, 1980"¹⁵, the first edition of which was published early in 1981, will be issued regularly at the beginning of each year. The next edition will include a section on the industrial progress of the least developed countries. Work was completed during 1981 on a study on dynamic changes in comparative advantage, to be published in 1982, which includes a detailed analysis of 134 industries in over 40 developing and developed countries and documents the changes of comparative advantage that transpired during the 1960s and late 1970s. Work also continued on a handbook of industrial statistics¹⁶ which, when published in 1982, will provide information, unavailable elsewhere, on significant structural changes in a large number of developing and developed countries covering such topics as patterns of consumption of manufactures; growth and structural change in all industrial branches; the composition of industrial output; and export performance in key industries.

¹⁴ID/B/260, chap. IV, para. 17.

¹⁵UNIDO/IS.214.

¹⁶ID/B/260, chap. IV, para. 24.

23. As reported previously, UNIDO was expected to play an active role in the preparation for the 1983 World Programme of Industrial Statistics.¹⁷ During the year under review, UNIDO co-operated closely with the United Nations Statistical Office, ECA and the Economic and Social Commission for Asia and the Pacific (ESCAP) in organizing workshops and training programmes. The UNIDO Secretariat provided lecturers for a workshop in March 1981 sponsored by the Munich Centre for Advanced Training in Applied Statistics for Developing Countries and for a workshop convened by ESCAP in Suzhou (China) in November 1981. Fellowships and lecturers will also be provided for an ECA regional industrial census training workshop scheduled for January 1982.

24. The biennial issue of the *Industrial Development Survey* entitled *World Industry in 1980* was published in September 1981.¹⁸ The survey includes a detailed review of the salient structural changes and policy initiatives which occurred during the late 1970s and examines their consequences for industrial progress in the first half of the present decade. Special attention is given to key industrial branches (chemicals, iron and steel, engineering products and food processing), energy requirements of the manufacturing sector and the role of the transnational corporations in the restructuring process. Following the Expert Group Meeting on the Industrial Development Survey, held in Vienna, November 1981, work on the next issue, to be published in 1983, will begin early in 1982.

25. In preparing country studies, priority was given to the least developed countries. In a paper entitled "The poor fall behind: an assessment of industry in the least developed countries"¹⁹ which was prepared for the United Nations Conference on the Least Developed Countries, held in Paris, September 1981, progress in the 1970s and prospects for the 1980s were reviewed and ways of improving the bleak situation confronting these countries were outlined. In connection with the programme of in-depth industrial development studies for the least developed countries mentioned in the 1980 *Annual Report*,²⁰ studies were undertaken in respect of Botswana, Burundi, Gambia, Lesotho, Mali, Somalia, United Republic of Tanzania. These studies, which take into account the base for industrial development in terms of resources and infrastructure, were prepared in co-operation with national institutions or consultants. It is anticipated that this programme of studies will be continued and intensified in the coming biennium, due account being taken of the least developed countries in the Asian and Arab regions.

26. In addition to these in-depth studies, country industrial development profiles or country industrial briefs were completed for 21 countries (Afghanistan, Bahrain, Barbados, Central African Republic, Chad, Congo, Cuba, Democratic People's Republic of Korea, Ghana, Haiti, Kuwait, Liberia, Malawi, Mongolia, Nepal, Niger, Paraguay, Rwanda, Senegal, Sudan, Upper Volta). While the major part of this activity will be subsumed under the work on the handbook of industrial statistics (see para. 22 above), some profiles and briefs will be revised and updated in the course of the next biennium.

¹⁷*Ibid.*, para. 18.

¹⁸ID/269.

¹⁹UNIDO/IS.239.

²⁰ID/B/260, chap. IV, para. 23.

27. Within the context of regional studies, the Regional and Country Studies Branch and the Sectoral Studies Branch jointly prepared a study on the agricultural machinery industry in Africa based on country reviews conducted in 15 African countries. As reported previously,²¹ this study will be the basic document for the first regional Consultation on agricultural machinery in Africa, rescheduled for April 1982.

28. With regard to studies on the experience of subregional industrial co-operation schemes,²² those covering the Kagera River Basin and the Economic Community of the Great Lakes Countries continued, while those covering the Association of South-East Asian Nations (ASEAN) and the Andean Group were completed in 1981. The study on the Andean Group examined the nature and institutional structure of the Cartagena Agreement and its effect on industrial development in the subregion, and analysed national industrialization policies insofar as they related to subregional co-operation. The study on ASEAN analysed such aspects as industrial complementation programmes, establishment of regional large-scale industries, ASEAN industrial joint ventures and regional industrial financing arrangements. Both studies will be presented as background documents to a UNDP-financed meeting of key officials and representatives of industry from the two groups of countries, to be held in Lima in 1982.

29. A study was also completed during the year under review on the scheme for regional integration in Central America. The study analysed the development of integrative instruments and mechanisms of particular importance to industrial development, and assessed their quantitative and qualitative impact on industrialization in the subregion. Four surveys of the experiences of developing countries in mobilizing investment funds and channelling them to manufacturing enterprises were also completed in 1981.²³ These surveys cover India, as well as selected countries of Africa, Latin America and south-east Asia. The diverse issues, problems and policies described provide the basis for a comparative analysis of the effectiveness of financial mechanisms, instruments and institutions in enhancing the domestic financing of industrial development in conjunction with, or as a complement to, foreign investment.

30. Lack of staff resources delayed the updating and publication in condensed form of the data and information contained in the studies on the industrial development prospects of Arab countries prepared for the Fifth Industrial Development Conference of Arab States,²⁴ held in November 1979. In co-operation with the Arab Industrial Development Organization (AIDO) studies were initiated in preparation for the Sixth Industrial Development Conference of Arab States, scheduled to be held in Damascus early in 1983. The research to be undertaken includes: (a) an analysis of prospects and strategies for industrial development in the least developed countries in the Arab region; (b) an analysis of prospects and strategies for industrial development of the other countries in the region compared with the experience of selected industrially advanced developing countries; and (c) a quantitative

²¹*Ibid.*, para. 28

²²*Ibid.*, para. 27.

²³JNIDO/IS.252 (Latin America), UNIDO/IS.256 (Africa) and UNIDO/IS.266 (India).

²⁴ID/B/240, chap. IV, para. 49; ID/B/260, chap. IV, para. 26.

study of future manufacturing activity in the region based on alternative hypotheses incorporated in models for co-operation between Arab countries.

31. Close contact was maintained in 1981 with the regional commissions through staff outposted to the Joint Industry Divisions. In ECLA this co-operation entailed active participation in the regional project on the capital goods industry. In the Economic Commission for Western Asia (ECWA) it involved active participation in the preparation of the world-wide study on the petrochemical industry. As work proceeded on the formulation of programmes related to the Industrial Development Decade for Africa, co-operation was intensified with both ECA and the Industry Section of the secretariat of the Organization of African Unity (OAU). In that connection, studies were conducted in Africa on the metallurgical, engineering and chemical industries. Co-operation with ESCAP involved: (a) the preparation of a study on industrial development in the region, for presentation to the Meeting of the *Ad Hoc* Group of Ministers of Industry, held in Bangkok, July 1981; (b) the compilation of regional studies for regional expert group meetings preparatory to the global Consultation meetings; (c) assistance in the operation of the Regional Network for Agricultural Machinery and the Regional Centre for Technology Transfer (RCTT); (d) assistance to the least developed countries, particularly within the framework of the Solidarity Meetings; and (e) development of indigenous capabilities for the generation and implementation of industrial projects, particularly in the least developed countries.

32. The research programme on the role of the public industrial sector²⁵ was continued in 1981 in keeping with Industrial Development Board resolution 48 (XII) of 26 May 1978 and the subsequent recommendations of the expert group meeting held in May 1979. The research findings and results of a questionnaire-based survey were presented to an Expert Group Meeting on the Changing Role and Function of the Public Industrial Sector in Development, held in Vienna, October 1981. At that meeting, discussion centred on major issues related to: the conceptual basis of public enterprises; the role and policies of the public and private industrial sectors and their impact on development; organizational patterns and legal structures; the planning of, and linkages between, public enterprises; and the evaluation of the performance of such enterprises. The Expert Group elaborated a set of guidelines and put forward recommendations for government policy-makers and managers of public enterprises in developing countries. A publication highlighting the main conclusions of the two expert group meetings and including selected papers on key issues is being prepared for issue in 1982.

SECTORAL STUDIES

33. As reported previously²⁶ a new approach in the preparation of sectoral studies comprising three distinct stages of research was adopted at the outset of the biennium 1980-1981. Broadly speaking, these stages entail: (a) an initial

²⁵ID/B/260, chap. IV, para. 29.

²⁶*Ibid.*, para. 30.

analytical appraisal of the current situation and future development of the respective sectors; (b) a detailed investigation and elaboration of alternative sectoral strategies; and (c) a subsequent assessment of the strategy or strategies selected, on the basis of which a plan of action for the development of the sector can be elaborated. This approach makes it easier to meet the specific requirements of the different stages of the System of Consultations. Furthermore, it allows other categories of users (e.g. those concerned with UNIDO technical assistance activities and policy-makers in the developing countries) to make more efficient use of the studies.

34. For the greater part, the programme of sectoral studies is still at the first stage (analytical appraisal). In only two sectors (iron and steel, capital goods) has it been possible to enter the second stage (the elaboration of alternative strategies). It is, however, envisaged that research related to the petrochemical, pharmaceutical and leather industries will reach this stage during the biennium 1982-1983.

35. During the year under review, research was carried out in the following sectors: iron and steel, capital goods, agricultural machinery, petrochemicals, fertilizers, pharmaceuticals, food processing, leather and leather products and wood and wood products.

36. In keeping with the recommendations of the Second Consultation on the Iron and Steel Industry (New Delhi, January, 1979),²⁷ work continued on the elaboration of scenarios for the development of the world iron and steel industry and the identification of the steps needed to attain the Lima target in that sector. Two studies were completed under the heading "1990 scenarios for the iron and steel industry"—namely: Part I entitled "The dossiers"²⁸ and Part II, "Proposals for the scenarios".²⁹ These studies, which will be used as inputs to the third world-wide study of the iron and steel sector to be completed in 1982, describe, *inter alia*, problems encountered by the developing countries and outline the objectives of international negotiations related to this sector. Hypotheses are also put forward on major factors affecting the development of the sector.

37. The "First global study on the capital goods industry: strategies for development"³⁰ was completed and presented to the First Consultation on the Capital Goods Industry, held in Brussels (Belgium), September 1981. In the study, alternative approaches to establishing and expanding the production of capital goods in developing countries were proposed, whereby particular emphasis was placed on countries with little or no capital goods industry. An important conceptual feature of the study was an analysis of the technological complexity of capital goods; this method permits the identification of the basic levels of technological infrastructure and possible ways of progressing from one level to another.

²⁷*Ibid.*, para. 34.

²⁸UNIDO/IS.213.

²⁹UNIDO/IS.213/Add.I.

³⁰ID/WG.342/3.

38. This global study was complemented by a series of studies on machinery and equipment in the following sectors: food processing; mining (limited to the Andean region); machine tools; construction and public works; iron and steel; petrochemicals; and fertilizers. Furthermore, so that countries planning to develop their own capital goods industry might learn from the experience of other medium- and small-sized countries which had already launched such a programme, thorough analyses were made, and case studies were completed or initiated, in respect of Bulgaria, Cuba, Guatemala, Hungary, Peru, Poland and Spain. Other joint research projects related to the capital goods sector were initiated in co-operation with AIDO and SELA; the results will be available in 1982.

39. As reported in paragraph 27 above, the Sectoral Studies Branch made a major contribution to the preparation of a comprehensive study which will be presented as a major background document to the first regional Consultation on agricultural machinery in Africa, rescheduled for April 1982.³¹ In the study, which incorporates the findings of 15 African experts and inputs from the Food and Agriculture Organization of the United Nations (FAO), an analysis is made of the present situation in the region in terms of manufacturing capacities, demand, and trade flows; major problems that most of the African countries are facing are also diagnosed. Conscious of the small farmers' need for appropriate agricultural machinery, practical alternative strategies for the development of local manufacturing capacities are proposed, together with an integrated agro-industrial policy.

40. The "Second world-wide study on the petrochemical industry"³² was completed and presented to the Second Consultation on the Petrochemical Industry held in Istanbul (Turkey), June 1981. In the study, the sector's ongoing restructuring process is demonstrated, the patterns of supply and demand in respect of major petrochemical products are analysed and possible developments up to 1990 are projected. Potential opportunities for the establishment of new production capacities are also indicated. Particular emphasis is placed on co-operation between various regional and economic groupings as a means of ensuring sectoral development on an equitable basis. Pursuant to the recommendations of the Second Consultation on the Petrochemical Industry, research was initiated on possible co-operation between developing countries possessing petrochemical feed-stocks and energy resources and those without. This research is being undertaken in conjunction with the Organization of Petroleum Exporting Countries (OPEC), the OPEC Special Fund, and AIDO. The results of these joint activities are expected to be available in 1982.

41. Pursuant to the recommendations of the Third Consultation on the Fertilizer Industry, held in São Paulo (Brazil), September 1980,³³ two studies were initiated in 1981 and scheduled for completion in 1983. In the first study, the aim is to identify countries, technologies and types of fertilizers best suited to production in mini fertilizer plants. In the second, the aim is to analyse the cost of constructing and operating fertilizer plants in developing countries,

³¹ID/B/260, chap. IV, para. 36.

³²ID/WG.336/3 and Add.1.

³³ID/B/260, chap. IV, para. 38.

demonstrate the causes of cost escalation and provide guidelines for cost control in order to minimize investment expenditures and reduce operating costs in developing countries.

42. In keeping with the recommendations of the First Consultation on the Pharmaceutical Industry held in Lisbon (Portugal), December 1980,³⁴ two studies were initiated. The first, which is being undertaken in co-operation with ECA and the secretariat of the OAU, will draw up a programme of action for the development of the pharmaceutical industry for presentation to a joint symposium on the pharmaceutical industry in Africa to be held in 1982. The second study will elaborate alternative sectoral strategies for groups of developing countries with common characteristics; it is scheduled for presentation to the second Consultation on the pharmaceutical industry, to be held late in 1983.

43. "The first global study on the food processing industry"³⁵ was completed and presented to the First Consultation on the Food Processing Industry held at The Hague (Netherlands), November 1981. The study comprises a detailed global assessment of the present situation in the food processing industry and of the developing countries' prospects of rapid progress in that sector. It describes: different ways and means of developing the sector, such as integrated food processing; industrial policies; technological and organizational alternatives; planning processes; the contribution of the private sector; and the role of institutions in project formulation and promotion. The study was based on a series of sub-studies on such subjects as: technological choice in the food processing industry in developing countries; the impact of the Generalized System of Preferences on food processing industries in developing countries; new measures governing developing country trade in food and processed food products; and the role co-operatives in developed and developing countries play in expanding the food processing industry.

44. The second study on the vegetable oils and fats industry,³⁶ originally planned for completion in 1981, was postponed owing to the rescheduling of the Consultation on that sector. However, work in this sector will be resumed during the coming biennium.

45. Work continued on the world-wide study of the leather and leather products industry pursuant to the recommendations of the Second Consultation on the Leather and Leather Products Industry held in Cologne, June 1980.³⁷ In the final version of the study, scheduled for completion in 1983, emphasis will be placed on examining the potential opportunities for the establishment of the leather industry in developing countries.

46. In 1981, research was initiated on a global study of the wood and wood-products industry which is expected to be completed by mid-1983 for presentation to the first Consultation on that sector. In the study, the current

³⁴*Ibid.*, para. 39.

³⁵ID/WG.345/3/Rev.1.

³⁶ID/B/260, chap. IV, para. 41.

³⁷*Ibid.*, para. 42.

global situation of the wood and wood-products industry and its prospects will be analysed, production potential in the developing countries will be assessed and new areas for international co-operation identified.

47. Concurrent with the adoption of a new approach in the preparation of sectoral studies at the outset of the biennium 1980-1981, a methodological unit was set up in the Sectoral Studies Branch to draw up a methodology for such studies and provide substantive support in the form of economic and statistical analyses, including forecasts and systems analysis. In 1981, the unit developed scenarios for the iron and steel industry, tested (in Algeria) the method for assessing the technological complexity of the capital goods industry, undertook a statistical analysis of the food processing industry, and continued to analyse inter-industrial structures. In addition to studying energy requirements in various branches of industry, the unit initiated a study of the industrial energy requirements in the developing countries in order to examine the linkage between energy and production.

OTHER ACTIVITIES

48. Other activities carried out under the industrial studies programme of UNIDO relate to (a) industrial development and the environment and (b) industrial water use.

49. Within the framework of the Regional Seas Programme of the United Nations Environment Programme (UNEP),³⁸ the final report was prepared on a survey of marine pollutants from industrial sources in 18 countries in the West and Central African region. Also in the course of co-operation with the UNEP Regional Seas Programme Activity Centre, UNIDO carried out a petrochemical case study for a project involving environmental impact assessment in coastal zones and covered the industrial pollution aspects of an environment survey mission to eight countries in East Africa. A booklet on industrial development and the environment is under preparation and will be presented to the Governing Council of UNEP in May 1982. The booklet will underscore the importance of environmental considerations in industrial development, describe the work of UNIDO following the recommendations of the United Nations Conference on the Human Environment (Stockholm, 1972) and outline the future activities of UNIDO in this field.

50. Work on the environmental study of the Tejo estuary in Portugal continued in co-operation with the United Nations Educational, Scientific and Cultural Organization (UNESCO):³⁹ a review was carried out of the industrial wastes survey and assistance was provided in calculations of industrial pollution loads discharged to the estuary. UNIDO also presented a paper on "Means of improving environmental standards in the tanning industry with guidelines for developing countries"⁴⁰ at the International Symposium on

³⁸*Ibid.*, para. 44.

³⁹*Ibid.*, para. 45.

⁴⁰*Cf.* International Symposium on Water Resources Management in Industrial Areas, *Papers*, vol. 2, B20.

Water Resources Management in Industrial Areas held in Lisbon (Portugal), September 1981.

51. Pursuant to resolution 1979/70 of the Economic and Social Council on follow-up to, and implementation of, the Mar del Plata Action Plan, UNIDO undertook research in a new area, namely industrial water use and treatment practice. In addition to participating actively in the Inter-Secretariat Working Group for Water Resources of the Administrative Committee on Co-ordination, UNIDO completed a study "Water use and treatment practices and other environmental considerations in the iron and steel industry".⁴¹ This will be followed by similar studies in respect of other industrial branches.

Chapter IV

SPECIAL PROGRAMMES

1. Eight of the programmes undertaken by UNIDO have been singled out for special attention in the present report. A description is given below of the activities carried out by the Organization under these programmes in 1981.

INVESTMENT CO-OPERATIVE PROGRAMME

2. While the Investment Co-operative Programme is expected, by its very nature, to produce innovative ideas, it was clear during the year under review that insufficient resources were available to undertake all the activities engendered by the Programme's innovative approach. Efforts were thus concentrated on existing Programme elements.

3. In assessing past activities, it was noted that, although project preparation and evaluation should, ideally, be directly linked to investment promotion, most of the industrial investment projects in developing countries successfully promoted under the Investment Co-operative Programme did not seem to have been based on pre-investment studies prepared by UNIDO. Furthermore, only a few of the studies prepared by UNIDO resulted in actual investment or the setting up of factories. The new co-operative arrangement on investment follow-up being implemented by the United Nations Development Programme (UNDP) and UNIDO (see appendix B) is expected to help remedy this situation. Furthermore, to improve the success ratio of projects prepared to investments made, the linkage between the activities of the Investment Co-operative Programme and the work being carried out in the Division of Industrial Operations on the preparation of feasibility studies was strengthened during the year under review.

4. The main elements of the Investment Co-operative Programme are:

(a) The preparation and evaluation of industrial feasibility studies in close co-operation with the Feasibility Studies Section of the Division of Industrial Operations which acts as the focal point; this activity involves different types of technical assistance, such as *ad hoc* specific feasibility studies, series of opportunity studies and the establishment of national pre-investment facilities in developing countries;

(b) The promotion of industrial investment projects, especially those that have been identified, prepared and evaluated by the UNIDO Secretariat, with the object of locating technological, managerial and marketing resources (mobilization of partnerships);

(c) The operation of Investment Promotion Services in industrialized (and, in future, advanced developing) countries;

(d) The mobilization of financial resources for implementation of projects; and

(e) The operation of the World Bank/UNIDO Co-operative Programme.

5. In addition to the major activities described in paragraphs 8 to 39 below, the Investment Co-operative Programme in 1981 provided support services for technical co-operation projects in different areas within the broad context of financing and industrial investment promotion. For example, advisory services were provided to Mali for the eventual creation of an industrial development bank. Advice was also given to the National Development Bank of Suriname on industrial investment promotion, the training of development bankers, project evaluation and the mobilization of international capital. Further, assistance is being given to Chile for the development of an industrial promotion unit to mobilize external technical and financial support for industrial projects in that country. Similar assistance was provided to Panama where, following consultations with the Inter-American Development Bank and local banks, it was decided to create a promotion service in order to seek a broad variety of foreign investment, technology and finance on favourable terms and conditions. In Bangladesh, technical assistance provided under the Investment Co-operative Programme helped to identify and formulate some 40 industrial projects which will be promoted at an investment promotion meeting at Dacca in February 1982. Sri Lanka also received technical assistance in the identification and formulation of industrial projects within the context of an investment promotion meeting.

6. Staff members of the Investment Co-operative Programme Branch took part in various UNIDO programming missions and participated in numerous meetings. A joint mission was also undertaken with the Islamic Development Bank to identify industrial investment projects in Tunisia and the Programme was further instrumental in bringing about a \$20 million project in the Syrian Arab Republic, based on UNIDO preparatory work, to be financed by the OPEC Fund for International Development.

7. In spite of the network of focal points in developing countries—mainly government departments and development banks—the information gap between project sponsors in those countries and UNIDO Headquarters continued to be a major hindrance. One reason for the gap was inadequate support services at Headquarters: coverage of all the developing countries was provided by only five Professional staff members. A second reason was the inability of Senior Industrial Development Field Advisers (SIDFAs) to devote more time to investment follow-up because of their involvement in other programmes. Staff limitations were also to be found in the support Headquarters gave to the Investment Promotion Services (only one Professional staff member was provided) and in the updating of the promotional tools (see paras. 26-30). The lack of skills within the developing countries for generating and preparing suitable industrial investment project proposals continued to be a further major constraint. In future, the Investment Co-operative Programme Branch, through its Investment Promotion Services and in conjunction with the Feasibility Studies Section, intends to devote more time to training and guiding specialized staff in public and other institutions in developing countries.

Investment Promotion Services

8. By the end of 1981, seven Investment Promotion Services were in full operation at Brussels, Cologne, New York, Paris, Tokyo, Vienna and Zurich. New Services in Australia, Italy and the Scandinavian countries, and a second Service in the United States of America are under consideration. The establishment of Investment Promotion Services in advanced developing countries would enlarge the scope of the Services which, hitherto, have contributed towards the North-South flow of finance, technology and resources. In advanced developing countries they would also open up new channels for South-South co-operation, earn foreign exchange for the host country and could be instrumental in the creation of new industrial projects tied up with buy-back agreements. In 1981, negotiations continued on the establishment of Services in Brazil, India and one of the Gulf States;¹ negotiations were also opened with Mexico and Turkey. The form of financing of such Services in the advanced developing countries is still under consideration.

9. The success of the Investment Promotion Services in promoting the flow of external financial, technological and managerial resources to developing countries can be partly measured by the number and total investment cost of the industrial investment projects the Services helped to launch. The projects mentioned in paragraph 10 below are those known to have been concluded through the intervention of the Services. There are strong indications that a significant role was played in the conclusion of a number of other projects, but it has often been difficult to obtain a full picture, owing to a reluctance on the part of both project sponsors (even when these are Governments) and foreign partners to divulge information, which is often considered confidential.

10. In 1980 and 1981, the Investment Promotion Services at Brussels, Cologne, New York, Vienna and Zurich promoted 101 industrial investment projects in 43 developing countries, eight of which are least developed countries (see appendix D). Projects promoted by the Paris and Tokyo Services are still at the negotiation stage. The main role of the Services in promoting these projects has been to identify foreign partners, provide information on the host country, assist in preparing a financial package and furnish follow-up assistance. Thirty-seven of the projects were sponsored by public institutions while the remainder originated in the private sector. Seventy-five projects have foreign equity participation—in most of them the foreign partners hold a minority shareholding. Seventeen of the projects were already operational in 1981; the remainder were in various stages of negotiation and development. The total investment cost of the 101 projects was about \$1.7 billion. Although a number of foreign partners are reluctant to disclose information on the foreign contribution, this is believed to be \$1.2 billion. The investment cost of five projects (Libyan Arab Jamahiriya—poultry-processing; Madagascar—ammonia-urea plant; Bolivia—lead and silver smelter; Thailand—zinc refinery; Benin—sugar complex) amounted to over \$100 million per project; cumulatively they accounted for \$744 million, or 44 per cent of the total. The average cost of the remaining projects was \$10 million.

¹ID/B/260, chap. III, para. 30.

11. During the year under review, a total of 41 country presentation meetings were organized by the Investment Promotion Services for the following countries: Bangladesh, Benin, Chile, Costa Rica, Egypt, Haiti, Kenya, Malta, Mauritania, Mauritius, Peru, Rwanda, Sri Lanka, Thailand, Zaire. Such meetings are directed at potential partners, bank officials, representatives of federations of industry and other executives in countries where the Services are located who are known to be interested in investment opportunities in developing countries. The officials and private project sponsors from developing countries can come into contact with potential partners and explain the advantages of investing in their countries. The meetings usually cover the full range of industries, and may be supported by a portfolio of industrial investment project proposals. Such meetings, through the discussion of comparative advantages of the developing country concerned, also generate ideas for establishing manufacturing plants. Country presentation meetings, such as those organized for Bangladesh and Sri Lanka, can also serve as a prelude to subsequent investment promotion meetings, or as a partial substitute for such meetings when none are planned.

12. The possibility of using television for country presentations is being investigated. The linking of industrialized and developing countries, for example by satellite, would cut down on travelling time and costs and would give a developing country the opportunity to provide industrialists and potential partners with a fuller view of its investment climate, investment policy and specific opportunities than would be possible during a promotion tour. The dialogue that normally takes place at a country presentation meeting between officials from developing countries and participants could still take place. Should the system prove feasible, the initial proposal would be to link up Cairo with four cities in the United States and one in Canada. The United States Overseas Private Investment Corporation has made a grant for such a presentation, scheduled for early 1982. The second such television presentation would be made in a European city by four East African countries. Such presentations would, of course, not be restricted to those industrialized countries where there was a UNIDO Investment Promotion Service.

13. The orientation ("training-by-doing") programme started by the New York Investment Promotion Service in 1978² has been enlarged and adopted by other Services. Under this scheme, a number of executives from investment promotion agencies or similar institutions in developing countries are attached to a Service for a period of up to one year. During this time, the executives are guided in investment promotion techniques by UNIDO staff whose aim is to train them in promoting industrial investment projects in their individual countries and in locating, and negotiating with, potential partners in the host country. The orientation programme has two main advantages: it allows UNIDO to spread its resources further, and it introduces the UNIDO way of promoting industrial investment to executives from developing countries who will eventually—or do already—occupy responsible positions in counterpart organizations in their respective countries. So far, some 13 executives have participated in one-year programmes provided by the New York Service alone since this scheme began. Executives from Bangladesh, Colombia, Dominica,

²ID/B/220, chap. III, para. 38.

Haiti, Indonesia, Kenya, Philippines, Senegal, United Republic of Tanzania and Zambia are participating in the current New York programme, which started in October 1981. Morocco and Sri Lanka, which sent participants to the programme for the last three years, have now opened their own investment promotion offices in New York. The New York Service also ran some five-week orientation programmes, from which 69 executives from developing countries have so far benefited. The Brussels, Cologne, Paris and Zurich Services have also started orientation programmes. An executive from Saint Lucia was attached to the Cologne Service, one from Senegal to the Paris Service and one from Sri Lanka to the Zurich Service. The Brussels and Paris Services also took on 19 executives from a number of developing countries for periods of up to three months. These assignments were paid for out of both bilateral and regional funds.

14. The Investment Promotion Services are also engaged in a number of support activities. For example, the Government of Switzerland, on the initiative of the Zurich Service, set up a supporting pre-investment financing facility—with an allocation of SwF 500,000—able to absorb up to 50 per cent of the cost incurred by small- and medium-scale Swiss enterprises in pre-investment studies of industrial investment projects, mainly in least developed countries. If a project is implemented, the advance is reimbursed to the facility. This facility has stimulated the interest of Swiss enterprises and has already been used to finance studies of three industrial investment projects in two developing countries.

15. The Services also play a major role in giving advance publicity to UNIDO investment promotion meetings (see paras. 16-19 below) through relevant information media in the countries in which they operate. They also focus the attention of industrial associations and individual enterprises in the host countries upon industrial projects to be promoted at investment promotion meetings. At these meetings they also render on-the-spot assistance in discussions between potential partners from the countries in which the Services are located and project sponsors.

Investment promotion meetings

16. Two investment promotion meetings were held in 1981: one for Sri Lanka and the other for a group of Arab countries from the Gulf region. A third meeting for Bangladesh, initially scheduled to take place in December 1981, was postponed until February 1982. Preparations continued for meetings due to take place in 1982 for Chile, China, Nepal, States members of the Economic Community of West African States (ECOWAS), a number of East African countries and the Caribbean Community.

17. The meeting for Sri Lanka, held in Colombo in October 1981, was attended by more than 100 industrial firms from industrialized and advanced developing countries and a roughly equal number of Sri Lankan business firms, mostly from the private sector, which took part in the discussion of investment opportunities with their foreign counterparts. At the five-day meeting, 76 project proposals were presented, 50 of which had been identified by the Feasibility Studies Section. A preliminary survey made at the close of the

meeting showed that 11 initial agreements had been reached between Sri Lankan project sponsors and foreign companies.

18. The meeting for Arab countries from the Gulf region, held in Abu Dhabi in November 1981, was the first in which the particular developing countries were capital-surplus oil-exporting countries. The co-operation sought from their foreign counterparts was mainly the establishment of joint ventures and the provision of technology. About 70 public institutions and business firms from Bahrain, Iraq, Kuwait, Oman, Qatar, Saudi Arabia and the United Arab Emirates were represented at the meeting. Potential partners from the industrialized countries, mainly European, totalled approximately 120.

19. The results of the investment promotion meetings held in 1980 in Rabat, Munich, Dakar and Budapest³ are still difficult to quantify. A survey of the results of the Rabat meeting showed that, out of a portfolio of 74 investment project proposals promoted, 21 found a partner. The total investment cost of these 21 projects, half of which were in the agro-industrial sector and half in the metalworking sector, amounted to \$65 million. Ten additional projects were submitted during the meeting and five of them, with a total investment cost of \$5 million, entered the negotiation stage; at least one is now under way. The foreign partners participating in the 26 projects are from Belgium, Canada, France, Germany, Federal Republic of, Italy, Netherlands, Spain, United States of America and, for the first time, from a capital-surplus developing country, Kuwait.

Mobilization of financial resources

20. Investment and financing in developing countries during 1981 were characterized by a level of external debt which exceeded the repayment capacity of many of these countries. Total official development assistance for the year is estimated to have reached \$26 billion. Financing operations were frequently disturbed by the recession-related "aid-fatigue" to be found in many industrialized countries. The situation is expected to deteriorate further due to the sluggish market growth and anti-inflationary policies of these countries. Consequently, a growing proportion of foreign exchange financing of industrial investment projects will be provided from financial institutions with non-concessional funds, such as commercial banks, multilateral and bilateral agencies, as well as foreign direct investment. In 1981, total foreign direct investment in industry is estimated to have been about \$4 billion, compared with new bond issues on international markets of \$3 billion and newly publicized Euro-currency borrowing by developing countries of about \$40 billion. The requirements for industrial financing totalled approximately \$45 billion, of which foreign financial resources amounted to \$20 billion. The lack of risk capital, which could have been eased by foreign private flows, and the high cost of borrowing for industrial projects, for which concessional funds were not accessible, continued to be major problems for developing countries. More concessional capital and new financial instruments for industrial investment (such as the UNIDO proposed International Bank for Industrial Development) will therefore have to be made available to the developing countries, in particular the least developed countries.

³ID/B/260, chap. III, paras. 22, 23.

21. Since the high cost of foreign lending makes equity and quasi-equity investments (including convertible debentures) more attractive, greater foreign direct investment in developing countries is needed in the future. By involving themselves more fully in financing, foreign partners are committed to providing more efficient equipment and marketing services. Production-sharing arrangements, leasing and loans amortized by production (buy-back) are risk-sharing techniques that might be integrated in future projects prepared and promoted by UNIDO.

22. In 1981, co-operation with industrial development finance institutions with global, regional or national fields of operation was intensified, with a view to expanding the flows of capital to developing countries (e.g. as outlined in para. 5 above).

23. Additional activities included participation in a meeting organized by the German Association of Solar-Equipment Suppliers to develop its programme for mobilizing financial resources for joint ventures in developing countries; participation in the International Symposium on Islamic Banks and Strategies of Economic Co-operation, held at Baden-Baden in 1981; and an agreement concluded with the proposed Equity Financing Programme of the Inter-American Development Bank to establish a UNIDO "financial promoter" at Washington, under a cost-sharing arrangement, in order to increase the flow of industrial risk capital in Latin America.

24. The staff of the Investment Co-operative Programme Branch also assisted in defining the issues to be discussed at the 1982 Consultation on industrial financing. In addition, arrangements were made for a party of officials from Bangladesh to visit and study, under UNIDO guidance, financial institutions in Arab countries in the Gulf region. A proposal made at the World Bank/UNIDO Symposium on Development Banking in the 1980s, held at Zurich in 1979,⁴ led to the establishment at Madrid in 1981 of the World Federation of Development Financing Institutions.

25. Another highlight of the year under review was the emergence of proposals for: (a) a centre to assist developing countries in the establishment of industrial joint ventures and compensatory agreements which would also provide advice on investment-related regulations and would constitute an additional "promotional tool" (see paras. 26-30); (b) the development of an international joint venture in the field of maintenance and repair; and (c) a risk-capital institution with government partnership such as that already being developed for Austria.

Promotional tools

26. The Secretariat continued to develop and make use of its five promotional tools. Two editions of the List of Industrial Investment Project Proposals, which is the first tool,⁵ were issued during 1981. The list contains essential information on investment project proposals, screened by UNIDO, classified according to industrial branches and grouped by country. The

⁴ID/B/240, chap. III, para. 36.

⁵ID/B/260, chap. III, para. 14.

October 1981 list covers some 170 projects in 32 developing countries, eight of them least developed countries. Of these projects 149 lie within the areas accorded priority in the Lima Declaration and Plan of Action, namely agro-industries, steel, chemicals and engineering; for more than one third of the projects listed, feasibility studies were carried out by the sponsors. During the year under review, 562 requests for further information on the projects contained in the list were received from 131 potential partners.

27. Country industrial investment profiles, which constitute the second promotional tool, are being used increasingly to provide additional information on industrial investment project proposals and background material for investment promotion and country presentation meetings.⁶ In 1981, industrial investment profiles were prepared under the guidance of the Investment Co-operative Programme on 30 developing countries, bringing the number of available profiles to 80. The complete set is much in demand by other international organizations and private and public institutions.

28. The second edition of the *Directory of Financial Resources for Industrial Projects in Developing Countries*,⁷ was published in 1981. This *Directory*—the third promotional tool—is designed to help project promoters and potential partners find suitable sources of finance for industrial investment projects in developing countries. It provides information on 180 national, regional and international development finance institutions.

29. The fourth promotional tool is the Roster of Resources.⁸ The number of private and public enterprises in industrialized and advanced developing countries that have indicated a willingness to participate in industrial investment projects in developing countries continued to increase. During the year, offers were received from more than 600 new enterprises in 18 industrialized and advanced developing countries to co-operate in suitable projects through joint-venture partnerships; transfer of technology; provision of technical, management and marketing expertise etc. This partly included the results of surveys conducted among enterprises in Canada, India, Japan, Poland and the United States of America. There is no significant increase in the number of responses to the Roster of Resources, which brings co-operation possibilities to the attention of project sponsors in developing countries. In 1981, requests were received from private and public institutions in developing countries for assistance to identify partners for 28 new industrial investment projects, and some 127 potential partners were contacted as a result. A questionnaire was sent to some 600 institutions in developing countries to whom the Roster of Resources has been mailed regularly, in order to assess and improve its effectiveness.

30. In November 1981, the fifth and latest promotional tool became available—a set of plant profiles, entitled *How to Start Manufacturing Industries—Technological and Investment Perspectives*. The first issue consists of a collection of profiles of some 100 small- and medium-scale manufacturing plants. Each profile describes briefly: the manufacturing process involved;

⁶*Ibid.*, para. 15.

⁷PI/61/Rev.1.

⁸ID/B/260, chap. III, para. 17.

requisite raw materials; machinery and equipment; labour requirements; and investment and production costs. The set of profiles is primarily intended to motivate potential project sponsors in developing countries and help them to identify suitable products for local manufacture.

World Bank/UNIDO Co-operative Programme

31. The World Bank/UNIDO Co-operative Programme, a distinct unit under the supervision of the Director of the Investment Co-operative Programme Branch, concentrates on areas of common interest to the organizations and, in particular, on industrial sector and subsector studies in support of World Bank lending and UNIDO technical co-operation activities. In addition to undertaking its own missions, the unit also provides staff support to both UNIDO and World Bank field missions and serves as a liaison office for activities of mutual interest in such areas as training, studies, technical assistance and country-programme planning.

32. The operating budget of the Co-operative Programme in 1981 was about \$835,000 (as compared to \$760,000 in 1980)⁹ of which 75 per cent was borne by the World Bank and 25 per cent by UNIDO. The Programme employed six Professional staff members and, as in previous years, drew upon the experience of staff from other divisions of UNIDO for several tasks. In addition, consultants were hired for specific assignments.

33. In the year under review, seven operational missions were carried out under the Co-operative Programme; support was provided for seven other missions which formed part of the World Bank's activities and four more were undertaken at the request of other UNIDO units. In all, 16 developing countries were covered by the 18 missions. Industrial sector missions were undertaken in Bolivia, Peru and Yemen to assess the status, prospects and problems of industry in those countries. More specialized missions aimed at surveying specific industrial subsectors, including small-scale and handicraft industries, as in the Comoros, Malaysia and Rwanda.

34. The construction industry continued to be a focal point of the activities of the Co-operative Programme in 1981.¹⁰ A comprehensive survey of this sector was carried out in Sudan as the sixth in a series of such studies undertaken by the Programme over a three-year period.

35. The Co-operative Programme's activities in the preparation of investment projects concentrated on three projects in Yemen,¹¹ namely, a mechanized stone-quarrying and cutting operation (estimated cost \$20 million) which is presently being considered for financing by the World Bank; a plant to produce 60,000 tons of concrete products annually (investment cost of \$9 million) which is at present under review within UNIDO; and a third project (investment cost about \$17 million) for the manufacture of hollow glass. Geological mapping

⁹*Ibid.*, para. 34.

¹⁰*Ibid.*, para. 37.

¹¹*Ibid.*, para. 38.

and mineralogical investigations of the silica-sand deposit to be used have been undertaken following the feasibility study prepared by the Co-operative Programme. Potential equity and technology partners have also been identified and brought into contact with the project sponsors in Yemen. Assistance was also given to World Bank missions dealing with the capital goods sector in Mexico and the textile sector in Turkey.

36. Within the framework of expertise made available to the World Bank, recommendations were made on Bolivia's proposed new investment law. Factory rehabilitation in Uganda and industrial protection in Brazil were also surveyed by Co-operative Programme staff on behalf of the World Bank. Specialized expertise was made available by the Programme to other UNIDO units in providing technical assistance to the automotive industry in Tunisia; in determining areas of co-operation between industrial research and development institutions in Argentina, Paraguay and Uruguay; and in investment promotion in Paraguay.

37. In 1981, the World Bank approved a number of loans and credits for projects for which the Co-operative Programme had done preparatory work.¹² Examples of this kind of activity are the project preparations carried out for the Governments of Pakistan, Peru and Uruguay. For example, the International Development Association (IDA) granted a credit of \$30 million to Pakistan to assist small-scale enterprises in promising industrial subsectors to finance extension services and to expand export promotion of handicrafts and products of small-scale industry. This had been preceded by preparatory work by the Co-operative Programme including a UNDP-financed survey of small-scale industry in 1980. In Uruguay a \$30 million World Bank loan to help improve the competitiveness of industrial enterprises was granted for an industrial credit project. About 70 industrial projects will be assisted, and 3,200 job opportunities created. The Co-operative Programme had participated in the World Bank's industrial sector survey that had preceded the loan. Peru was granted a loan of \$60 million to be channelled through the State-owned industrial development institution to public and private enterprises, mostly in industry but also in the mining and tourism sectors. The Co-operative Programme had also assisted in the World Bank's small-scale industry pre-appraisal work.

38. Since 1974, the Co-operative Programme has carried out or participated in missions which have prepared the ground for World Bank loans amounting to a total of about \$1.3 billion. These loans relate to 34 projects in 25 developing countries (see appendix E).

39. UNIDO and the World Bank made a joint review of their Co-operative Programme in 1981, in order to evaluate its record of past activities, identify its accomplishments and determine focal areas for future co-operation. The review concluded that while the Co-operative Programme had in effect carried out its mandate under the 1973 Memorandum of Understanding between the two organizations, future co-operative activities should concentrate more on co-operation in a broader sense, utilizing existing expertise in both organizations, and less on operational missions designed to support Bank lending. Details of a new *modus operandi* for 1982 and beyond are being developed by the staff of both organizations.

¹²*Ibid.*, para. 36.

ENERGY

40. During the year under review, the Office of the Executive Director, through the Special Advisory Group on Energy (SAGE),¹³ continued its work on the identification of broad strategies and priorities of energy-related industrial activities in order to provide advice, guidance and co-ordination within the UNIDO Secretariat.

41. In particular, a framework of basic facts, analyses and substantive conclusions has been worked out, which has helped to clarify the broad scope and priorities of UNIDO activities in the field of energy. The work, carried out by SAGE with the full co-operation of other UNIDO units, was supported by or based on informal but close contacts with representatives of other offices and organizations in the United Nations system, such as the Department of Technical Co-operation for Development of the United Nations Secretariat, the regional commissions, the United Nations Conference on Trade and Development (UNCTAD), the United Nations Environment Programme (UNEP), the United Nations University, the secretariat of the United Nations Conference on New and Renewable Sources of Energy, the Food and Agriculture Organization of the United Nations (FAO), the United Nations Educational, Scientific and Cultural Organization (UNESCO), the World Bank and the International Atomic Energy Agency (IAEA).

42. In the above context informal contacts with representatives of missions, of intergovernmental organizations (the Council of Europe, the Inter-American Development Bank, the International Institute for Applied Systems Analyses (IIASA), the Latin American Energy Organization (OLADE) and the Organization of Petroleum Exporting Countries (OPEC)), and of non-governmental organizations (the Club de Genève and the Latin American Iron and Steel Institute) were also helpful and will be intensified.

43. Identification of priority areas in the field of energy for action relating to industrial development was also started in 1981. This action-oriented analysis will be continued and should lead in 1982 to specific priority activities (projects, studies, meetings, agreements for co-operation etc.) to be implemented within existing programmes or as new resources become available.

44. In 1981, attention was mainly, but not solely, focused on the potential of new and renewable sources of energy for industrialization because of the Secretariat's involvement in the preparation of and participation in the United Nations Conference on New and Renewable Sources of Energy held in Nairobi (Kenya), August 1981. While continuing to devote full attention to the subject, more detailed consideration will be given in 1982 to the role of the conventional sources of energy. This approach will ensure a proper balance in the analyses and activities of UNIDO in forthcoming years, since industrial development will depend not only on new and renewable sources of energy but also, almost equally, on additional development and application of conventional sources, especially fossil hydrocarbons and coals of various types and qualities.

¹³*Ibid.*, para. 87.

45. The report on energy-related industrial development activities,¹⁴ prepared for submission to the Preparatory Committee for the United Nations Conference on New and Renewable Sources of Energy in accordance with decision 7 (II), paragraph (e) of the Preparatory Committee,¹⁵ presented an overview of the mandate and activities of UNIDO and of its arrangements and agreements relating to the development and use of energy in connection with the industrialization process as of 1 January 1981. This report included lists and brief descriptions of energy-related projects and studies, specific co-operative agreements with other United Nations organizations and organizations outside the United Nations system and publications issued.

46. The draft background paper for the *Ad Hoc* Expert Group Meeting on Industrial Issues and Utilization of Energy in Transportation and Allied Sectors, held at Vienna from 12 to 16 January 1981, was prepared at the request of the secretariat of the United Nations Conference on New and Renewable Sources of Energy. The document included a concise review of the present energy situation, identification and definition of the main aspects of the interaction between energy and industry, issues for consideration and action in connection with industrial development and the corresponding energy input, quantified projections relating to the Lima target and a preliminary evaluation of the relative significance of new and renewable sources of energy for industry with selected examples of their use in industry. The report also indicated the conclusions reached on the impact of an increasing use of new and renewable sources of energy in industry with specific examples, gave lists of capital goods to be produced in developing countries in connection with the development of new and renewable sources of energy, and made specific suggestions regarding manpower training, technological institutions and services and financial requirements. The paper was extensively used during the *Ad Hoc* Expert Group Meeting and many of its concepts and projections were retained in the final report of the Meeting.¹⁶ A revised version of the UNIDO paper¹⁷ which included additional information requested by the experts during the Meeting itself was circulated to the Permanent Missions to UNIDO and to numerous organizations and experts.

47. One of the main tasks of the Secretariat in 1981 was to co-ordinate UNIDO participation in the preparatory work for the United Nations Conference on New and Renewable Sources of Energy and in the Conference itself. A considerable amount of time and effort was devoted, *inter alia*, to attendance and active participation in 14 meetings, involving the study or preparation of documents and statements and the preparation of appropriate follow-up action.

48. During 1981, the Secretariat also organized or participated in 29 other energy-related meetings, thus demonstrating its growing involvement with energy-related aspects of the industrialization effort, in accordance with the recommendations of the Third General Conference and the Industrial Development Board.

¹⁴UNIDO/OED.130, subsequently issued as A/CONF.100/6/Add.12.

¹⁵A/35/43, part two, annex I, sect. B.

¹⁶A/CONF.100/PC/36.

¹⁷UNIDO/OED.131.

49. Special mention should be made of the Panel on Energy/Industry Issues, organized by the secretariat of the United Nations Conference on New and Renewable Sources of Energy with the co-operation of the United Nations University and UNIDO, which met at Nairobi on 14 August 1981. UNIDO proposed the issues, and drew up the list of panellists, which included a small group of eminent personalities from various regions and country groups. The meeting, which was also chaired by UNIDO, aroused a great deal of interest at the Conference. The proceedings are being drafted by the secretariat of the United Nations University.

50. The above activities helped to foster throughout the Secretariat a greater awareness of the various aspects of the relationship between energy and industry, and increased participation in related activities.

51. The crucial importance of industrial activities and their special role in relation to the energy problem, which were discussed at a number of the meetings mentioned above, were specially emphasized during the contacts and presentations made in connection with the United Nations Conference on New and Renewable Sources of Energy. In particular, the statement made at the Conference by the Executive Director included a concise analysis of the relationship between energy and industry, especially in connection with new and renewable sources of energy.¹⁸

52. The study of the implications for UNIDO of the Nairobi Programme of Action for Development and Utilization of New and Renewable Sources of Energy,¹⁹ adopted by the Conference, and of the follow-up required was initiated and annotated tables were prepared relating to its decisions and recommendations, and the industrial activities needed. The following important aspects should, however, be kept in mind:

(a) The results and broad implications of the Conference still have to be examined at further meetings at the United Nations Secretariat level and in the General Assembly,²⁰ to define more precisely ways and means of implementing the Nairobi Programme of Action;

(b) It is already clear that implementation of the Nairobi Programme of Action will require increased co-operation and co-ordination among the agencies and bodies within the United Nations system, as well as with relevant intergovernmental and non-governmental organizations, enhanced international and intergovernmental co-operation of various types (technical, scientific, financial, entrepreneurial, educational etc.) and the availability of substantial additional resources for expanding the energy-related activities of the United Nations system;

(c) The detailed implications for UNIDO of the Nairobi Programme of Action will need special scrutiny, since it contains numerous references to industry under many different headings; the references will be systematically compiled and interpreted in the light of the UNIDO mandate and the scope of its work;

¹⁸A/CONF.100/11, chap. IV, para. 162.

¹⁹*Ibid.*, chap. I, sect. A.

²⁰*Ibid.*, para. 61.

(d) In spite of the obvious importance of new and renewable sources of energy for developing countries, the attainment of the Lima target will depend on equal attention being devoted to the use of conventional sources of energy;

(e) The expansion of the energy-related activities undertaken by UNIDO to the volume and quality necessary for and commensurate with the attainment of the Lima target will largely depend on the availability of substantial additional resources.

53. As a first step in the work needed to ensure the proper follow-up and implementation of the Nairobi Programme of Action and to elaborate a comprehensive United Nations medium-term plan for energy, UNIDO participated in the Informal Inter-agency Prior Consultations on the United Nations Medium-term Plan 1984-1989 and the *Ad Hoc* Working Group on Inter-agency Follow-up to the Nairobi Programme of Action, which were held in New York in December 1981. A draft concise background paper was prepared by SAGE for the meetings.

54. Numerous reports, draft texts, comments, informal reference documents, briefings, presentations and statements on energy/industry questions were also prepared by SAGE at the request of, or in co-operation with, other UNIDO units, in connection with the drafting of United Nations and UNIDO documents, the undertaking of technical co-operation projects, the organization of or participation in selected meetings, the holding of special programmes, contacts and discussions, co-operation with other United Nations bodies etc.

55. Additional information on the energy-related activities of UNIDO in 1981 can be found in other sections of this report, in particular those dealing with Industrial Operations and the Technology Programme.

TECHNOLOGY PROGRAMME

56. Following the emphasis given to technology in the New Delhi Declaration and Plan of Action, adopted at the Third General Conference of UNIDO, and the decisions taken by the Industrial Development Board at its fourteenth session, high priority continued to be attached in 1981 to the development and transfer of industrial technology. While the Secretariat continued to devote its attention to the selection, acquisition, adaptation, absorption and development of technology, new activities were developed to respond to the world-wide dynamic trends that emerged in the field of technology and to the needs expressed by the developing countries themselves.

Technological advances

57. A major new programme was established, dealing with the implications of emerging technological advances for developing countries, an area to which the United Nations Conference on Science and Technology for Development had drawn particular attention.²¹ Several of these technological advances are

²¹A/CONF.81/16, annex IV.

expected to alter substantially the rate and pattern of industrial production in the coming decades and developing countries should be made aware of them so that they can take appropriate and timely action. The programme was designed, in particular, to increase awareness of:

(a) The potentials and limitations of the various technologies for the developing countries;

(b) The industrial and technological capabilities that the developing countries need in order to be able to avail themselves of such technologies;

(c) The policy actions to be taken by the Governments of developing countries.

58. Activities were developed within the framework of the foregoing considerations, bearing in mind the nature of the technological advances and the type of practical action that would be most effective. Thus, at an exchange of views on the implications of advances in genetic engineering for developing countries, in Vienna from 4 to 6 February 1981, leading scientists in the field of genetic engineering and biotechnology recommended the establishment of multi-disciplinary core technical groups at the national level in developing countries and the setting up of an international centre for genetic engineering and biotechnology to provide initial impetus and support to national efforts. Subsequently, a group of experts held discussions in 16 developing and developed countries on the basis of which a proposal was drawn up for the establishment of an international centre for genetic engineering and biotechnology, with detailed recommendations on its functions, work programme and organization.²²

59. In June 1981 a meeting of experts was organized on the implications of technological advances in micro-electronics for developing countries. The meeting emphasized the importance of actions at the national level relating to manufacture, industrial and other applications, software development and the formulation of a national micro-electronics strategy. Actions at the international level were also recommended, including a continuous monitoring of the trends observed and of their impact on various sectors and the development of pilot projects and programmes dealing with applications and software. An expert group meeting is to be held in 1982, in co-operation with the Economic Commission for Latin America (ECLA), at which the implications of micro-electronic advances for Latin American countries will be analysed and recommendations made for action.

60. The Secretariat in 1981 initiated activities concerning lighter-than-air (LTA) technology systems. While the technology of airships was already being used several decades ago, current technological efforts have made it necessary, particularly in the face of rising energy costs, to examine the implications of LTA systems for developing countries. An expert meeting studied the question in October 1981 and came to the conclusion that the current state of technological development and the limited operational experience in that field pointed to the need for a gradual approach on the part of the developing countries. Activities recommended by the meeting were therefore limited to support for a pilot project under way in Peru, as a means of gaining experience in LTA technology, and issue of a publication that would analyse and disseminate information on LTA systems.

²²UNIDO/IS.254.

61. As a background to the above-mentioned activities, a large amount of analytical documentation on technological advances was prepared by leading experts, examining the subject from the point of view of the developing countries. The documentation covered the implications of genetic engineering for developing countries and the potential impact of microbiology on those countries, an overview of preliminary issues in the field of micro-electronics, several technical papers on LTA technology systems, an analysis of the industrial and technological capabilities needed by developing countries for the detection, exploitation and use of sea-bed mineral resources, and technological perspectives in machine tools and petrochemicals. The study on machine tools provided an input for the preparation of documentation for the Consultation on the Capital Goods Industry, held in Brussels (Belgium), September 1981, and for the meeting on micro-electronics referred to in paragraph 59 above. Furthermore, since the meetings concerned with technological advances have stressed the need for the continuous supply and analysis of information for the benefit of developing countries, brief mimeographed bulletins on micro-electronics, genetic engineering and biotechnology are being prepared to help keep policy-makers, scientists and technologists, and industrial enterprises in developing countries up to date.

62. The above-mentioned efforts were aimed at stimulating interest and action at the national level. A project financed by the United Nations Interim Fund for Science and Technology for Development will be undertaken in Mexico to assist the Government in setting up a permanent national team to monitor technology perspectives, with a view to providing in particular inputs for industrial, technological and commercial policy formulation and for decision-making on large industrial projects.

63. The strengthening of policy capabilities was also the object of a national seminar organized in Georgetown (Guyana), February 1981, in co-operation with the Technology Transfer (Policy) Unit of the National Scientific and Research Council. The participants recommended that advisory task forces on technology transfer should be set up, together with an advisory committee on technology transfer, which would have an important role in technology transfer activities in the country. A list of some 50 project concepts was also compiled at the seminar. Also in the field of technological policy a study was published in the series "Development and Transfer of Technology", entitled *Technological Self-Reliance of the Developing Countries: Towards Operational Strategies*.²³

Industrial technology in Africa

64. Following the Joint OAU/UNIDO Symposium on Industrial Technology in Africa, Khartoum (Sudan), November 1980,²⁴ and the declaration of the 1980s as the Industrial Development Decade for Africa,²⁵ special attention was given to programmes dealing with the development and transfer of technology in that region. On the basis of recommendations made at the Symposium, several specific regional projects were formulated, in co-operation with the Organization of African Unity (OAU) and the Economic Commission for Africa (ECA), for funding by UNDP.

²³ID/262.

²⁴ID/B/260, chap. III, para. 43.

²⁵General Assembly resolution 35/66B of 5 December 1980.

65. There was further close co-operation with the African Regional Centre for Technology. Besides participating in preparing the work programme for the Centre, a number of project proposals were formulated jointly with the Centre for possible funding by UNDP. The papers and proceedings of the Joint OAU/UNIDO Symposium on Industrial Technology in Africa were issued²⁶ and widely disseminated throughout Africa.

66. Country activities were also undertaken in 1981. In Sudan, UNIDO assisted the Government in organizing a national seminar on the development and transfer of technology which, coupled with a mission of two experts, was part of the preparatory assistance furnished to the Sudan for the establishment of a national centre for technology. Following the recommendations of the two experts, UNIDO was requested to formulate a project for UNDP assistance. At the request of the Government of Lesotho, an advisory mission was fielded for the development of a national technology programme. The mission resulted in the formulation of a project for the establishment of a national centre for technology, which is at present being considered by the United Nations Interim Fund for Science and Technology for Development. In the United Republic of Tanzania, two experts carried out an intensive examination, with the participation of local counterparts, of the policy actions that might be required and a report containing recommendations for action was submitted to the Government.

Technology acquisition

67. The strengthening of negotiating capabilities for the acquisition of technology continued to be an important activity. Assistance was given to the Government of Swaziland in redrafting its law on joint ventures in order to promote an increased flow of foreign capital and technology into the country. Discussions were held with the Government of China regarding preparations for streamlining the inflow of foreign technology into the country's economy. Preliminary assistance was provided to the Government of Indonesia in assessing the feasibility of more direct government involvement in the importation of technology. In co-operation with the Committee on Industry, Minerals and Energy of the Association of South-East Asian Nations (ASEAN), a programme was launched to study the possibilities of strengthening and improving the regulation of technology imports in individual ASEAN countries in accordance with their requirements. A meeting of ASEAN government representatives was held in September 1981 to exchange views and experiences in regard to technology imports and to study the actions taken by other countries in this respect. Training workshops to strengthen negotiating capabilities were held in Portugal and China. Five developing countries requested and received special advice and assistance under the technological advisory services programme.²⁷ In the series "Development and Transfer of Technology" a publication entitled *Case Studies in the Acquisition of Technology*²⁸ was issued.

²⁶ID/WG.332/1-ID/WG.332/11/Rev.1.

²⁷ID/B/220, chap. III, para. 67.

²⁸ID/257.

68. In 1981, UNIDO's Technological Information Exchange System (TIES)²⁹ continued to promote information exchange among technology transfer registries in developing countries, published 12 issues of the *TIES Newsletter* and expanded the number of contracts registered to 5,600. The System welcomed a new participant, the Republic of Korea, and several new observers; the total number of participants and observer countries associated with TIES is now 28. Co-operation with regional technological information systems such as the Andean Technological Information System proved to be beneficial and similar co-operation with ASEAN is under consideration. Close co-operation in the field of technological information was maintained with the United Nations Centre on Transnational Corporations. A study of experiences in the acquisition of technology in the pharmaceutical sectors in the countries of the Andean Group was carried out by these countries at the request of UNIDO.

69. The activities mentioned in paragraph 68 above, including other sectoral studies, were reviewed at the sixth meeting of heads of Technology Transfer Registries, held in Manila in November 1981. In addition, the meeting examined the possibility of extending TIES to encompass technological aspects of technology transfer contracts, which would also provide inputs on alternative technologies to the Industrial and Technological Information Bank (INTIB).

Technology development and adaptation

70. With regard to scaling down and adapting modern technology to conditions in the developing countries, a detailed "Technical Implementation Plan" for a metal production development unit was prepared for the United Republic of Cameroon, in addition to the one already drawn up for Sudan.³⁰ The work is being carried out by the Technology Programme in close co-operation with the Engineering Industries Section and the Metallurgical Industries Section of the Division of Industrial Operations. A number of requests for assistance in this field have been received from other African countries and it is anticipated that, after local metalworking facilities have been surveyed, further detailed design studies will be made to tailor the requirements to particular local conditions.

71. In co-operation with UNDP and the Industry Council for Development (ICD), a workshop on the selection of technology for the assembly of electronic and electrical products in developing countries was held at Utrecht (Netherlands), May 1981, and attended by 15 participants from developing countries. In accordance with recommendations by the workshop, a set of guidelines for the establishment of television receiver assembly plants in developing countries is being prepared for distribution to these countries.

72. Following the recommendations of the first two seminars (combining seminar, workshop and study tours) on mini-hydro-power generation held in Nepal in 1979 and in China and the Philippines in 1980,³¹ a manual for

²⁹ID/B/220, chap. III, para. 73; ID/B/240, chap. III, para. 58; ID/B/260, chap. III, paras. 46-47.

³⁰ID/B/260, chap. III, para. 50.

³¹*Ibid.*, para. 51.

decision-makers³² was prepared in co-operation with the Latin American Energy Organization (OLADE) and distributed to developing countries. The manual is intended as a working tool for decision-making on the establishment of small- and mini-hydro-power stations. It suggests ways of identifying the possibilities for developing mini-hydro-power generation in a given area and describes a number of techno-economic aspects that should be taken into account before a final decision is made. Work was continued on the compilation of a bibliography on mini-hydro-power generation and its application in the developing countries. A project proposal was also formulated for the establishment in China of a regional centre for research, development and training in mini-hydro-power generation. The first part of the overall project, namely the supply of equipment, was assigned to UNIDO as executing agency. All these activities are being undertaken in close co-operation with the Industrial Energy Engineering Unit of the Division of Industrial Operations, the Investment Co-operative Programme Branch and the Special Advisory Group on Energy, as well as other organizations and agencies working in the field of mini-hydro-power.

73. In regard to technology development, work was begun on the first phase of the project launched in 1980 in the Philippines for the establishment of a pilot plant for the production of ethanol from cellulosic materials.³³ This project is under implementation by the Division of Industrial Operations in co-operation with the Technology Programme. A project was also formulated in co-operation with OAU, to optimize technologies for the gasification of agricultural wastes in four African countries. In addition to the preparation of techno-economic studies on selected technologies, the project envisages the establishment of pilot plants and the training of manpower in each of those countries.

74. An advisory mission was undertaken in 1981 to promote co-operation among selected technological research institutions in Brazil, Paraguay and Uruguay and several specific possibilities for institutional co-operation were identified. The UNIDO Secretariat also participated actively in the formulation of a project proposal, to be financed by the United Nations Interim Fund for Science and Technology for Development, for strengthening the World Association of Industrial and Technological Research Organizations (WAITRO).

Technological co-operation in small-scale industries

75. Along the lines of the project initiated in 1980 to promote plant-level co-operation between small-scale metalworking and light engineering industries,³⁴ a project was initiated for the transfer of technology between small- and medium-scale food processing plants in the Netherlands and similar plants in China, Mexico, Sudan and Thailand. The project will pay particular attention to the adaptation of processing techniques. Under a trust fund contribution by the Government of Mexico, a national workshop on the transfer of technology

³²UNIDO/IS.225.

³³ID/B/260, chap. III, para. 52.

³⁴*Ibid.*, para. 55.

to small-scale industries is planned for early 1982. The workshop will deal with small- and medium-sized enterprises in the food processing industry in Mexico, an area which has been assigned high priority by the Government.

76. To promote technological co-operation among small- and medium-sized enterprises in developing countries, a project was initiated in 1981 involving selected small-scale enterprises in India and their counterparts in Nepal in the fields of non-ferrous metal casting, machine tools, small foundries, welding electrodes and small brick-making industries. A second project was implemented during the year under review to study the possibilities for transferring technology from small-scale industries in India to enterprises in Western Samoa processing coir and coir by-products.

77. The technological services delivery system, which is designed to provide technological services to small-scale industries has been operational since 1978 as a pilot project in the Philippines.³⁵ The project had succeeded in establishing a linkage between industrial research institutions and small- and medium-scale industries, particularly in the rural areas, and had helped to improve the technological performance of these areas. The results of the project, which were reviewed at a meeting held in Manila in November 1981 (with some 25 participants from a number of countries), were also disseminated to other ASEAN and selected developing countries.

Industrial and Technological Information Bank

78. In its second year of operation, INTIB, within the limitations of its modest appropriation, focused its work on the three main aspects of information on technology choice: identifying and linking up with sources of information; identifying and meeting end-user requirements; and generating information.

79. Through the Vienna International Centre (VIC) Library, INTIB continued to develop access to world-wide data-base systems, and over 100 data-bases related to all aspects of technology are now accessible.³⁶ Special co-operation was initiated with the National Technical Information Service in the United States of America to make better use of their publications and to establish contacts with their focal points in developing countries. These steps are part of the continuing effort of UNIDO to contribute to the development, through INTIB, of a global technological information exchange system in the field of industry.

80. The INTIB network of correspondents was further developed and complemented by a roster of experts prepared in 1981. This roster contains 400 names of individual experts for the dual purpose of (a) securing expert advice to INTIB and (b) developing a market for direct employment of experts under contracts between them and employers in developing countries. The only role of UNIDO in the latter is to provide information, if requested.

³⁵ID/B/220, chap. III, para. 64; ID/B/240, chap. III, para. 52.

³⁶ID/B/259, para. 15; ID/B/260, chap. III, para. 58.

81. The operation of INTIB as a central facility available to developing countries to complement their own efforts at obtaining industrial and technological information necessarily requires an intimate working relationship with national and regional institutions engaged in such efforts. The "Directory of industrial information services and systems in developing countries"³⁷ containing some 450 entries was issued. Work on the compilation of a directory of research institutions was also completed; this directory, which will be issued in 1982, aims to encourage and facilitate co-operation in industrial research activities.

82. In the series of regional INTIB promotion missions, which had begun in 1980 with a mission to South-East Asia,³⁸ the chief of the Industrial Information Section of UNIDO and four experts in information networks, systems and services, visited 12 countries in Latin America in November and December 1981. The purpose of the mission was to bring available INTIB services to the attention of those countries and to assess the specific needs of industrial information users by means of discussions at seminars and visits to relevant offices, institutions and industries. Contacts were made with regional information systems at various stages of development. The mission brought to light, *inter alia*, the limited capacity of scientific and technological information systems and networks to meet certain industrial information needs which cannot readily be expressed in the form of clearly identified data and documents. In this context, attention was drawn to the role of INTIB in providing information on access to knowledge, know-how and the non-tangible aspects of industrial technologies, the need for which can only be identified by information services manned by engineers with substantive technical knowledge of relevance to industry. The mission also highlighted the need for developing countries to (a) formulate relevant industrial and technological information policies within overall industrial development policies; (b) design and set up appropriate extension-oriented industrial and technological information structures based upon such policies; and (c) through such structures channel problem-specific, processed information to users. It is planned to conduct a similar survey mission and promotion drive for INTIB in Africa in 1982. Discussions were also held with the Regional Centre for Technology Transfer in Bangalore and with the Andean Group, to initiate closer co-operation with INTIB.

83. Meetings of the Industrial Information Committee of the International Federation for Documentation, held in Barcelona, September 1981, and of the Committee on Engineering Information of the World Federation of Engineering Organizations, held in Buenos Aires, November 1981, provided forums for promoting INTIB services and developing networks with end-users, since industrial information officers from many countries are represented in these committees. In addition, the TECHEX '81 Fair on Technology, held in Colombo and sponsored by the Government of Sri Lanka, provided another opportunity to promote INTIB and to collect information on technologies offered.

84. As development banks have a crucial role to play in technology choice, a high-level expert group meeting is planned early in 1982, to be attended by

³⁷UNIDO/IS.205.

³⁸ID/B/259, para. 7; ID/B/260, chap. III, para. 62.

representatives of development banks of developing countries in order to identify their information needs and to discuss the possibility of creating an information exchange network among them.

85. A memorandum of understanding was presented by the Korea Advanced Institute of Science and Technology for linkage with INTIB, with the Institute serving as a focal point for Korea. This was preceded by a study of INTIB procedures by two officials of the Institute who had been attached to INTIB for several weeks. Such an arrangement could be a prototype for similar arrangements for focal points for other developing countries.

86. INTIB worked in close co-operation with the other technical units of the Secretariat—both at Headquarters and in the field—with the dual aim of both fulfilling the information needs of UNIDO and mobilizing in-house information. Emphasis was therefore placed on briefing not only SIDFAs and Junior Professional Officers but also UNIDO experts before they take up their assignments.

87. The substantive inquiries answered through the Industrial Inquiry Service followed a pattern similar to that observed in 1980.³⁹ Industrial enterprises, R + D institutes, development banks and productivity and development centres in developing countries were among the major users. Food, beverages and tobacco, metals and chemicals were among the major sectors. Many of the inquiries received were discussed with officers from the Division of Industrial Operations and in certain cases led to requests for UNIDO technical assistance.

88. Technological profiles prepared for the pilot operation of INTIB were found to be very useful to provide answers to technological inquiries which would otherwise have had to be processed at additional expense. A technological information profile on solar energy equipment was completed and publication is foreseen for 1982. Preparation of a similar profile was initiated for fuel alcohols and solar salt production. A catalogue of manufacturers of solar-energy equipment was in preparation. Six information packages on technologies developed or adapted for developing countries were compiled from material available at UNIDO Headquarters and advertised in the *UNIDO Newsletter*. Over a thousand of these packages were distributed to developing countries upon request in 1981, demonstrating the importance of such information requirements. Following an agreement with the Japan Consulting Institute, approximately 70 profiles were published in a loose-leaf format under the title *How to Start Manufacturing Industries—Technological and Investment Perspectives*. Additional profiles are planned for 1982.

89. External sources of information continued to be identified, compiled and published in the series "Guides to Information Sources", now comprising 39 volumes, plus seven revisions. Two volumes were published in 1981 and a number of volumes were in various stages of processing for issue in 1982, including a macro-guide listing common services of information to the other volumes in the series. In addition, two volumes were published in 1981 in the

³⁹ID/B/259, paras. 16-17; A/36/16, para. 268.

series "Monographs on Appropriate Industrial Technology" and two in the series "Development and Transfer of Technology".

90. The mobilization of in-house information continued through the Industrial Information System (INDIS) and On-Line Information Key (LINK) data-bases. Four volumes of the *Industrial Development Abstracts* series were published in 1981. The computerized INDIS tapes were distributed to, and used in, various countries. The data-base, which now contains 11,000 references and abstracts of UNIDO documents, was improved by including industrial sector codes, thus permitting better retrieval. The *Thesaurus of Industrial Development Terms* was revised completely and a new edition will be published early in 1982. The *Thesaurus* is used world-wide as a means of classifying documents on industrial development.

91. The LINK data-base, initiated in 1980, was developed further and now contains more than 7,000 entries on institutions, inquiries received, contents of subject files, technology suppliers and other related matters. It was found to be an excellent tool in the preparation of directories and other operations. INTIB subject files are systematically indexed and included on LINK for easy identification and retrieval. In 1981, the subject files on fruit-and-vegetable processing and meat-and-fish processing were completed. Work on a file on building materials was progressing.

92. Under an agreement between UNIDO, the World Intellectual Property Organization (WIPO) and the Austrian Patent Office, searches were carried out to provide patent information which would otherwise have been difficult to identify from other published documents. "Users' guides to the International Patent Classification (IPC)" prepared by WIPO under a co-operative arrangement with UNIDO, were published and distributed for the four sectors (iron and steel, fertilizers, agro-industries, agricultural machinery) of the INTIB pilot operation.⁴⁰ The International Patent Documentation Centre (Vienna), created with the support of WIPO, also represents a major source of patent information on the validity of patents in any country.

93. The *UNIDO Newsletter* continued to promote information exchanges on technology through the features "INTIB-Interlink" and "Industrial opportunities"; although the exchange of correspondence between technology suppliers and interested parties is not monitored continuously because of the high volume, spot checks showed the usefulness of these items. The *Newsletter* is issued on a monthly basis, with language versions in English, French and Spanish produced in Vienna with a circulation on a computerized mailing list of some 35,000 addresses, and in Russian by arrangement with VINITI, Moscow; Arabic and Chinese versions are under discussion for printing and distribution from an Arab country and China. Since January 1981, the *Newsletter* has been sent by airmail to selected, distant countries through a special-rate commercial service, a major advantage to developing countries who used to receive it by surface mail many months after its publication. Through the *Newsletter* and *Industrial Development Abstracts* 66,777 documents were distributed in response to 10,471 requests in 1981. In addition, 21,160 documents were sent out to interested readers by using selective retrieval from the *Newsletter's* computerized mailing list.

⁴⁰UNIDO/IS.231, 232, 233 and 234.

Informatics

94. Information technology as embraced by the term "informatics"⁴¹ and extending beyond data-bank systems and networks to industrial management tools and industrial processes is in a stage of dynamic growth, particularly through the use of micro-processors. UNIDO co-sponsored a conference on informatics and industrial development held in co-operation with the Irish National Board for Science and Technology and Trinity College, Dublin, in March 1981.⁴² The Conference highlighted the importance developing countries attach to information developments, which were of substantial consequence to current industrial development strategies. This subject will be amplified at the Intergovernmental Conference on Strategies and Policies for Information (SPIN) 1983, to be held at Havana. The Conference is being organized by the Intergovernmental Bureau for Informatics (IBI) following adoption in June 1981 of the Declaration of Mexico on Informatics, Development and Peace. UNIDO will co-operate with IBI in the preparation of this event, addressing itself to: the industrial applications of informatics; informatics as a sector of industry *per se* and hence of relevance to INTIB; and informatics as a feature of industrial technologies in any sector of industry, a factor which has to be taken into account in the proper selection of advanced technology.

Co-operation with other United Nations agencies and organizations

95. In addition to the co-operative activities mentioned earlier, co-operation was informally established with the International Trade Centre UNCTAD/GATT, FAO and UNEP, entailing, *inter alia*, provision of answers to inquiries. There was also continued co-operation with the International Labour Organisation (ILO) under the joint UNIDO/ILO Programme on the Preparation of Technical Memoranda. This resulted in the elaboration of some 15 memoranda, which will be published for distribution in 1982; more memoranda are planned. The main purpose of the memoranda is to provide small-scale producers in developing countries with detailed technical and economic information on alternative production technologies which may efficiently compete against capital-intensive technologies from industrialized countries. In preparing these technical memoranda, it was agreed to invite other United Nations agencies, such as FAO and UNEP, to participate in subjects of specific relevance to them.

96. The Secretariat participated in several meetings and discussions with regional commissions and other United Nations agencies. These included formal intersecretariat meetings or informal discussions with UNCTAD, UNESCO, ILO and FAO in regard to programmes of common interest; discussions with the Centre for Science and Technology for Development, including contributions to the preparation of the operational plan for the implementation of the Vienna Programme of Action on Science and Technology for Development, and participation in the meetings of the Intergovernmental Committee on Science and Technology for Development; discussions with the United Nations Centre on Transnational Corporations on the preparation of

⁴¹ID/B/266, chap. III, para. 64.

⁴²ID/B/259, para. 6.

joint study projects in the field of micro-electronics; and the contribution of a paper to a meeting on technological policy organized by the Economic Commission for Western Asia (ECWA).

INDUSTRIAL DEVELOPMENT DECADE FOR AFRICA, 1980-1990

97. As stated in a report to the Board at its fifteenth session,⁴³ the Executive Director established a UNIDO Task Force on the Industrial Development Decade for Africa. Assuming its functions in November 1980, the Task Force held a series of meetings in the first four months to familiarize itself with those activities of the Organization that were of relevance to the objectives of the Industrial Development Decade for Africa. It also set about the task of elaborating, in co-operation with ECA and OAU, a programme of action for the Decade along the lines set out in the chapter devoted to industry in the Lagos Plan of Action for the Implementation of the Monrovia Strategy for the Economic Development of Africa.⁴⁴ To this end, a joint meeting was held with representatives of ECA and OAU in March 1981 in Vienna, at which agreement was reached on the fundamental principles contained in the Lagos Plan of Action and on its translation into an operational programme.

98. In the following months and in the light of the importance attached to the Industrial Development Decade for Africa by the Board at its fifteenth session,⁴⁵ work proceeded on the preparation of proposals for the formulation and implementation of a programme for the Decade. The proposals as presented to the Intergovernmental Meeting of Experts on the Programme of the Industrial Development Decade for Africa and to the Sixth Conference of African Ministers of Industry, held in October and November 1981 respectively, comprised four major working papers entitled: "Framework for the preparation and implementation of the programme", "Guidelines for the formulation of strategies for major industrial subsectors and areas", "Monitoring and reporting on the implementation of the programme for the Industrial Development Decade for Africa" and "Modalities for the implementation of the programme".

99. The Task Force, some of whose members were among the UNIDO representatives at the Meeting of Experts and the Conference of Ministers, was instrumental in the preparation of the first paper, and contributed to the elaboration of the others. It also prepared an information paper on the possible contribution of the organizations and bodies of the United Nations system to the implementation of the Industrial Development Decade for Africa. The basis of this paper was derived from contacts established with the heads of organizations and bodies within the United Nations system who had been requested by the Executive Director to submit their ideas and contributions.

100. In addition to the above papers, the Task Force, in co-operation with the UNIDO divisions concerned, prepared and submitted to the two meetings

⁴³ID/B/261/Add.6, para. 11.

⁴⁴A/S.11/14, annex I, chap. II.

⁴⁵A/36/16, annex I, resolution 54 (XV).

background papers entitled "Historical account of the Industrial Development Decade for Africa", "The UNIDO System of Consultations and the African countries", "Possible contribution of UNIDO to the Decade", together with the "Report of the Joint OAU/UNIDO symposium on industrial technology for Africa, Khartoum, Sudan" and the "Joint UNIDO/OAU draft study on the development of industrial and technological manpower in the African countries: a proposed framework of action".

101. On the occasion of the Sixth Conference of African Ministers of Industry, an agreement was signed pertaining to the establishment of a joint committee of the OAU, ECA and UNIDO secretariats on the implementation of the programme for the Industrial Development Decade for Africa within the framework of the Lagos Plan of Action. Designed to strengthen co-operation between the three secretariats in the development of more effective programmes of work for the implementation of the Lagos Plan of Action and General Assembly resolutions 35/64 and 35/66B, the Joint Committee shall, in summary: (a) recommend to the heads of the three organizations policies and strategies for the implementation of the Decade Programme; (b) propose ideas and programmes covering all requirements for the implementation of the Decade; (c) submit proposals on consultations and negotiations for industrial collaboration and development; (d) co-ordinate all the activities of the three secretariats related to the implementation of joint programmes and projects; and (e) monitor and review progress in the implementation of these activities, as well as assist in the overall monitoring, review and appraisal of the implementation of the Decade Programme.

102. The first meeting of the Joint Committee took place early in January 1982 and discussed the immediate actions arising out of the resolution 1 (VI) on, and proposals for, the formulation and implementation of a programme for the Industrial Development Decade for Africa adopted at the Sixth Conference of African Ministers of Industry. A progress report and the four working papers mentioned in paragraph 98 above will be submitted to the Industrial Development Board at its sixteenth session under agenda item 7 on the Industrial Development Decade for Africa.

SYSTEM OF CONSULTATIONS

103. The General Assembly, in resolution 36/182 of 17 December 1981, strongly supported the strengthening of the System of Consultations, giving particular attention to measures which could increase the industrial capacities of developing countries. The System has now been established as a permanent forum for the continuing dialogue between developed and developing countries in the field of industry. In 1980, when considering the follow-up to the Third General Conference of UNIDO, the Industrial Development Board concurred that priority should be given to the System of Consultations and agreed on the importance of industrial restructuring, including social aspects of industrialization;⁴⁶ furthermore, following its consideration of the System of Consultations,

⁴⁶A/35/16, para. 54.

the Board decided to make the Consultations a permanent activity of UNIDO and defined further some of its main characteristics.⁴⁷ In 1981, its Permanent Committee adopted for submission to the Board the draft Rules of Procedure under which the System is to operate.⁴⁸ The Board also approved preliminary work to widen the scope of the System of Consultations, as recommended by the Third General Conference of UNIDO; the new sectors and topics to be covered are wood and wood products, building materials, non-ferrous metals, and energy-related industrial technology and equipment.

104. In 1981, in line with the decisions of the Board, three Consultations were convened: the Second Consultation on the Petrochemical Industry, held in Istanbul (Turkey), from 22 to 26 June; the First Consultation on the Capital Goods Industry, held in Brussels (Belgium), from 21 to 25 September; and the First Consultation on the Food Processing Industry, held in The Hague (Netherlands), from 9 to 13 November. (A report on these Consultations will be included in the document to be submitted to the Board under agenda item 9.)

105. Thus, 14 Consultations on industrial sectors have been convened in the five years from 1977 to 1981. Furthermore, preparations have been made to convene in 1982 Consultations on industrial financing, on the training of industrial manpower, and on the iron and steel industry, as well as a regional Consultation on the agricultural machinery industry in Africa.

106. A review of the Consultations which have taken place so far, in particular those held in 1981, points to a number of features which are summarized below.

107. Experience has demonstrated the usefulness of involving all interested parties in the System of Consultations. The views of representatives of industry and labour as well as those of Governments have been an essential factor in assessing the changing world context within which each sector evolves and the problems encountered in increasing the developing countries' share in total world production in that sector. Now that two or more Consultations have been convened in some sectors, it is clear to all parties involved that a consultation meeting is only a milestone in the consultation process. Because the problems dealt with at the Consultations are so complex and by their nature have such important implications, a continuous and close dialogue is required with Governments, which are responsible for national interests, as well as with the institutions and enterprises influencing economic and social life which, as it turns out, are the most important contributors so far to the consultation process. Since many interests and a variety of motivations are involved, it is only by setting out the issues under consideration in a clear and precise manner that it has been possible to refine them and to evolve solutions that are of mutual benefit to all parties concerned and that may be adopted by consensus.

108. An important and hitherto unrecognized impact of the System of Consultations is that the UNIDO Secretariat has developed new and valuable contacts in each sector through this continuing dialogue. This has enabled the

⁴⁷*Ibid.*, paras. 151-153.

⁴⁸ID/B/270, para. 104.

Organization to be fully aware of all factors affecting the main trends in each sector, to anticipate problems as they arise and to reorient technical co-operation programmes in full cognizance of those factors. For example, through the Consultations the following trends, which have a particularly significant impact on the industrialization of developing countries, have been brought to the attention of Governments, the international business community and the UNIDO Secretariat:

(a) The very sharp increase in the cost of all industrial plants that occurred in the 1970s and the difficulties this poses for developing countries, whose income from sales of commodities fluctuates;

(b) The instability and fragility of the present international financial system and its impact on the industrialization of developing countries;

(c) The vital contribution which the food processing, agricultural machinery and fertilizer industries can make to meeting the food production and distribution requirements of the developing countries in the next 20 years;

(d) The increasing gap between the needs for industrial manpower in quantitative and qualitative terms and the existing capacity to meet those needs;

(e) The possible economic viability of mini-fertilizer and iron and steel plants so that more developing countries can enter these fields;

(f) The continuing process of restructuring in the petrochemical industry without the involvement of developing countries, despite the growing importance of feed-stock costs as a proportion of total production costs;

(g) The slow-down in the establishment of new mines to produce iron ore and coking coal for the steel industry, and the increasing gap between demand and supply in developing countries;

(h) The difficulties that developing countries have encountered in acquiring technology to manufacture the basic ingredients of the drugs needed to treat the main diseases prevailing in developing countries;

(i) The growing scarcity of hides and skins and the importance of helping developing countries to utilize their raw materials and thus expand the world supply of leather and leather goods.

109. Another interesting trend has been observed. Acknowledging that the full picture of a given sector can only be obtained by subjecting the sector to a global analysis, and being aware of the central role played by industrial production in the overall development process, participants have expressed the desire to address themselves in a single forum to all aspects of a particular sector, including trade, marketing, financing technology and training. The fact that these matters are interrelated implies the involvement of other relevant organizations of the United Nations system that can make specific contributions. It is gratifying to note that these organizations are willing to participate in the consultation process by examining in an integrated manner such subjects as:

(a) The complex education-training-industrialization interrelationships, examined by the UNIDO/ILO/UNESCO Inter-secretariat Working Group on the Training of Industrial Manpower;

(b) The integrated development of the agro-food chain, examined by the Joint UNIDO/FAO/UNCTAD/ITC Working Group on the Food Processing Industry;

(c) The world demand and supply situation in fertilizers, examined by the UNIDO/FAO/World Bank Working Group on Fertilizers;

(d) The ground rules for the rationalization of production, marketing and trade in the leather and leather products industry, examined by the Panel on Leather and Leather Products Industry, on which UNCTAD and FAO are represented.

110. A gradual change has been observed in the attitudes of the different parties to the consultation process. This has been due: (a) to their exposure to the problems faced by developing countries; (b) to their growing awareness of the fact that, in important sectors, the interests of developed and developing countries converge in the long run; and (c) to the exchange of views and information that has taken place on industrial projects and on ways of improving existing forms of co-operation to implement them. In order to increase the negotiating capacity of developing countries and to render the conditions for international co-operation more transparent, the following recommendations were made in 1981.

(a) The First Consultation on the Food Processing Industry recommended that UNIDO should establish a roster and assist in bringing clients in developing countries into contact with appropriate partners. It was agreed that international co-operation could be increased and improved, particularly through the involvement of new partners, such as small- and medium-scale enterprises and co-operatives;

(b) The Round-Table Meeting of Experts on Pharmaceuticals, held at Mohammedia (Morocco), December 1981, agreed that the directory of manufacturers and suppliers of bulk drugs and their intermediates being prepared by UNIDO would assist developing countries in considering a wider range of alternative sources of supply;

(c) The Second Consultation on the Petrochemical Industry recommended that UNIDO should provide information on opportunities for co-operation between industrialized and oil- and gas-producing developing countries for the development of downstream petrochemical industries in other developing countries;

(d) The First Consultation on the Capital Goods Industry recommended that UNIDO should make information available to developing countries on long-term technological trends, on technological alternatives and their availability, results and costs and on the commercial conditions for their acquisition.

111. It has become clear that one way of achieving the results expected by developing countries in terms of their development and socio-economic difficulties is to explore, *inter alia*, the possibility of concluding long-term arrangements for industrial co-operation that add stability to their economic

relations and that can be tailored more specifically to their development needs. This approach was supported by the Consultations held in 1981. For example:

(a) The First Consultation on the Food Processing Industry concluded, *inter alia*, that given the interrelated aspects of establishing and developing this industry, new forms of international co-operation should be explored through the development of a frame of reference in this sector; such a frame of reference should provide policy guidelines for a comprehensive approach to the acquisition of training, technology, financing, marketing etc. The Consultation stressed, furthermore, the importance of long-term arrangements that would increase the participation of the food-producing developing countries in processing activities, create a more equitable distribution of the benefits among those involved in the agro-food chain, and link the food processing industry to the other sectors of the economy;

(b) The Second Consultation on the Petrochemical Industry recommended that the UNIDO Secretariat examine the various forms of long-term arrangements for international co-operation in the sector along the parameters discussed at the Consultation. The Consultation agreed that long-term arrangements for the production and marketing of petrochemical products would help to ensure the orderly development of the industry world-wide and that they might cover international co-operation between countries and companies concerning their policies on the replacement or expansion of capacities for selected petrochemical products;

(c) The First Consultation on the Capital Goods Industry requested UNIDO to propose measures to improve the flow of technology to developing countries, taking into account the mutual interest of the recipient and supplier of technology and, in particular, the overall consequences with regard to the effect on employment in the capital goods industry.

112. Consideration of improved forms of international co-operation, and particularly contractual relations at the enterprise level, has led to the following observation: whilst the United Nations has done much, through the United Nations Commission on International Trade Law (UNCITRAL), to establish standard international practice for laws governing international trade, the current practice of applying trade laws to international industrial co-operation does not appear to provide the right framework for dealing with problems which involve long-term obligations not normally associated with the simple purchase and sale of goods. Participants in Consultations have stressed the need to adapt current practice in industrial contracts to the more extensive and longer-term requirements of the industrialization process in developing countries. At their request, the UNIDO Secretariat has developed:

(a) Two model forms of contract for the construction of a fertilizer plant in the form of comprehensive contract plus technical annexures, which has been agreed by an international group of experts representing the interests of both contractors and purchasers; developing countries have begun to use these model contracts as a guide when negotiating with contractors;

(b) A model form of licensing agreement for the petrochemical industry; the Second Consultation on the Petrochemical Industry recommended that UNIDO should prepare a more extensive commentary on the text and alternative texts where divergent views had been expressed; after review by a

group of experts, this new draft should be distributed to all member countries and participants in the Second Consultation;

(c) A check-list of points to be covered in contractual agreements in the leather and leather products industry, which was approved by the Panel on Leather and Leather Products Industry at the end of 1981; UNIDO was requested to circulate the check-list to members of the industry and to other interested parties;

(d) A document containing terms, conditions and variations thereof for three types of contracts related to the establishment of the pharmaceutical industry, as well as background notes.

113. Another feature has been the growing recognition of the importance of co-operation amongst the developing countries. When the Bureau of the Third Consultation on the Fertilizer Industry met in May 1981, it felt that UNIDO should give first priority to practical ways of exchanging experience on the construction and operation of fertilizer plants. The Second Consultation on the Petrochemical Industry also recommended a special programme of co-operation to develop downstream industries. The First Consultation on the Food Processing Industry suggested that the more industrialized developing countries could help other developing countries and that training programmes and research and development institutes at the regional level should be strengthened. This will constitute a first step towards meeting the goals of developing countries as expressed in Caracas (Venezuela) in May 1981 at the High-Level Conference on Economic Co-operation among Developing Countries. In this connection, it is noteworthy that this Conference recommended that the developing countries should discuss and co-ordinate issues of mutual interest to them prior to their participation in Consultations. The UNIDO Secretariat looks forward to this recommendation becoming operational in the near future.

114. To conclude, 1981 has witnessed in the first place the inclusion of two key industrial sectors for the industrialization of developing countries in the System of Consultations: the capital goods and food processing industries; an important step has thus been taken towards meeting the goals and objectives of developing countries, in line with the Lima Declaration and Plan of Action. Secondly, parties in both developed and developing countries have come to realize the underlying mutual benefits of industrial co-operation; and thirdly, they have recognized that alternative and improved forms of industrial co-operation will have to be explored if the mutual advantages of such co-operation are to be reaped.

115. The year 1982 is expected to be marked first by the Third Consultation on the iron and steel industry, which will have before it the scenarios for this industry that were requested by the Second Consultation. These scenarios for 1990 will consider all factors affecting the iron and steel industry; their final preparation will therefore involve all parties in the selection of negotiable items required for the implementation of the projects planned in this period.

116. Secondly, the System of Consultations will begin operations at two additional levels, the regional and the global. At the regional level, a Consultation will be held on the agricultural machinery industry in Africa. In this way, the problems of industrial infrastructure and of the production of

capital goods in Africa will be tackled; it should be recalled that the First Consultation on the Capital Goods Industry recommended the convening of a Consultation in Africa. At the global level, 1982 will see the convening of two Consultations which will contribute considerably towards a better understanding of the key factors affecting the industrialization of developing countries: financing for industry and the training of industrial manpower. These two Consultations will consider many of the questions on these two common topics raised at the 14 sectoral Consultations already held, which have so far not been answered satisfactorily.

INDUSTRIAL FINANCING

117. As a follow-up to the request contained in the New Delhi Declaration and Plan of Action,⁴⁹ work was carried out on an initiative to ensure a substantial increase in the flow of additional financial resources to developing countries in order to accelerate their industrialization. At the beginning of 1981 two meetings were held with the Special Advisory Group of Experts on International Industrial Financing; the participants were mostly central or international bankers from all regions. Following the conclusions of the expert group, and in line with General Assembly resolution 35/66A, paragraph 10, a proposal for setting up an International Bank for Industrial Development⁵⁰ was submitted to the Industrial Development Board and discussed at its fifteenth session. The proposed bank would attempt to fill the existing gap in international industrial financing, would be based in the market place and would be subject to more equitable control than existing institutions. In accordance with a decision by the Board⁵¹ and resolution 1981/75, adopted by the Economic and Social Council on 24 July 1981, the proposal was also submitted to the Permanent Committee for consideration at its sixteenth session.

118. The proposal also attracted a good deal of attention from other parts of the international community as well as from the financial and economic press. In particular, the Sixth Conference of African Ministers of Industry, held in Addis Ababa, November 1981, in resolution 3 (vi) called upon the Industrial Development Board to decide on the convening of an intergovernmental conference with the objective of examining and deciding upon the proposal for the establishment of an International Bank for Industrial Development.

119. The Permanent Committee at its sixteenth session requested the Executive Director to submit a report to the Industrial Development Board at its sixteenth session indicating relevant developments as well as information derived from his usual contacts.⁵²

120. The General Assembly in resolution 36/182 of 17 December 1981, requested the Board to consider carefully the proposal with a view to taking a decision on it, and requested the Executive Director to continue his efforts on the subject, in accordance with relevant decisions of the Permanent Committee at its sixteenth session.

⁴⁹ID/CONF.4/22, chap. IV, paras. 152, 160.

⁵⁰ID/B/261/Add.7.

⁵¹A/36/16, para. 99.

⁵²ID/B/270, para. 76.

ASSISTANCE TO THE LEAST DEVELOPED COUNTRIES

121. As in the past, in 1981 the planning and adoption of special measures in support of industrial development of the least developed countries continued to be one of the top-priority concerns of the Organization. In addition to intensifying and strengthening existing programmes which focus, *inter alia*, on the manufacturing sector including industrial inputs to agricultural development and the human and physical infrastructure, there were concentrated efforts in two new areas. These involved plans for launching a few programmes in specific subsectors, and preparations for and participation in the United Nations Conference on the Least Developed Countries, which yielded a number of decisions for follow-up action. A further important area to which efforts continued to be directed was the co-ordination of UNIDO's participation in the third UNDP country programming exercise.

122. It may be recalled that UNDP decided to increase substantially the indicative planning figures (IPFs) for the least developed countries for the period 1982-1986.⁵³ According to the Substantial New Programme of Action for the 1980s for the Least Developed Countries,⁵⁴ adopted at the United Nations Conference on the Least Developed Countries, held in Paris, September 1981, the official development assistance to these countries is likely to double by 1985, compared to the transfers which took place during the last five years.⁵⁵ Some increase is also expected in the allocation devoted to the least developed countries under UNIDF, if overall resources made available to this funding source are to meet the annual target level of \$50 million.

123. All the above-mentioned factors will lead to a considerable expansion in the demand for technical assistance and other services to be provided by UNIDO, including assistance in industrial planning and project preparation and formulation. Therefore the sectoral review missions so far sent to 10 least developed countries had the objective of identifying and, as far as possible, formulating project proposals to be financed not only under the national IPF, but also under other sources which might be made available to these countries, including bilateral sources. Depending on priorities established by the Governments of the 10 recipient countries, it is expected that the closer association of UNIDO in the preparatory stages of country programmes would lead to a more useful programme of assistance to the industrial sector in these countries for the next five years. However, in view of special difficulties faced by certain of these countries and subsequent changes in their priorities, UNIDO has hitherto been unable to associate itself in their programming exercises despite the efforts and the preparatory work which had been done for that purpose.

124. With regard to the technical co-operation activities carried out by UNIDO in 1981, relevant statistics are provided in appendix O. The total value of project approvals from all sources of funds, including revisions for ongoing

⁵³ID/B/260, chap. III, para. 79.

⁵⁴A/CONF.104/22, part one.

⁵⁵*Ibid.*, chap. II, para. 63.

projects, reached approximately \$15.0 million by the end of December 1981. The predicted decline in new project approvals, which started in 1980, continued in 1981 and this is particularly valid with regard to project approvals under the national IPFs, which cover approximately 80 per cent of UNIDO's technical co-operation activities for the least developed countries. The decline is mainly due to the fact that most of the UNDP-financed projects were approved in the first 3 years of the second country programming cycle, with very few of them remaining to be approved in the last period of the cycle. Furthermore, with the closing of the second UNDP country programming cycle in 1981, there was less room than in previous years for additional allocations to ongoing activities by way of project revisions. In addition, for reasons beyond UNIDO's control, special difficulties were encountered in developing new projects and accelerating their approval in some countries. In certain cases, even the operational projects had to be suspended. As far as delivery of technical assistance to the least developed countries is concerned, the total value under all sources of funds, including unliquidated obligations, reached \$20 million at the end of 1981, i.e. approximately the same level as in 1980.

125. During the year under review, UNIDO participated actively in the preparatory work for the United Nations Conference on the Least Developed Countries. UNIDO also participated in the Conference itself, with a delegation headed by the Executive Director. Two papers were contributed dealing with the industrial sector. In addition, upon request, assistance was provided to several least developed countries in preparing their own documentation for the series of individual country review meetings organized in preparation for the Conference. UNIDO inputs to the Conference were co-ordinated by the Least Developed Countries Section which will continue to act as the focal point in ensuring mobilization of the Organization's efforts for the implementation of the Substantial New Programme of Action adopted at the Conference. The Programme of Action contains specific recommendations and measures which are of relevance to many of the subprogrammes in UNIDO and their activities for the future. The Secretariat's initiatives and intentions in response to the various recommendations contained in the Programme of Action have already been described in the Addendum to the "Draft medium-term plan for the period 1984-1989"⁵⁶ submitted to the Permanent Committee at its fifteenth session. It is worth repeating at this juncture, however, that in the absence of additional resources UNIDO will not be in a position to respond fully to the call of the least developed countries for the increasing variety of services involved in the follow-up, monitoring and implementation of the Substantial New Programme of Action.

126. Through its programming, operational and promotional activities, UNIDO has been continually striving to channel an ever-increasing quantum of the limited resources at its disposal towards covering the special needs of the least developed countries, in order to generate additional resources and to influence the decisions of other parties in this respect, including the least developed countries themselves. The special programmes of UNIDO covering investment promotion, energy, technology, Industrial Development Decade for

⁵⁶ID/B/C.3/107/Add.1.

Africa, System of Consultations, and co-operation among developing countries continued to give special attention to the least developed countries. The Investment Co-operative Programme of UNIDO provided assistance to the least developed countries in identifying and promoting projects for investment by financial institutions and potential investors in the developed countries. The Investment Promotion Offices opened in various developed countries were also used to train representatives of least developed countries in project promotion activities along the lines of the programme which started in New York in 1979 (see para. 13 above).

127. With regard to the mobilization of additional resources for the industrial development of the least developed countries, consultations took place in 1981 between UNIDO and a number of special funds and financial institutions (e.g. United Nations Capital Development Fund, Arab Gulf Programme for United Nations Development Organizations, Islamic Development Bank) with a view to obtaining funds for some of the projects identified with UNIDO assistance in various least developed countries. A number of selected projects, which seem to fit the criteria for financing by these institutions, have already been submitted to them for further consideration and eventual negotiations with the Governments of the least developed countries concerned. A further UNIDO activity in which resources have been devoted exclusively to promoting industrial development in the least developed countries involves the organization and follow-up of Solidarity Meetings as part of the programme for economic and technical co-operation among developing countries (ECDC/TCDC) (see paras. 131-136 below). In co-operation with the Government of Yugoslavia which has been one of the most active partners of UNIDO in the promotion of ECDC/TCDC activities, another joint activity has been planned and is expected to be launched very soon in support of selected least developed countries in Africa, with the aim of accelerating agro-industrial development.

128. Despite financial and manpower limitations, the UNIDO Regional and Country Studies Branch in 1981 undertook the preparation of industrial surveys for seven least developed countries; there are plans to prepare further studies in 1982 (see chap. III, para. 25). In addition, desk country industrial development profiles or country industrial briefs have been prepared in respect of some of these countries as part of UNIDO's participation in the UNDP country programming exercise for the period 1982-1986 (see *ibid.*, para. 26). These activities were carried out in response to the recommendation contained in the New Delhi Declaration and Plan of Action, which calls upon the Secretariat to assist in the establishment of comprehensive inventories of the resources of least developed countries, particularly alternative energy sources, and prepare industrial surveys of these countries to support endogenous exploitation of their resources.⁵⁷

129. As briefly indicated in paragraph 126 above, UNIDO's special programmes have been continually trying to design and implement special activities in support of industrial development of the least developed countries. These efforts will be continued and increased as the resource situation improves.

⁵⁷ID/CONF.4/22, chap. VI, para. 296.

CO-OPERATION AMONG DEVELOPING COUNTRIES

130. In 1981 UNIDO vigorously pursued the promotion of its programme for economic and technical co-operation among developing countries (ECDC/TCDC) despite resource constraints. This programme has five mutually supporting components: (a) organization of Solidarity Meetings in least developed countries and round-table ministerial meetings in order to mobilize support and co-operation of interested developing countries for the promotion of industrialization; (b) follow-up of the decisions and agreements reached at such Solidarity Meetings; (c) development of joint programmes for specific industrial sectors; (d) implementation of the conclusions and recommendations relating to TCDC, arrived at through Consultation meetings; and (e) promotion of co-operation through study tours, training programmes and seminars.

131. With regard to the first component, UNIDO in 1981 organized Solidarity Meetings in the Sudan and Upper Volta with the aim of fostering co-operation in the industrial development of these two countries. At the Sudan meeting, attended by representatives of 22 countries and 6 development financing institutions, 54 projects were examined by the participating countries of which 25 were selected for implementation in 1981-1983 with a view to providing technical and financial assistance to the Government of the Sudan. Offers made for these 25 co-operation projects include, for instance, the supply of machinery and equipment in the form of a grant of the equivalent of \$900,000 for the establishment of a pilot plant for production of bricks (Yugoslavia); technical co-operation in the planning, execution and operation of the Khartoum Central Foundry and a grant of the equivalent of \$400,000 for purchase of equipment (Algeria); and a grant of the equivalent of \$226,000 (Rs 2 million) for technical co-operation in preparation of feasibility studies, experts services and training (India). China agreed to earmark \$100,000 from its national indicative planning figure (IPF) for procurement of equipment and technical co-operation to the Khartoum Ready-Made Clothes Factory, and Oman showed interest in financing a sugar mill on an equity basis.

132. The Solidarity Meeting in Upper Volta, held from 1 to 4 December 1981, was attended by representatives of 18 countries and 9 financial institutions and international organizations. The bilateral and group discussions resulted in a considerable number of concrete offers of technical assistance to Upper Volta. India offered a grant of \$56,500 (Rs 500,000) to carry out feasibility studies in the fields of irrigation and mini-/micro-hydro-power stations; soft loans up to \$2,260,000 (Rs 20 million) for the purchase of industrial equipment; and expertise, training and equipment for any project submitted. Pakistan offered soft loans for expertise, training and the entire equipment for the establishment of a sugar industry complex and, under similar concessionary conditions, assistance for the establishment of a cement plant. Tunisia offered expertise, training and equipment for projects dealing with granite breaking and crushing and underground phosphate extraction.

133. For 1982, two Solidarity Meetings are scheduled, one each in Lesotho and Nepal. In accordance with the agreements reached between UNIDO and

the respective Governments, the intensive preparatory work for these two meetings was carried out in 1981, including the identification and elaboration of detailed project portfolios jointly by the host Governments and UNIDO.

134. In 1981, UNIDO also carried out preparatory work, including project proposals and background papers, for a round-table ministerial meeting of selected Arab countries for co-operation in the industrial development of Mauritania, to be held in January 1982 in co-operation with the Arab Industrial Development Organization (AIDO). Preparatory work also continued for a round-table ministerial meeting on agro-industry development in Iraq, to be held in February 1982. The main objectives of the meeting will be to study the experience of Iraq with regard to strategy, policies, programming and institutional aspects of integrated agro-industrial development and compare the experiences of other participating developing countries. Potential areas and forms of co-operation among the participating countries are also expected to be identified.

135. Follow-up of Solidarity Meetings was a main feature of the ECDC/TCDC programme of UNIDO during the year under review. As a result of the Solidarity Meeting held in the United Republic of Tanzania, July 1979, assistance was extended to that country by a number of other countries. For example, Yugoslavia, in co-operation with UNIDO, is assisting the United Republic of Tanzania in the establishment of a foundry with integrated mechanical workshop in Mwanza. The project, with a total cost of \$1,050,000, will be executed during the period 1981-1983. Egypt started a training programme for Tanzanian officials, providing a total of 50 fellowships, and Turkey offered to assist in the execution of several projects which are being finalized for implementation. In addition, with the support of UNIDO, two senior Tanzanian officials visited Brazil to define follow-up action to the agreements reached at the 1979 Solidarity Meeting. As a follow-up to the 1979 Solidarity Ministerial Meeting held in Port-au-Prince (Haiti), a joint Haiti/UNIDO mission visited Brazil, Colombia, Mexico and Venezuela to discuss and finalize co-operation agreements between those countries and Haiti. Several projects were identified and proposals of assistance are being analysed for approval.

136. At the 1980 Bangladesh Solidarity Meeting, 77 projects with a total cost of \$88 million were agreed upon. UNIDO and the Government of Bangladesh reviewed the list of projects in March 1981 and selected 19 priority projects for processing and implementation. In this connection, UNIDO sponsored the visit of a high-level Bangladesh Government mission to Pakistan, to discuss the implementation of a co-operation project for the establishment of a sugar mill. According to the Memorandum of Understanding signed by Pakistan and Bangladesh, Pakistan will supply machinery and equipment in the form of a soft loan of approximately \$8 million for the establishment of a sugar mill in Bangladesh and will provide supervisory services for plant construction and start-up.

137. With regard to the development of joint programmes for specific industrial sectors, emphasis was given in 1981 to the agro-industries and cement and sugar industries. A joint UNIDO/Yugoslav programme for international co-operation in the development of food processing industries in the developing

countries was organized on the occasion of the forty-eighth International Agricultural Fair held in Novi Sad (Yugoslavia), May 1981. Twelve least developed countries from Asia and Africa participated in this programme with exhibits of selected products and a portfolio of specific projects. A number of projects were selected and agreed upon for bilateral and multilateral assistance, including possible UNIDO assistance within the ECDC scheme.

138. In co-operation with the Government of Turkey and the Turkish Cement Manufacturers Association, UNIDO organized a High-Level Meeting on Co-operation among Developing Countries in the Field of Cement, Lime and Related Industries in Ankara (Turkey), December 1981. The objectives of the meeting were (a) to review these industries in the developing countries and assess their urgent needs for support that could be mobilized within the TCDC framework and (b) to start the planning of the short- and long-term co-operation programmes necessary for attaining the uninterrupted development of this sector.

139. In October 1981, a Workshop on Maintenance and Repair of Sugar Industry Equipment was held in Havana (Cuba) jointly organized by UNIDO, the Group of Latin American and Caribbean Sugar Exporting Countries (GEPLACEA) and the Government of Cuba. The major conclusion of the Workshop was to embark on a joint regional programme in the maintenance of sugar industry equipment. In addition, the Government of Cuba expressed its interest in developing, with UNIDO assistance, a coherent programme for ECDC/TCDC arrangements in various industrial sectors.

140. One of the important components of the ECDC/TCDC programme is the follow-up of the conclusions and recommendations of Consultation meetings. The Third (1980) Consultation on the Fertilizer Industry requested, *inter alia*, that UNIDO initiate a programme of action in the field of fertilizers, within the framework of co-operation among developing countries. The Section for Economic Co-operation among Developing Countries is therefore preparing such a programme to be implemented over the next two or three years. As a first step, an inventory is being drawn up of the specific areas of training needs and capabilities in selected developing countries. A number of countries, both needing assistance and able to provide capabilities in the field of training, have responded positively. It is expected that, on the basis of the inventory, an ECDC training programme in the field of fertilizers will be finalized in 1982.

141. The fifth component of the ECDC/TCDC programme encompasses a series of activities designed to foster contacts, understanding and mutually useful joint activities. To give a few examples, plans were made for a mission of senior design and technology staff of the machine tool industry in Beijing (China) to visit India in February 1982. It is expected that this mission will be the beginning of an exchange of experience and co-operation between Indian and Chinese organizations, institutes and factories in the machine tool industry. In order to promote co-operation in the field of non-metallic minerals and processing, with a special focus on building materials for the construction industry, a workshop will be held in 1982, in co-operation with the Government of Yugoslavia. In addition, the Section for Economic Co-operation among Developing Countries continued in 1981 to organize a number of study tours, e.g. 6 officials from Indonesia visited Greece, the Syrian

Arab Republic and Yugoslavia to study industrial fairs management; 9 Ugandan officials visited Indonesia for studies in the field of building materials; 4 officials from Upper Volta and 1 Zambian official studied the development of rural industries in India; and 2 Portuguese officials undertook missions to Argentina, Brazil and Uruguay to gather experience in the field of leather industries.

142. The ECDC/TCDC programme will be further developed in 1982, particularly in the African region in support of the Industrial Development Decade for Africa. Additional activities in connection with the Decade are being initiated in the fields of manpower and integrated agro-industry development.

INDUSTRIAL OPERATIONS

A. Implementation overall in 1981

1. 1981 marked the final year of the second UNDP country programming cycle for most countries. A review of UNIDO technical co-operation over the five-year period shows that the momentum gained in technical assistance delivery up to 1979 slowed down in 1980 and recovered again in 1981. As stated previously,¹ the level of delivery can be maintained only if resources of staff directly involved in technical co-operation activities are increased.

2. Field activities involved a total of 1,734 projects, comprising 101 of more than \$1 million in value; 398 of upwards of \$150,000 in value; and 1,235 smaller-scale. Tables 1 and 2 below show, respectively, technical co-operation expenditure in 1980 and 1981, by source of funds and project components.

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

Source of funds	1980		1981	
	\$ thousand	%	\$ thousand	%
Regular programme	3 462	4.5	3 458	3.9
UNDP				
IPF and cash counterpart	52 089	68.3	63 998	72.3
SIS	3 897	5.1	1 568	1.8
Programme reserve and special measures	1 263	1.7	1 537	1.7
United Nations Interim Fund for Science and Technology for Development	—	—	1 737	2.0
Subtotal	57 249	75.1	68 840	77.8
Other funds				
UNIDF	10 591	13.9	10 391	11.8
Trust funds	4 136	5.4	4 847	5.5
SIS Trust Fund	63	0.1	11	—
Non-UNIDO funds	779	1.0	905	1.0
Subtotal	15 569	20.4	16 154	18.3
TOTAL	76 280	100.0	88 452	100.0

¹ID/B/260, chap. II, para. 3.

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

Project component	1980		1981	
	\$ thousand	%	\$ thousand	%
Project personnel	36 295	47.6	42 007	47.5
Subcontracts	9 309	12.2	15 673	17.7
Fellowships and training	11 215	14.7	9 905	11.2
Equipment	18 028	23.6	19 287	21.8
Miscellaneous	1 433	1.9	1 580	1.8
TOTAL	76 280	100.0	88 452	100.0

3. During 1981, project development work required for the third country programming cycle of the United Nations Development Programme (UNDP) continued to demand much staff time both at UNIDO Headquarters and in field missions to prepare project proposals and assist Governments in the design and formulation of technical co-operation projects. The field missions, together with consultations at regional level (particularly with economic commissions and UNDP regional bureaux and within the framework of conferences of ministers of industry), resulted in a number of new regional projects currently under consideration for UNIDO implementation.

4. In recent years, projects have grown in size and particularly in complexity. To maintain and enhance the quality of implementation, the Division of Industrial Operations has set up management teams for multi-disciplinary and multi-sectoral projects. The Division has also established technical advisory committees for certain large, highly technical and specialized projects. These committees (comprising staff of the Division and consultants together with project counterparts from developing countries) held discussions at Headquarters and in the field and reviewed work plans, progress achieved, corrective actions, where necessary, and proposals for future work. These added functions have placed a heavy burden on the staff of the Division, over and above normal project implementation duties and the provision of technical inputs to the activities of other divisions. In addition, an increasing share of technical input from the staff of the Division of Industrial Operations was provided to projects either financed from the United Nations Interim Fund for Science and Technology for Development and the special-purpose contributions to the United Nations Industrial Development Fund (UNIDF) or carried out in connection with activities regarding integration of women in development. This included backstopping at UNIDO Headquarters, participation in project formulation and evaluation missions.

5. In the technical co-operation programme, there was greater emphasis on the specific priority areas identified by the Industrial Development Board at its fourteenth session² as a follow-up to the Third General Conference of UNIDO, namely industrial technology, energy-related industrial technology, industrial production, development of human resources and special measures for the least developed countries.

6. Secretariat staff worked on several expert panels for the preparation of the United Nations Conference on New and Renewable Sources of Energy and

²A/35/16, vol. II, para. 54.

participated in the work of the Conference itself, which was held in Nairobi, August 1981. Staff also attended the United Nations Conference on the Least Developed Countries held in Paris, September 1981. As a result of the Conferences, new concepts and programmes were proposed and developed for the UNIDO contribution to activities related to these areas; these proposals were incorporated in the Addendum to the "Draft medium-term plan for the period 1984-1989".³

7. As reported last year,⁴ the trend towards "invisible" technical assistance in direct advisory services provided by the staff of the Division of Industrial Operations continued to grow. The five interregional advisers financed under the UNIDO regular programme of technical co-operation and attached to the Office of the Director of the Division played an important role in the provision of such services. In close collaboration with the substantive branches and sections of UNIDO, these advisers undertook technical missions in their respective fields of specialization related to metallurgy, engineering, agro-, chemical and energy-related industries. As experts, they were able to respond to urgent technical assistance requests from Governments, providing their experience and skills within a far shorter time span than would otherwise have been the case with normal technical assistance procedures. In addition, in the area of project development, the interregional advisers made a significant contribution to UNIDO activities in assisting Governments in project design and formulation. The activities undertaken by them during 1981 were reflected in the results of a number of programming missions in connection with the third UNDP country programming cycle as well as technical assistance co-operation financed under trust-fund arrangements.

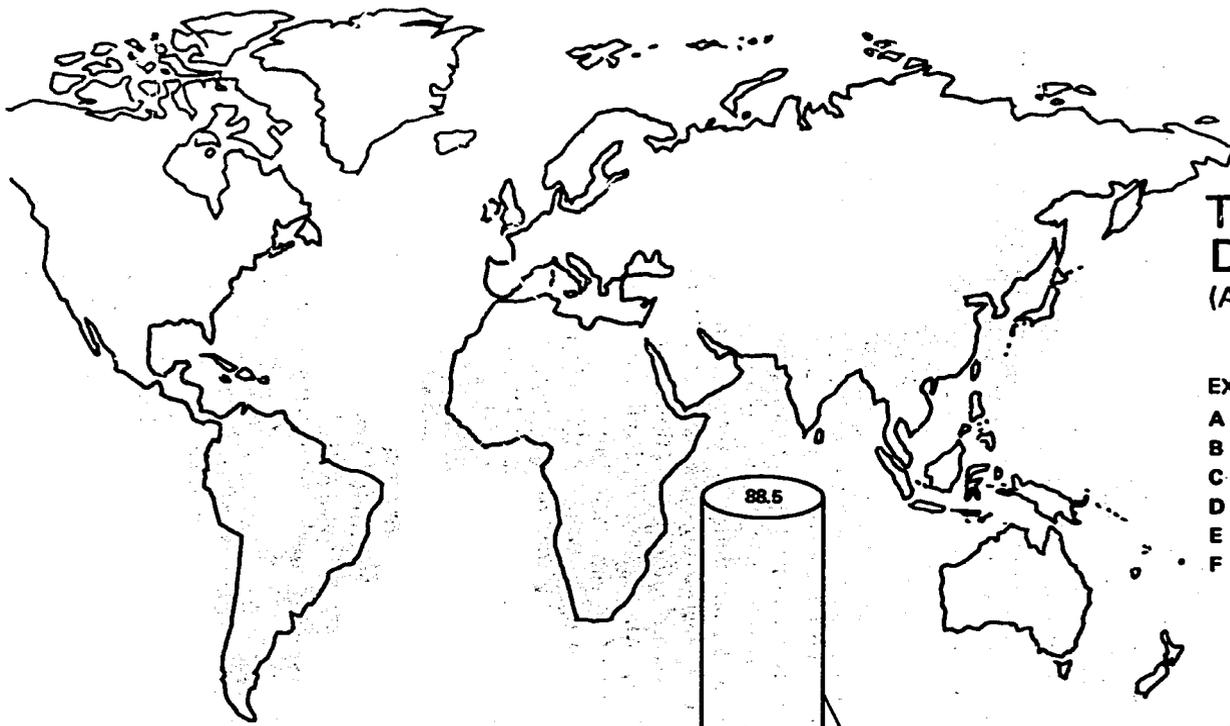
8. In 1981, the problems of energy supply, production, conservation and management continued to preoccupy most developing countries. There were increasing requests for technical assistance in areas of energy-related technology such as improvement of petroleum refinery operations; natural gas distribution and utilization; synfuels from coal and peat; fermentation biofuels; mini-hydro power; and wind and solar energy. In energy conservation, efforts were being directed towards the design and construction of fuel-efficient equipment and the development of alternative, fuel-saving processes. In addition, the Joint UNIDO/Czechoslovakia Programme for International Co-operation in the Field of Ceramics, Building Materials and Non-metallic Mineral-based Industries covered the subject of energy conservation. The newly established industrial energy engineering unit in the Office of the Director of the Division of Industrial Operations⁵ served as a co-ordinating unit and as a focus for technical assistance in this area. During the year under review the number of energy-related technology projects increased to over 50.

9. In keeping with General Assembly resolutions 35/66B on the Industrial Development Decade for Africa and 34/210 on special measures in favour of the least developed among the developing countries, a number of technical advisory missions and programming missions were organized by the technical staff to advise and assist the African region and the least developed countries

³ID/B/C.3/107/Add.1.

⁴ID/B/260, chap. II, para. 8.

⁵*Ibid.*, para. 13.

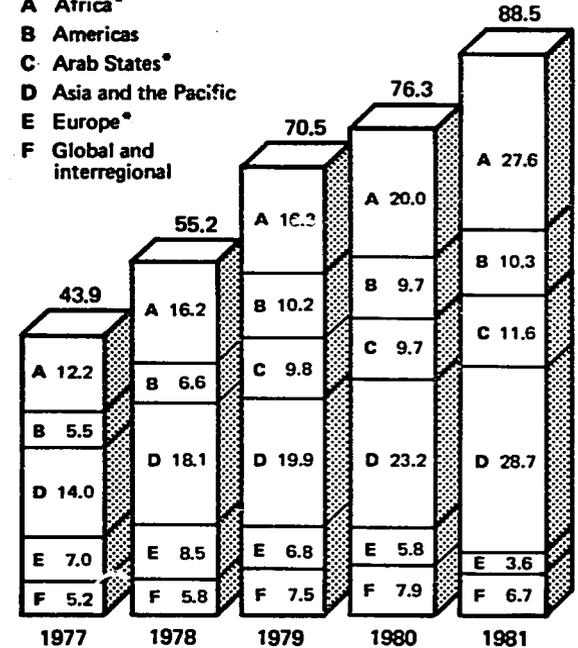


TECHNICAL ASSISTANCE DELIVERED BY UNIDO

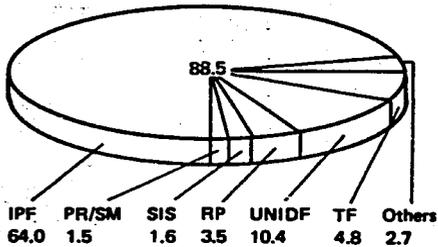
(All regions, in millions of US dollars)

EXPENDITURES 1977 TO 1981

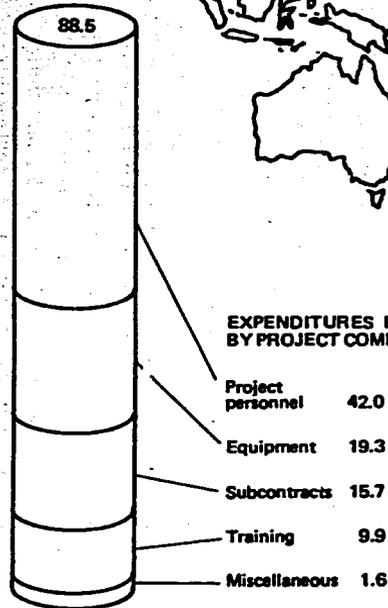
- A Africa*
- B Americas
- C Arab States*
- D Asia and the Pacific
- E Europe*
- F Global and interregional



EXPENDITURES IN 1981 BY SOURCE OF FUNDS



EXPENDITURES IN 1981 BY PROJECT COMPONENT



* Prior to 1979, expenditures related to the Arab States were reported partly under Africa and partly under Europe and Western Asia.

and accelerate the pace of industrialization. In co-operation with the Economic Commission for Africa (ECA), technical inputs were provided to the building materials, chemical, pharmaceutical, wood, food processing and agricultural machinery sectors and endogenous industrial management consultancy capacities were strengthened. Special consideration was also given to countries in the African region and least developed countries to enable their increased participation in technical meetings and group training programmes organized by UNIDO.

10. In the course of 1981, considerable work was done to strengthen national capabilities, particularly those of the least developed countries, to carry out pre-investment work. Activities involved: setting up industrial advisory units; preparing individual pre-investment studies; conducting seminars on the preparation and evaluation of industrial feasibility studies; and providing additional financing to carry out pre-investment studies. One Government has already indicated its willingness to make a special-purpose contribution to UNIDF for 1982 to 1984 to finance the UNIDO pre-investment study programme in the least developed countries.

11. Efforts were also undertaken to ensure better co-ordination of all inputs required in the pre-investment and investment phases in order to achieve successful project implementation and subsequent operation. In April/May 1981 a Memorandum of Understanding was signed between UNDP and UNIDO on co-operative arrangements on investment follow-up (see appendix B). This arrangement will enable UNIDO to upgrade and update pre-investment studies and thus improve the linkages between pre-investment and investment.

12. During the year under review, some developing countries requested UNIDO to focus attention on higher technology projects, such as bio-engineering, polymer blends, semiconductor manufacture, computer-aided design and manufacture (CAD/CAM), robotics development, electron-beam and laser welding technology, vibrophore fatigue testing of welded structures under pulsating loads, etc. This trend was manifested through the type of processes transferred to these countries and the nature of the skill required from field experts. There was also interest in the use of technologies utilizing agricultural raw materials which, under certain circumstances, have become technologically and economically attractive, e.g. the production of certain chemicals by fermentation, and the construction of silos using natural fibres and of laminated beams and roof trusses using coconut wood.

13. In addition to the development and transfer of technology through technical co-operation activities in the field of agro-, metallurgical, engineering and chemical industries and through pre-investment work within the context of feasibility studies, UNIDO is responsible for implementing eight research projects approved by the United Nations Interim Fund for Science and Technology for Development in 1981 with a total value of over \$6 million. These projects include: research in metallurgical processes; development of silicon technology, sucro-based chemicals and antibiotics production techniques; recycling of chemical waste; and research in carbon-fibre composite technology. A number of other science- and technology-based projects are under consideration by the same Fund.

14. The year under review saw increased activity in the provision of consulting and advisory services to enterprises and manufacturers, in order to enhance the development of managerial and decision-making tools and to deal with questions of industrial production and expansion, the increase of industrial capacity utilization and the development of national consultancy capacities. Joint programmes in this area have been initiated at regional level in co-operation with the Economic and Social Commission for Asia and the Pacific (ESCAP) and ECA.

15. Training activities in 1981 involved, *inter alia*, the strengthening and establishment of "centres of excellence"⁶ to train technical personnel at national level and through TCDC (technical co-operation among developing countries) arrangements in areas such as building materials, metallurgy, textiles, plastics, packaging and leather products. In addition to increasing the number of fellowships, UNIDO also helped to organize more study tours of relatively short duration, to enable senior officials of government institutions in developing countries to visit leading companies and research organizations abroad for technical consultations. It has been proven in many cases that effective advantage can be taken of study tours to identify and select research and pilot plant equipment, to arrange the placement of fellowships and to expedite the recruitment of experts. Such a partnership of UNIDO, Governments and senior project personnel in sharing responsibility to secure inputs to UNIDO projects has proven to be particularly effective, and in many cases possible delays in project implementation have been avoided. There were also successful efforts to place fellows and participants of study tours in the centres and institutions assisted by UNIDO.

16. The effects of some innovative approaches in technical co-operation undertaken between UNIDO and international development banks were apparent in 1981. The banks showed a growing tendency to use UNIDO technical experience and expertise in the execution of projects they financed. By way of illustration, UNIDO technical assistance to the Syrian Arab Republic in the recycling of municipal waste⁷ led to an investment of \$20 million provided by the OPEC Fund for International Development, the Islamic Development Bank and the Arab Fund for Economic and Social Development. In addition, UNIDO continued to provide technical advisory services to assist the Government of the Syrian Arab Republic in planning the construction of that recycling plant. Another example of such co-operation was the Workshop on Petroleum Processing, held in Vienna, April 1981, in which the OPEC Fund and the Austrian Government joined UNIDO in financing and sponsoring the workshop. In view of the successful outcome the three parties have agreed to co-operate in repeating the programme in 1982. Encouraged by co-operative efforts with UNIDO, the Islamic Development Bank requested the Organization to execute a project on its behalf for petroleum storage and unloading facilities in the Comoros. This would be the beginning of a partnership between that Bank and UNIDO for future technical co-operation activities.

17. Some Governments showed increasing confidence in UNIDO for the implementation of technical co-operation projects under trust-fund arrange-

⁶*Ibid.*, para. 172.

⁷*Ibid.*, para. 19.

ments. The good results achieved in the implementation of a cement project in Benghazi (Libyan Arab Jamahiriya) led to a request for another similar project in that country. Another example of growing confidence was a trilateral agreement in Uruguay where under UNIDO technical supervision the Government of Spain provided experts on a non-reimbursable agreement basis.

18. The Office of the Director of the Division of Industrial Operations, as the primary source of general management for the implementation of industrial operations, co-operated and participated in the working group on procedures relating to the implementation of technical co-operation activities with a view to simplifying internal procedures. In addition to providing the technical inputs for programming missions, the Division co-operated with the Division of Policy Co-ordination in the evaluation of technical co-operation activities related to manufactures—a joint undertaking with UNDP and the United Nations Secretariat. A self-evaluation programme was also initiated. Close contact was maintained with the Office of the Deputy Executive Director with regard to project development, implementation and evaluation (see also chap. VI, "Reviews and evaluations"). In order to benefit from one another's experience and to improve efficiency, new contacts were initiated and maintained through the exchange of information and visits between the Central Reference Office and the Briefing/Debriefing Office of UNIDO, their corresponding units in the United Nations Secretariat and other specialized agencies. The UNIDO "Chief technical adviser's manual"⁸ for the use of project personnel and substantive officers was completely revised in 1981.

19. Close co-operation and contacts were also maintained with other United Nations agencies, both in designing joint programmes and activities such as technical meetings and working groups, and in implementing programmes of technical co-operation.

20. Although inflation continued to influence the value of implementation, the overall effect of the inflationary trend was largely compensated by the dollar strengthening during the first nine months of 1981.

21. From the experience gained in programming missions and in the implementation of projects, it is evident that for many developing countries the share of the industrial sector in the UNDP third programming cycle (1982-1986) will be significantly increased. In addition, the developing countries' and international development banks' higher demand for UNIDO technical co-operation, the work in priority areas identified by the Industrial Development Board, the Industrial Development Decade for Africa and special funds such as the United Nations Interim Fund for Science and Technology for Development, UNIDF and trust funds will continue to make heavy demands on the technical staff services of the Division. As already pointed out in last year's *Report*⁹ the expansion of UNIDO technical co-operation activities, however, cannot occur unless additional staff resources are provided.

⁸UNIDO/IO.222/Rev.2.

⁹ID/B/260, chap. II, para. 21.

B. Implementation by region

22. Table 3 below provides a breakdown of technical co-operation expenditure by geographical area in 1981, with corresponding figures for 1980. In comparing 1981 figures against those for other years, it should be borne in mind that the regional heading "Arab States" was used in the *Report* for the first time in 1979. The Arab States count six countries formerly listed under "Africa" and 12 formerly listed under "Europe and Western Asia".¹⁰

TABLE 3. TECHNICAL CO-OPERATION EXPENDITURE, BY GEOGRAPHICAL AREA

	1980		1981	
	\$ thousand	%	\$ thousand	%
Africa	19 973	26.2	27 554	31.1
The Americas	9 702	12.7	10 290	11.6
Arab States	9 720	12.7	11 628	13.2
Asia and the Pacific	23 228	30.5	28 707	32.5
Europe	5 820	7.6	3 572	4.0
Global and interregional	7 837	10.3	6 701	7.6
TOTAL	76 280	100.0	88 452	100.0

AFRICA

23. As anticipated in last year's *Report*,¹¹ 1981 showed a continued increase in field activities in Africa; technical assistance delivery for the region amounted to \$27.6 million, against \$20 million in 1980, an increase of about 38 per cent. A breakdown of technical assistance delivery by source of funds and project component, with corresponding figures for 1980, is given in tables 4 and 5 below.

24. UNIDO activities in the African region continued to focus on assistance in strengthening and establishing institutional, technological and manpower capabilities. Three factors that contributed to the growth of UNIDO activities in the institutional field were the proclamation in 1980 of the Industrial Development Decade for Africa, the preparation of national development plans in many African countries and the fielding of programming missions to most countries in the region in connection with preparations for the third UNDP country programming cycle. Industrial advisory units, providing an integrated approach to pre-investment work, were set up in the Congo, Djibouti, Ethiopia, Mali and Mauritania, with a view to improving the identification, preparation and implementation of projects and helping to prepare master plans for the development of key industrial sectors.

¹⁰*Africa*: Algeria, Egypt, Libyan Arab Jamahiriya, Morocco, Sudan, Tunisia; *Europe and Western Asia*: Bahrain, Democratic Yemen, Iraq, Jordan, Kuwait, Lebanon, Oman, Qatar, Saudi Arabia, Syrian Arab Republic, United Arab Emirates, Yemen.

¹¹ID/B/260, chap. II, para. 39.

TABLE 4. TECHNICAL CO-OPERATION EXPENDITURE IN AFRICA, BY SOURCE OF FUNDS

Source of funds	1980		1981	
	\$ thousand	%	\$ thousand	%
Regular programme	872	4.4	869	3.2
UNDP				
IPF and cash counterpart	13 883	69.5	21 694	78.7
SIS	1 451	7.3	558	2.0
Programme reserve and special measures	700	3.5	667	2.4
United Nations Interim Fund for Science and Technology for Development	—	—	500	1.8
Subtotal	16 034	80.3	23 419	84.9
Other funds				
UNIDF	1 182	5.9	2 199	8.0
Trust funds	1 387	6.9	469	1.7
SIS Trust Fund	18	0.1	5	—
Non-UNIDO funds	480	2.4	593	2.2
Subtotal	3 067	15.3	3 266	11.9
TOTAL	19 973	100.0	27 554	100.0

TABLE 5. TECHNICAL CO-OPERATION EXPENDITURE IN AFRICA, BY PROJECT COMPONENT

Project component	1980		1981	
	\$ thousand	%	\$ thousand	%
Project personnel	12 092	60.5	14 471	52.5
Subcontracts	2 769	13.9	4 284	15.6
Fellowships and training	1 644	8.2	1 746	6.3
Equipment	3 005	15.1	6 349	23.0
Miscellaneous	463	2.3	704	2.6
TOTAL	19 973	100.0	27 554	100.0

25. Special efforts were devoted to the development of rural and small-scale industries, particularly in the least developed countries, to reduce the heavy urban concentration of industry and the subsequent exodus from rural areas. Assistance took two forms: promotion of local entrepreneurship through the provision of technical and managerial services; and establishment of units in such fields as building materials, food processing, metalworking and the production of agricultural tools. The countries assisted included Botswana, Burundi, Ethiopia, Ivory Coast, Kenya, Niger, Nigeria, Upper Volta and Zaire. In Kenya, a new phase of assistance in large-scale and sectoral planning was begun and various studies were undertaken; new fields were also covered, including joint-venture negotiations and industrial and technological information.

26. A number of aspects of the energy question continued to receive special attention. These included the identification and development of new and

renewable sources of energy, the utilization of applicable technologies and the planning of energy production and consumption as well as the management of available energy. The Government of Angola has expressed its satisfaction with the implementation of a project that began in 1979 with the establishment of a petroleum development centre, of which three phases have now been completed, to be followed by a fourth. Within the project, a second petroleum seminar was successfully implemented in May 1981, with the participation of representatives from other developing countries (the first seminar was held in October 1978).

27. In Rwanda, the rehabilitation of the Lake Kivu methane-gas pilot plant entered its final phase (see also para. 255 below). The project is of prime importance to this land-locked least developed country with no alternative sources of energy. Assistance was also given to Mali in its efforts to find alternative sources of energy, and to the Comoros for the solar-energy distillation of Ylang-Ylang flowers. In Zaire, UNIDO assisted in the establishment of a free zone as the basis for project preparation and investment promotion for utilization of the 1,760 MW capacity of the hydro-power plant at Inga, on the Zaire river. In the United Republic of Cameroon, energy resources in rural areas were reviewed and their possible utilization for industrial development analysed.

28. In the public sector, which encompasses the biggest share of industrial plants in most African countries, industries are often working below capacity and products are not competitive sometimes due to general problems of management and quality control. UNIDO developed a comprehensive programme which takes the form of multi-disciplinary projects, usually implemented through government departments, with the aim of developing management methods and simultaneously improving productivity in specific factories. In Ethiopia, for example, the outputs of two enterprises in marble-processing and plastic-product manufacturing were more than doubled in 1981. Assistance was also provided during the start-up phases of an edible-oil-processing plant and of various textile factories.

29. Pursuant to the recommendation of the Lagos Plan of Action for the Implementation of the Monrovia Strategy for the Economic Development of Africa¹² that African countries should be assisted in the development of appropriate industrial technologies, UNIDO continued its efforts to assist in the establishment or development of industrial R + D (research and development) institutes, in line with the priority areas defined in the New Delhi Declaration and Plan of Action. Continued assistance was given to the Tanzanian Industrial Research and Development Organization¹³ as well as to the Institut de recherche scientifique et industrielle in Lubumbashi, Zaire.¹³ Assistance provided to the Ivory Coast¹⁴ concentrated on strengthening the capacity to evaluate and adapt various imported industrial technologies to local conditions and also develop an indigenous technological base.

30. Activities in African countries in the field of metallurgical industries increased markedly in 1981. In Angola, where 15 foundries and foundry shops

¹²A/S-11/14, annex I, chap. V.

¹³ID/B/260, chap. II, para. 25.

¹⁴ID/B/220, chap. II, para. 106.

are working below capacity, a project was implemented to evaluate the status of the foundry industry covering: the possibilities of producing different types of castings to meet the country's specific needs; the availability and costs of raw materials; and the availability and quality of the necessary skilled manpower. On the basis of this evaluation, which also covered management planning and co-ordination with other industrial branches, a master plan for the industry's rehabilitation and development is being prepared.

31. Assistance to the least developed of the African countries continued to receive high priority in the UNIDO programmes. Although in many cases the assistance was provided under projects due to end with the second UNDP programming cycle, almost all Governments requested continuation into the next cycle. In the Central African Republic, a project was implemented to strengthen the capabilities of the Ministry of Commerce and Industry through the establishment of a department for the planning, development and preparation of industrial investment projects. This department is to be responsible for revising and executing the national five-year development plan; identifying feasible projects; analysing the requirements of small- and medium-scale industries and providing them with basic assistance. There is also a strong training component within the project for the development of skilled manpower for industrial planning and project preparation. Similar projects were also implemented in other least developed countries, e.g. Benin and Lesotho.

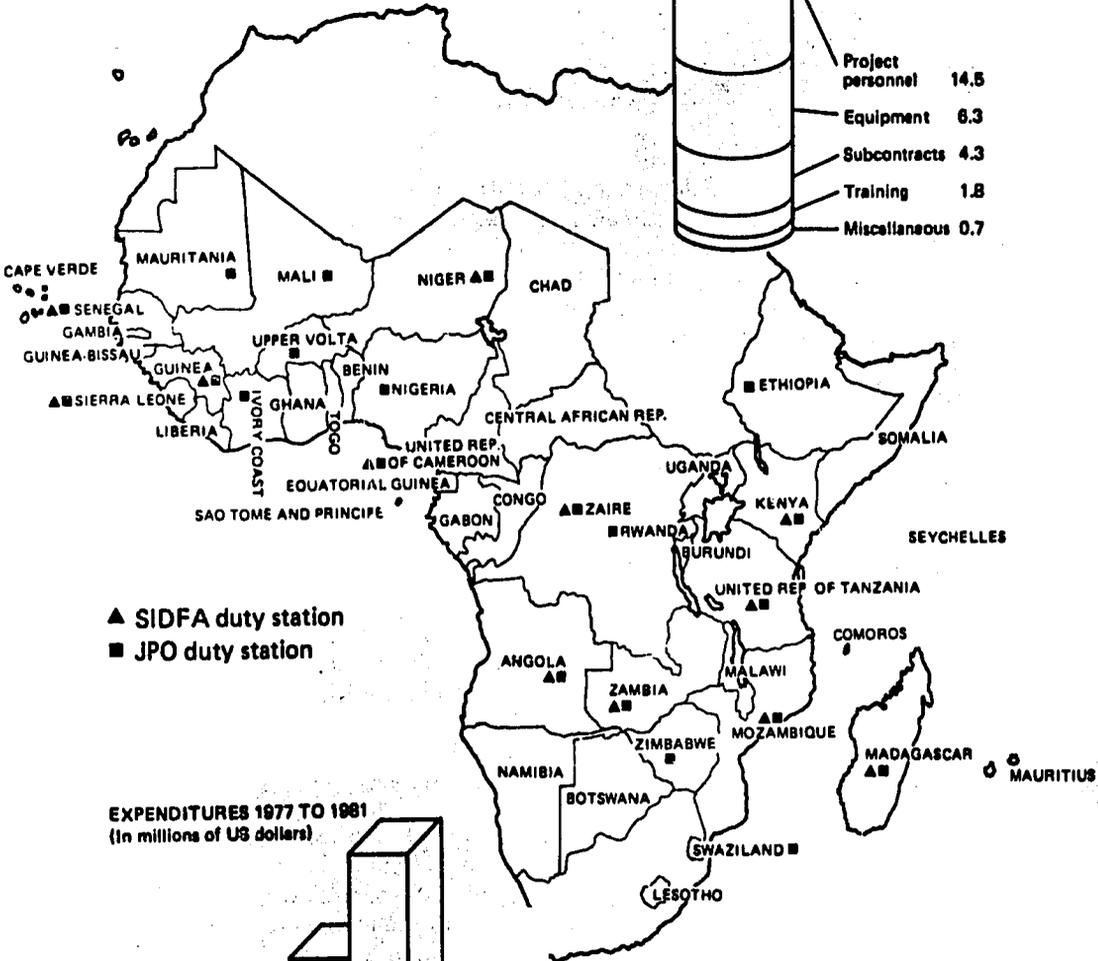
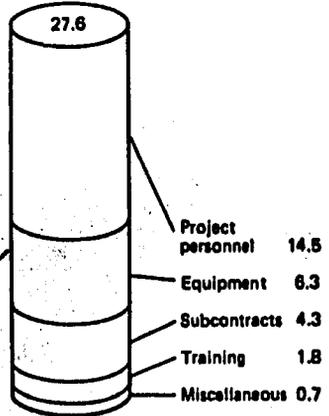
32. In many least developed countries there was continued emphasis on the planning of industrial sectors which, through the use of local resources, are vital for the achievement of self-sufficiency in food, building materials and clothing. The establishment of an integrated long-term industrial structure and the elaboration of policies for technology development received special attention. Assistance was provided to Benin, Central African Republic, Guinea-Bissau and Rwanda in preparing industrial development plans in keeping with the twin principles of the Lagos Plan of Action—self-reliance and self-support. A project was implemented in Djibouti to assist the Ministry of Industry and Industrial Institutions in formulating an industrial policy; promoting small-scale industries; and transforming the outdated structured economy into an integrated, modern economy able to meet the country's basic needs.

33. To meet the growing interest of a number of African least developed, land-locked and island developing countries in the manufacture of domestic glass hollow-ware, a technology was developed in co-operation with a British firm for the semi-automatic production of up to 5,000 tons/year of quality glass containers. In Malawi, this technology will soon be applied in a factory producing a full range of bottles, jars and utility ware; other countries, including Cape Verde and Upper Volta, may follow if the quality of their raw materials proves to be suitable.

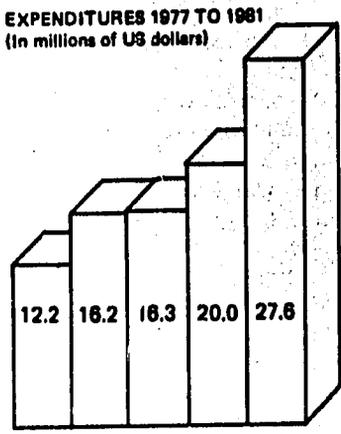
34. A \$3 million project implemented in Guinea for the establishment of facilities for the production of pharmaceutical formulations on a turn-key basis is a good example of transfer of technology in a large-scale project in a least developed country. The plant is expected to be completed in 1982/1983. A project being formulated in Mozambique and another being implemented in the United Republic of Tanzania are further examples of efforts undertaken in Africa for the development of indigenous capabilities in the production of pharmaceuticals (see also para. 267 below).

**EXPENDITURES IN 1981
BY PROJECT COMPONENT**
(In millions of US dollars)

AFRICA

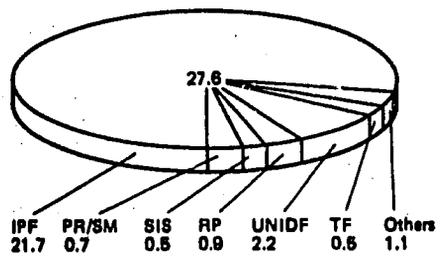


▲ SIDFA duty station
■ JPO duty station



* The figures for 1977-1978 include six countries which, since 1979, are listed under Arab States.

EXPENDITURES IN 1981 BY SOURCE OF FUNDS
(In millions of US dollars)



35. In the Sudano-Sahelian countries, assistance concentrated on project identification, design and implementation; industrial processing of local raw materials; optimization of the output of industrial plants and equipment through better management; and the establishment of appropriate repair and maintenance workshops. In Mauritania, the Government received assistance in establishing an industrial information centre, with a view to improving industrial planning and consolidating decision-making bodies, as well as stimulating the creation of new enterprises and improving the profitability of existing ones. In Mali, assistance continued to be provided to the *Entreprise malienne de maintenance* with the aim of reinforcing its operational capacity in transport and production equipment and transforming it into a commercially and technically viable unit. The establishment of this type of workshop in the land-locked Sahelian countries will not only help to develop internal transport networks, but will also make access to ports easier by linking them to the African international transport system—in line with the objectives of the Transport and Communications Decade in Africa (1978-1988).

36. Regional and subregional activities were particularly intense in 1981. Work continued on projects initiated in previous years and, after consultation with regional and subregional organizations, several new projects were prepared for the third country programming cycle. The major areas for co-operation included strengthening the institutional infrastructure and providing assistance in the formulation of industrial programmes and policies, the acquisition of new technologies and manpower development. UNIDO assisted the Economic Community of West African States (ECOWAS) in the formulation of subregional policies and programmes, and particularly in the preparation of a legal framework for establishing subregional industrial enterprises and pinpointing the areas in which transnational enterprises may operate within the territories of the member States of ECOWAS. At a later stage, assistance will also cover the identification of industrial projects, the preparation of pre-feasibility and feasibility studies, and negotiations with possible investors.

37. Further subregional activities involved: a project implemented jointly with the United Nations Conference on Trade and Development (UNCTAD) to assist the Central African Customs and Economic Union (UDEAC) in industrial infrastructure development; and, in association with the Food and Agriculture Organization of the United Nations (FAO), assistance to the Niger-Nigeria Joint Commission for Co-operation in the preparation, evaluation and implementation of industrial and agro-industrial projects common to the two member States, and in the training and development of manpower.

38. UNIDO joined efforts with ECA and the Organization of African Unity (OAU) in fostering regional and subregional technical and economic co-operation and integration and helping African countries to achieve the objectives of the Industrial Development Decade for Africa. A brief description of current activities related to the Decade is contained in chapter IV (paras. 97-102), and a progress report on the Decade will be submitted to the Industrial Development Board at its sixteenth session under agenda item 7. Inter-country industrial planning projects were promoted within the framework of intergovernmental organizations of Western Africa, to which UNIDO gave assistance.

39. Training and manpower development, which proved to be the most appropriate activities for fostering co-operation at the regional and subregional levels, were carried out both in Africa and elsewhere for African nationals. Preparatory assistance was provided to UDEAC for the establishment of a subregional multi-sectoral institute for applied technology, project planning and evaluation, which is expected to be followed by a large-scale project to be implemented during the next five years. In Angola, Brazil and Portugal participated in a training programme specially designed for the Portuguese-speaking African countries, to promote technical co-operation in training industrial skills.

40. It is expected that the role of UNIDO in the African region will continue to grow in importance in the light of the efforts made by African countries to develop their industries and meet the goals set by the Lima Declaration and Plan of Action and the Lagos Plan of Action. This trend is reflected in the national development plans and in the increased allocation of funds to the industrial sector under the indicative planning figure (IPF) at country and inter-country levels.

THE AMERICAS

41. The total value of projects executed in the Americas in 1981 reached \$10.3 million as compared to \$9.7 million in 1980—an increase of 6.2 per cent. A breakdown of delivery, by source of funds and project component, with corresponding figures for 1980, is given in tables 6 and 7 below:

TABLE 6. TECHNICAL CO-OPERATION EXPENDITURE IN THE AMERICAS, BY SOURCE OF FUNDS

Source of funds	1980		1981	
	\$ thousand	%	\$ thousand	%
Regular programme	318	3.3	309	3.0
UNDP				
IPF and cash counterpart	7 900	81.4	7 950	77.3
SIS	614	6.3	391	3.8
Programme reserve and special measures	100	1.0	74	0.7
United Nations Interim Fund for Science and Technology for Development	—	—	921	9.0
Subtotal	8 614	88.7	9 336	90.8
Other funds				
UNIDF	499	5.2	453	4.4
Trust funds	224	2.3	184	1.8
SIS Trust Fund	19	0.2	—	—
Non-UNIDO funds	28	0.3	8	—
Subtotal	770	8.0	645	6.2
TOTAL	9 702	100.0	10 290	100.0

TABLE 7. TECHNICAL CO-OPERATION EXPENDITURE IN THE AMERICAS, BY PROJECT COMPONENT

Project component	1980		1981	
	\$ thousand	%	\$ thousand	%
Project personnel	6 743	69.5	6 653	64.6
Subcontracts	549	5.7	1 203	11.7
Fellowships and training	819	8.4	408	4.0
Equipment	1 394	14.4	1 829	17.8
Miscellaneous	197	2.0	197	1.9
TOTAL	9 702	100.0	10 290	100.0

42. The priority accorded to industry by individual Governments for the third UNDP country programming cycle was discussed at field level, in co-operation with the UNDP Resident Co-ordinators. To judge from the size and variety of their programmes, countries such as Cuba, Mexico and Nicaragua are using all the options offered by UNIDO in terms of services, training and equipment, while other countries, where multilateral co-operation is not so much in demand, e.g. Argentina and Brazil, requested assistance of a more specialized nature.

43. Assistance in the field of energy conservation continued to be directed towards regional co-operation and greater and more efficient involvement in this sector. In this context, the Latin American Energy Organization (OLADE) has become the most dynamic instrument in the process of regional integration. UNIDO participated at the OLADE meeting held in Quito (Ecuador), August 1981, and actively contributed to the preparation of the Latin American programme of co-operation in the area of energy, submitted for approval to the Twelfth Extraordinary Ministerial Meeting of the member States of OLADE in November 1981. The drafting of this programme stemmed from a general consensus among the Latin American countries concerning a common approach to solving the most urgent and basic energy problems of the different member States.

44. UNIDO continued to support OLADE by providing assistance to improve the capital goods sector, promote the use of indigenous technological capacities, create co-operation schemes in the financial sector, and accelerate the integration process at regional and subregional levels.¹⁵ Specifically, UNIDO helped OLADE to develop mini hydro-power generating plants at selected sites in Costa Rica, Cuba and Uruguay. In addition, a Symposium on Project Design and Installation of Small Hydro-Power Plants was organized by UNIDO and the Government of Austria for participants from South America and members of the secretariat of OLADE.

45. In co-operation with the Central American Research Institute for Industry (ICAITI), UNIDO initiated an energy conservation project for the establishment of a pilot plant for the EX-FERM process of ethanol production at ICAITI in Guatemala City. The preparatory phase of the project was financed from the United Nations Interim Fund for Science and Technology for Development.

¹⁵ID/B/240, chap. II, para. 41; ID/B/260, chap. II, para. 44.

46. Also in the field of energy, Argentina was provided with three experts, who examined the possibilities of exploring important gas and oil reserves in the province of Neuquen.¹⁶ The project has already achieved positive results, since a number of entrepreneurs have expressed interest in the ethane obtained. As a follow-up to the work of the experts and their national counterparts, a proposal to install a plant producing olefins and derivatives with a capacity of 90,000 tons/year was approved by the Government; it is expected that the project will be financed from foreign investment.

47. In the engineering sector, assistance in the field of machinery industries continued to be provided to Argentina and to Ecuador; in this latter country the project covered both the industrial and the artisanal levels. In Mexico and Peru, assistance was completed in 1981 in the development of mechanical and electrical industries and testing laboratories for the electrical industry. Another project in Peru, dealing with the design and production of railway wagons, was also completed.¹⁷ Assistance in the form of a large-scale project to develop tool and die production and manufacturing engineering capabilities continued in Trinidad and Tobago, with a considerably increased budget. Cuba continued to benefit from technical assistance in programming maintenance for sugar refineries¹⁸ and initiated preparatory work for the forthcoming implementation of a large-scale project to develop computer techniques. Technical co-operation with Nicaragua in the establishment of a repair and maintenance centre was financed from UNIDF with a special contribution by Bulgaria.

48. The principle of integrated industrial project preparation and promotion was applied where possible, and major programmes were carried out in Costa Rica, Honduras, Panama, Paraguay and Peru. Since many different industrial sectors are involved, the co-ordinating role of UNIDO in this process has become even more vital for increasing the indigenous capacity to prepare and implement new projects. As a result of these efforts, pre-investment activities in Haiti, Panama, Paraguay and Peru will be carried out in 1982.

49. Several multidisciplinary projects in industrial planning, designed to recommend or formulate national medium-term development plans and to aid in the development of selected investment projects, were completed in Costa Rica, Dominican Republic, Guatemala and Nicaragua. In Uruguay, a planning project was continued, which included the provision of advice to the Ministry of Industry on an appraisal system of credit applications for World Bank funds.

50. With regard to capital goods development, UNIDO continued to assist Mexico in the implementation of a large-scale investment programme;¹⁹ a preliminary market survey for capital goods and equipment was carried out in Guatemala; and a new large-scale project in Venezuela was approved.

51. The spectacular growth of the iron and steel industry achieved by Latin America in the last 10 years and highlighted in last year's *Report*²⁰ could not be

¹⁶ID/B/260, chap. II, para. 59.

¹⁷*Ibid.*, para. 55.

¹⁸*Ibid.*, para. 56.

¹⁹*Ibid.*, para. 129.

²⁰*Ibid.*, para. 45.

sustained during 1981, when the final output of primary iron, raw steel and rolled steel products was at about the same level as in 1980. In spite of this projected lull in growth the Latin American Iron and Steel Institute suggested that countries should continue their expansion programmes so as to cope with an anticipated upturn in the world steel market in the mid-1980s. Thus, UNIDO assistance to Latin America in this sector did not experience any recession. After the effective and comprehensive assistance programme to the Chimbote plant of SIDERPERU in Peru, aimed at reducing operational and maintenance costs,²¹ the plant requested further assistance in developing the computerized maintenance system—the project is included in the 1982-1986 country programming cycle. In 1981, Special Industrial Services (SIS) assistance was provided to Argentina's Iron and Steel Research Institute in specialized fields (e.g. desulphurization and dephosphorization reactions in steel-making and reduction processes). As a follow-up, at the request of the Institute, UNIDO began to provide large-scale assistance for the creation of pilot plants for carbonization and agglomeration.

52. Several requests were received for UNIDO assistance in other metallurgical sectors, especially in the aluminium industry. A large-scale project, for which the United Nations Interim Fund for Science and Technology for Development is to provide \$950,800, was approved for the establishment in Jamaica of a modern, well-equipped bauxite-testing laboratory with an integrated pilot plant. Developments in local and international economic conditions during the year under review increased the nation's reliance on the bauxite/alumina sector and consequently called for an immediate strengthening and upgrading of the scientific and technological capabilities of the Jamaica Bauxite Institute. Projects in the bauxite/alumina industry were also formulated for Colombia and Guyana. Technical missions to Bolivia, Colombia, Paraguay, Peru and Venezuela discussed future UNIDO assistance in the foundries industry.

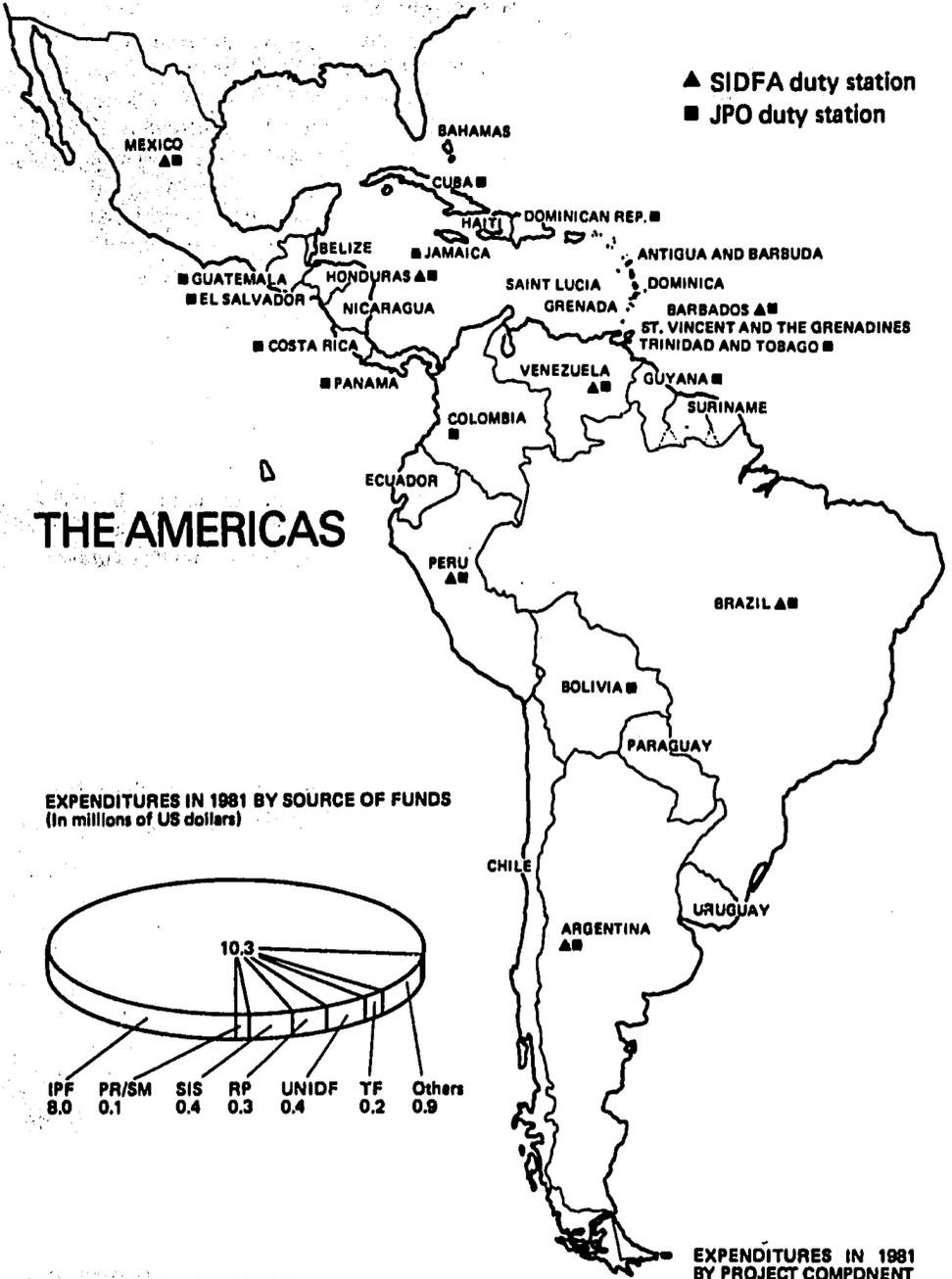
53. In the field of industrial standardization and related activities, UNIDO completed a project in Barbados to strengthen the Barbados National Standards Institution. The project, which also had a regional impact, involved the development of industrial standardization, certification and metrological capabilities to improve quality control and benefit both the consumer and export trade. In Brazil, a project for the standardization, quality control and quality certification of iron and steel²² led to substantial savings: the introduction of not more than five steel standards in one plant led to savings of about \$2 million/year.

54. National-scale production and self-sufficiency in the pharmaceutical and derivative industries were the objects of continued activities in the region. UNIDO and the United Nations Interim Fund for Science and Technology for Development collaborated on a project for the establishment of a regional fermentation programme for the production of antibiotics and other pharmaceuticals (see para. 272 below). Significant progress was also made in 1981 in the establishment in Cuba of a multi-purpose plant for the production of 15 essential synthetic drugs, a project that has been under way, with UNIDO assistance, since 1979.²³

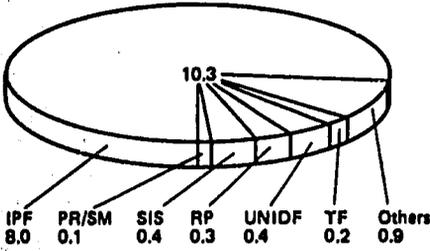
²¹*Ibid.*, paras. 45, 201.

²²*Ibid.*, para. 45.

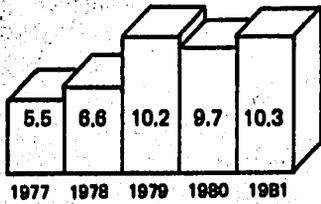
²³*Ibid.*, para. 234.



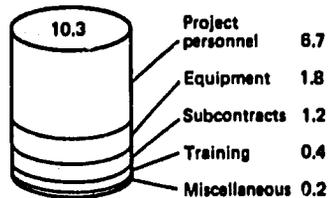
EXPENDITURES IN 1981 BY SOURCE OF FUNDS
(In millions of US dollars)



EXPENDITURES 1977 TO 1981
(In millions of US dollars)



EXPENDITURES IN 1981 BY PROJECT COMPONENT
(In millions of US dollars)



55. In seeking ways to improve management techniques, particular attention was paid to projects for achieving greater efficiency in public enterprises and bodies charged with project development and implementation. The areas involved included production, quality, maintenance and plant start-up, as well as procedures and systems. Such projects are being implemented in El Salvador, Nicaragua and Uruguay. In the latter country, it was possible to expand operations through the co-operation of the Government of Spain, which provided the services of four experts under a non-reimbursable loan; technical supervision was assumed by UNIDO. This pilot venture provides a new dimension for future bilateral and multilateral co-operation and co-ordination. A project in Guyana, started in 1980 for the establishment of an effective industrial and management consulting operation at the enterprise level and intended to service all operating entities of the Guyana State Corporation, progressed satisfactorily.²⁴ Another central topic in 1981 was the fostering of projects for the establishment of mini-computer consultancy centres, one of which was approved for Cuba. The aim is to create an interface between such centres and industry, and between universities and industry, in order to promote the use of computers to improve the operations of large- and medium-scale industries.

56. As several Latin American countries are facing the problem of rural migration to urban centres, UNIDO helped to develop policies and strategies to give a geographical balance to the growth of the productive sector. There was intensified activity within ongoing programmes to promote small and rural industries by securing the institutional mechanisms for providing effective extension services to such industries. Comprehensive and integrated programmes were continued and strengthened in Honduras, and projects of a similar nature were formulated to assist Costa Rica, Guatemala and Panama. Further efforts to stem rural migration involved assistance to the agro-industry sector, especially food industries in the development of large-scale sugar complexes in the Dominican Republic and integrated fruit-and-vegetable processing complexes in Brazil, Mexico, Paraguay, Peru, Uruguay and Venezuela.

57. In Mexico, the first phase of a project for the establishment of a national network for technical information²⁵ was completed, designed to help the National Council of Science and Technology strengthen all aspects of the institutional infrastructure for the application of science and technology.

58. The year under review saw the successful completion of a large-scale leather project in Saint Kitts.²⁶ Following a decision in 1975 by the Council of Ministers of the Caribbean Community (CARICOM) to establish specific manufacturing industries in selected Caribbean islands, a shoe factory, which started production in Saint Kitts in 1978 with UNIDO assistance, was turned over to local entrepreneurs by the UNIDO experts at the beginning of 1981. The Caribbean Shoe Company, which was initially formed by the Government and local entrepreneurs, is at present producing approximately 1,000 pairs of shoes a day for export to the United States of America, and a further 400 pairs a day for the Caribbean market.

²⁴*Ibid.*, para. 46.

²⁵*Ibid.*, para. 138.

²⁶*Ibid.*, para. 51.

59. A project was approved and is under way in Honduras to establish a low-cost modular prefabricated wooden bridge system to improve the national road network, especially in rural areas, using locally available materials (see also para. 200 below). The decentralized approach taken will help to curb unemployment outside urban areas by setting up medium-sized workshops. The system should prove to be applicable to other countries in Central and South America.

60. A major techno-economic feasibility study for the first textile manufacturing complex to be established in Haiti was completed during 1981. The study covered such factors as: market and plant capacity; demand and market situation; production programme; environmental aspects; raw materials and supplies; location and site; and technology and plant organization. A follow-up consultancy mission to examine further details is under discussion.

61. In an effort to strengthen agricultural output, UNIDO assisted in the promotion of the local manufacture of pesticides through national R + D institutes specializing in the synthesis, formulation and testing of pesticides. Regional pesticide development programmes in the form of co-operative networks, first set up in Asia, were recently introduced in the Latin American region. Assistance was provided to Latin American countries to establish contacts with the appropriate institutions and agencies participating in the programmes and to initiate projects which would continue to generate interest in long-term co-operation even after the cessation of UNDP/UNIDO assistance. Such programmes are implemented in association with FAO and the World Health Organization (WHO).

62. It appears from the above review that, notwithstanding the considerable amount and variety of individual requests for technical co-operation, the majority of the countries in Latin America and the Caribbean are increasingly concerned with regional integration in particular in new fields of technology where joint research and exchange of experience are of primary importance (i.e. energy, pharmaceuticals, pesticides). If such integration is achieved, the region, because of its high level of development, could become a testing ground for the transfer of know-how, pilot ventures and the adaptation of technologies.

ARAB STATES

63. The value of projects executed by UNIDO in the Arab States region in 1981 amounted to \$11.6 million, as compared to \$9.7 million in 1980, an increase of about 20 per cent. A breakdown of technical assistance delivery, by source of funds and project component, with corresponding figures for 1980, is given in tables 8 and 9 below.

64. The activities of UNIDO in the Arab States region in general should not only be considered in terms of technical co-operation expenditure but also in terms of success in mobilizing other inputs to help the Arab countries stimulate industrial development and diversify their economies. Activities in 1981 were focused on the identification of development opportunities for a number of

TABLE 8. TECHNICAL CO-OPERATION EXPENDITURE IN THE ARAB STATES, BY SOURCE OF FUNDS

Source of funds	1980		1981	
	\$ thousand	%	\$ thousand	%
Regular programme	279	2.8	314	2.7
UNDP				
IPF and cash counterpart	6 522	67.1	7 250	62.4
SIS	431	4.4	104	0.9
Programme reserve and special measures	—	—	(2)	—
United Nations Interim Fund for Science and Technology for Development	—	—	—	—
Subtotal	6 953	71.5	7 352	63.3
Other funds				
UNIDF	621	6.3	389	3.3
Trust funds	1 866	19.4	3 573	30.7
SIS Trust Fund	1	—	—	—
Non-UNIDO funds	—	—	—	—
Subtotal	2 488	25.7	3 962	34.0
TOTAL	9 720	100.0	11 628	100.0

TABLE 9. TECHNICAL CO-OPERATION EXPENDITURE IN THE ARAB STATES, BY PROJECT COMPONENT

Project component	1980		1981	
	\$ thousand	%	\$ thousand	%
Project personnel	7 087	72.9	9 074	78.0
Subcontracts	902	9.3	739	6.4
Fellowships and training	457	4.7	604	5.2
Equipment	1 134	11.6	1 053	9.1
Miscellaneous	140	1.5	158	1.3
TOTAL	9 720	100.0	11 628	100.0

medium-scale and light industries, on the basis of locally available resources; the review and modification of industrial policy to promote and diversify industrial investment and production; the promotion of manufactured exports; and the establishment and strengthening of industrial infrastructure and institutions, including industrial research and documentation centres. UNIDO also provided advice on and assistance in identifying ways of developing and strengthening industrial skills in developing Arab countries and overcoming the present bottleneck of skilled industrial manpower.

65. Assistance to the least developed Arab countries centred on issues concerning the public sector industries, the development of advisory services to industry and the acquisition of technologies. In the Sudan, assistance was provided to improve the performance of the public sector industries to make the most of the country's physical, human and financial resources. In Democratic Yemen, UNIDO assisted the Ministry of Industry in formulating

industrial policies and programmes; identifying investment opportunities arranging for the preparation of feasibility studies; and evaluating studies and/or licence applications for new projects or for the expansion of the existing enterprises.

66. In those Arab countries with oil resources, where measures to accelerate and diversify the economy are being undertaken, both Governments and private business men are seeking investment opportunities. As a consequence, these countries have also shown an interest in co-operating with UNIDO in the establishment of industrial institutional infrastructures. In 1981, UNIDO implemented a project (financed through a trust-fund agreement) to assist the State Organization for Industrial Development (SOID) in Iraq in accelerating the development of small- and medium-scale industry, and promoting industrialization in rural and less developed areas. SOID created a new directorate for co-operatives and industrial estates and is planning to give comprehensive support to small- and medium-scale industries through the establishment of industrial estates, of which the Nahrawan industrial estate is the first example. The UNIDO project will advise SOID on industrial estate development and assist in relocating existing small brick factories from near Baghdad to the Nahrawan area.

67. UNIDO continued to assist Saudi Arabia in its efforts to diversify its economy. Assistance was provided to the General Petroleum and Mineral Organization (PETROMIN) in implementing training activities at both technical and managerial levels.²⁷ Another project implemented in 1981 was designed to strengthen the services of the Ministry of Industry and Electricity so as to enable it to play the central role in initiating and implementing industrial development policies and strategies and planning and monitoring general industrial development. Other key institutions, such as the Saudi Arabian Standards Organization and the Industrial Studies and Development Centre, also received UNIDO assistance.

68. Kuwait is undertaking various measures to increase the manufacturing sector's share of the gross national product from a current 6-7 per cent to 15 per cent by the year 2000. UNIDO is supporting these efforts through the strengthening of the Industrial Development and Consulting Bureau and the Ministry of Commerce and Industry. While the manufacturing sector is being developed, effective measures are now necessary to limit the adverse effects of industrialization on the environment. Environmental management programmes were initiated in a number of Arab countries. In Qatar a committee on environment and industry was set up in 1981 and plans were made for the establishment of an industrial pollution control centre, which would serve the region by co-ordinating environmental protection and industrial pollution control activities. UNIDO places particular emphasis on inter-agency co-operation in this field, and is already co-operating with the United Nations Environment Programme (UNEP).

69. A new approach, combining technical assistance with commercial co-operation was applied in the UNDP/UNIDO assistance to a public sector chemical dyestuff company in Egypt.²⁸ The project, designed to rehabilitate

²⁷ID/B/220, chap. II, para. 79.

²⁸ID/B/266, chap. II, para. 69.

existing production facilities and to triple the plant's output by 1982, covered the provision of technical advisory and training services by a firm subcontracted by UNIDO which, as the original supplier of the plant and through a commercial agreement with the Egyptian company, is guaranteeing increased production and sales (see para. 250 below).

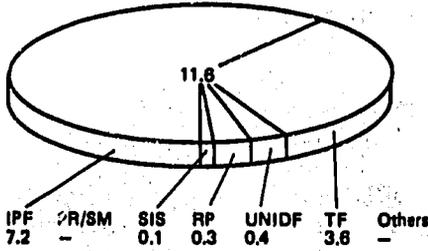
70. The development of the building-materials industry is of particular importance in the Arab countries, especially as regards processing local raw materials and meeting the needs of the local construction industry. In the Libyan Arab Jamahiriya, the success of a UNIDO project to establish a cement plant in Benghazi (particularly in terms of plant operation and personnel training)²⁹ led to a request for similar assistance, also to be financed under a trust-fund arrangement, to a new cement plant under construction in Derna (see para. 260 below). In the Syrian Arab Republic, a project to assist in the development of the construction and building materials industries was being successfully implemented, with special emphasis on maintenance. Assistance was also given in 1981 to the Syrian General Organization for Cement and Building Materials in the development of the lime, pozzolanic-materials and prefabricated concrete industries. Following the preparation of detailed technical documentation on the prefabrication industry in the Oran region (Algeria), an analysis was made of one of the biggest national construction companies, Sorec Sud, and recommendations for technical and managerial improvements were drawn up.

71. In Algeria, a project in the field of small- and medium-scale industries was launched as a follow-up to assistance given to ECOSULT. Assistance in maintenance and repair to the glass industry was successfully completed in 1981. Also in Algeria, the largest project to date in the field of agricultural mechanization (\$8 million) was approved in 1981 and will be implemented in close co-operation with FAO. A project, providing assistance to the Engineering and Industrial Design Development Centre in Egypt, was successfully completed and a new technical co-operation project to assist the Electronic Industries Research and Development Centre was formulated. In Iraq, despite some temporary difficulties in obtaining international experts, the activities of the Specialized Institute for Engineering Industries continued in the fields of product design, production engineering and quality control. In 1981 the Institute doubled its budget to reinforce the scope of its work.

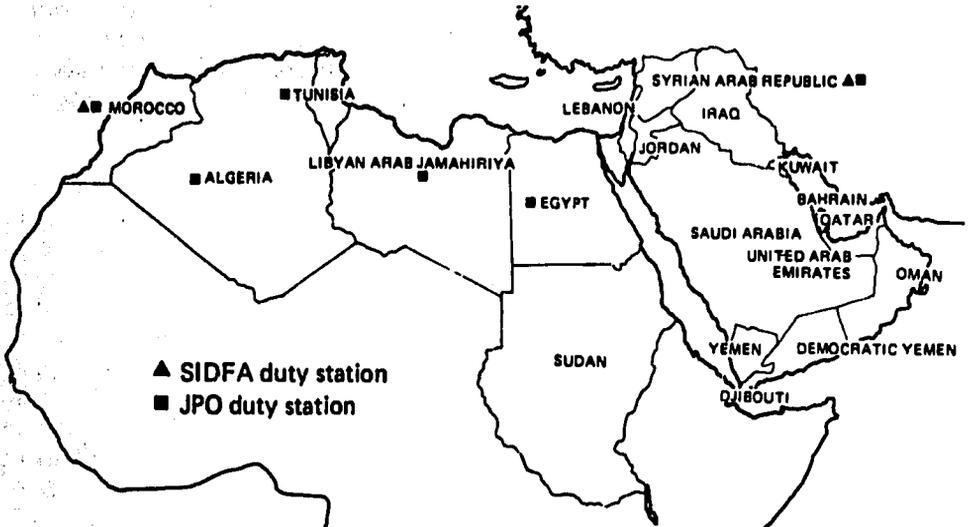
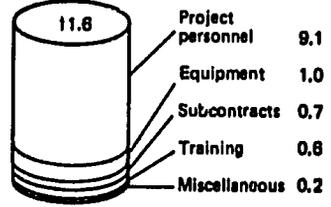
72. In the metallurgical industries sector, the importance of the iron and steel industry has constantly been affirmed by the Arab countries and has been considered in their development plans as a priority sector to be developed rapidly, especially in the light of the availability of natural resources, such as iron ore and natural gas. At present, installed steel capacities amount to 4 million tons/year, but there is still a huge gap between production capacity and the rapidly growing iron and steel consumption—now about 12 million tons/year. There is a pressing need for greater efficiency in existing metallurgical units and for new facilities that will ensure self-sufficiency. A project was drawn up to assist the Arab Iron and Steel Union by strengthening its activities in technology transfer and in provision of technical advisory services to iron and steel plants; UNDP financing of \$200,000 was made available for preparatory

²⁹*Ibid.*, para. 70.

EXPENDITURES IN 1981 BY SOURCE OF FUNDS
(In millions of US dollars)

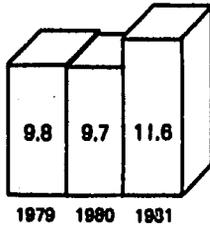


EXPENDITURES IN 1981 BY PROJECT COMPONENT
(In millions of US dollars)



ARAB STATES

EXPENDITURES 1979 TO 1981*
(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.

assistance. The outstanding success of the computerized maintenance system at the Egyptian Iron and Steel Corporation, Helwan,³⁰ resulted in a government request to expand the facilities and develop a regional programme for managed maintenance. The demand for aluminium in the Arab countries is also increasing rapidly. Contacts were made with the Arab Industrial Development Organization (AIDO)³¹ to implement a joint project to assess existing and planned aluminium smelter capacities; the supply of alumina; and the production of and probable demand for primary, semi-finished and selected finished products in the Arab world up to the year 2000. The purpose of the study, which is currently in the planning stage, is to establish a development programme for the aluminium industry in the region.

73. At the regional and subregional levels, UNIDO strengthened its co-operation with AIDO as well as with other Arab bodies involved in various fields of industrial activities. Consultation meetings, training workshops and technical seminars provided the necessary basis for co-operation among the Arab countries and an opportunity for direct contacts. The large-scale regional co-operation programme for development and promotion of fertilizer production and utilization in Arab States gained momentum.³² The project, implemented in co-operation with FAO, AIDO and the Arab Federation of Chemical Fertilizer Producers, produced favourable results. Since 1973, UNIDO has also been co-operating with the Arab Organization for Standardization and Metrology, with a view to developing and strengthening standardization, quality control and metrology activities in the Arab countries, at both national and regional levels.³³ Following official contacts established with several regional and subregional organizations in 1981, co-operation is expected to develop further in the coming years, especially within the metallurgical and engineering sectors.

ASIA AND THE PACIFIC

74. The largest share of the technical assistance delivered by UNIDO in 1981 (32.4 per cent) again went to Asia and the Pacific, with total delivery amounting to \$28.7 million, as compared to \$23.2 million in 1980, an increase of 23.7 per cent. A breakdown of delivery, by source of funds and project component, with corresponding figures for 1980, is given in tables 10 and 11 below.

75. Many developing and least developed countries in the region, especially the oil-importing countries, faced a worsening economic situation in 1981 with inflation, energy problems and trade deficits that directly affected their balance of payments.

76. A growing interest in energy and energy-conservation projects was evident in 1981. In China, the first phase of a large-scale project for the

³⁰*Ibid.*, para. 79.

³¹Before 1980 known as the Industrial Development Centre for Arab States (IDCAS).

³²ID/B/240, chap. II, para. 64.

³³ID/B/150, chap. IV, para. 32.

TABLE 10. TECHNICAL CO-OPERATION EXPENDITURE IN ASIA AND THE PACIFIC, BY SOURCE OF FUNDS

Source of funds	1980		1981	
	\$ thousand	%	\$ thousand	%
Regular programme	352	1.5	477	1.7
UNDP				
IPF and cash counterpart	19 076	82.1	24 040	83.8
SIS	827	3.5	176	0.6
Programme reserve and special measures	300	1.3	786	2.7
United Nations Interim Fund for Science and Technology for Development	—	—	316	1.1
Subtotal	20 203	86.9	25 318	88.2
Other funds				
UNIDF	2 133	9.2	2 188	7.6
Trust funds	318	1.4	420	1.5
SIS Trust Fund	26	0.1	6	—
Non-UNIDO funds	196	0.9	298	1.0
Subtotal	2 673	11.6	2 912	10.1
TOTAL	23 228	100.0	28 707	100.0

TABLE 11. TECHNICAL CO-OPERATION EXPENDITURE IN ASIA AND THE PACIFIC, BY PROJECT COMPONENT

Project component	1980		1981	
	\$ thousand	%	\$ thousand	%
Project personnel	6 456	27.8	8 198	28.6
Subcontracts	4 221	18.2	8 237	28.7
Fellowships and training	2 673	11.5	2 935	10.2
Equipment	9 589	41.3	9 019	31.4
Miscellaneous	289	1.2	318	1.1
TOTAL	23 228	100.0	28 707	100.0

development of biogas technology came to an end. In addition, study tours for Chinese scientists and engineers dealing with the subject of coal liquefaction were organized in Australia, Federal Republic of Germany, Poland and the United States of America.

77. Requests for assistance were received from India and Thailand, in the use of biomass waste materials for energy production; Afghanistan, in the development of solar energy; and the Philippines, in the production of ethanol from cellulosic materials. Thailand launched an energy saving scheme with UNIDO assistance to determine measures and targets for energy saving in each industrial sector in the country, analyse the impact of increased energy demands of the economy and carry out detailed investigations of costs involved in substituting one type of energy for another.

78. A comprehensive assistance plan was provided for India, comprising the provision of advisory services, the organization of study tours to Czechoslovakia, Federal Republic of Germany and the United Kingdom of Great Britain and Northern Ireland, and the supply of equipment for coal gasification. The project on assistance to the Indian Institute of Petroleum, implemented jointly with the United Nations Educational, Scientific and Cultural Organization (UNESCO), came to a successful conclusion, having established a laboratory to provide different tests and analyses for the refinery industry. UNIDO will continue two additional projects to assist the Indian Institute of Petroleum and the Indian Oil Corporation Ltd. by providing consultancy services and technical manpower development.

79. The larger share of UNIDO assistance to the region went to the engineering industries sector. Technical assistance covered a variety of areas, including: the manufacture of school science equipment, tape-recorders and improved television tubes; the application of micro-processors; and the establishment of a pilot plant for integrated circuits. Assistance to Pakistan, Sri Lanka and Thailand centred on audio-visual teaching equipment and the manufacture of replacement parts for such equipment. Hong Kong also received assistance in these fields. Other projects focused on the metalworking industry and the manufacture of spare parts. Bangladesh requested assistance in the manufacture of machine tools. In Bhutan, a project was completed in the fields of automotive engineering and automotive equipment maintenance and repair. In Viet Nam, assistance was provided for the tropicalization of equipment and activities were undertaken to improve the standards of maintenance and repair and promote the production of spare parts for rice and sugar mills.

80. A number of activities leading to the establishment of pilot plants and demonstration plants were carried out; one notable example was the project for a pulp and paper pilot plant in Burma. In the Democratic People's Republic of Korea, the establishment of a \$5.6 million pilot plant and training centre for bipolar digital integrated circuits, approved by UNDP in 1981, is the largest project in this field ever implemented by UNIDO. The plant, which will contribute directly to upgrading and modernizing the country's electronics industry, will produce bipolar digital integrated circuits on an experimental basis using mono-crystalline silicon, and will test and evaluate various industrial applications of the circuits.

81. Assistance in industrial planning in 1981 covered such sophisticated and specialized areas as the preparation of an industrial master plan and comprehensive investment profiles, the improvement of industrial statistics and the strengthening of government machinery for industrial programming and technology analysis.

82. The strengthening of industrial management and consultancy capacities was another major theme in the region (see para. 153 below). Projects were implemented in China, the Republic of Korea and Thailand dealing, *inter alia*, with the application of computers to industrial management.

83. Training activities in the region included group training programmes and projects to establish or strengthen training facilities. Special attention was given

in all projects to the training of national counterparts to ensure the transfer of know-how. In addition, study tours and fellowships were linked to project design to strengthen existing capabilities. In order to facilitate industrial development by linking the training aspects to priority sectors, a proposal was made to establish a training co-ordinator at the national level to cover large-scale UNIDO and other programmes. In 1981, 36 per cent of the total fellowships were from Asia and the Pacific. In addition, nine group training programmes were conducted in the region with 123 participants.

84. Least developed countries in the region were offered specific technical assistance in areas as diverse as utilization of solar energy, requested by Afghanistan, and machine tool manufacturing, requested by Bangladesh. Assistance was also given in the planning and organization of export processing zones. The Bangladesh Chemicals Industries Corporation continued to receive assistance in increasing plant utilization at its Ghorasal and Chittagong sites, and in establishing a central fertilizer training institute at the Ghorasal site. In that country, a large-scale UNIDO project to increase productivity in the cotton industry and improve product quality entered its second phase. In Nepal, a feasibility study was made for the establishment of a small nitrogenous fertilizer plant and, in collaboration with WHO, a joint project dealing with primary health care was implemented.

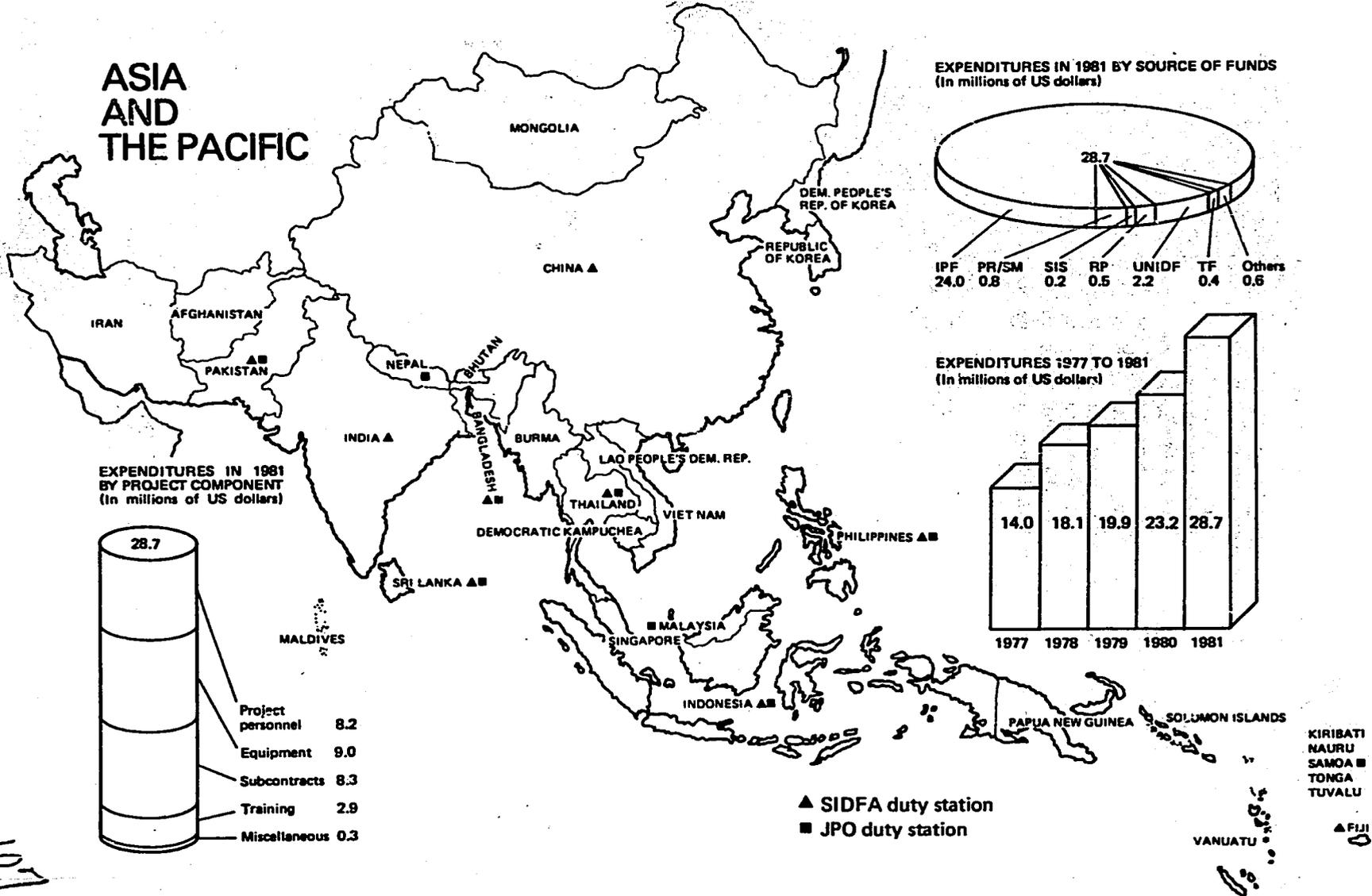
85. Special attention was given to assisting island countries in the South Pacific such as Fiji, Papua New Guinea, Tonga and Vanuatu. Vanuatu is a prime example of how local material can provide the basis for industrial development. With UNIDO assistance it has become the first developing country to produce mother-of-pearl buttons from locally abundant trochus shells for export to fashion markets in industrialized countries. This labour-intensive production process seems excellently suited to other island countries, which until now have exported the shells.

86. In Sri Lanka, UNIDO initiated a large-scale R + D project to alleviate the present shortage of raw wood materials in the country by developing technologies for the processing and utilization of the immense local reserves of rubber-wood trees and coconut-palm stems.

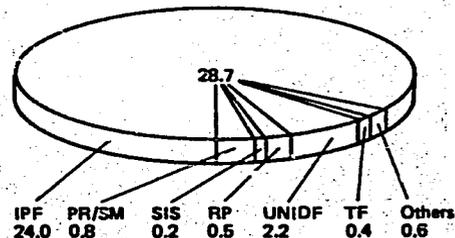
87. A new approach to investments was also launched in Sri Lanka. The concept of fully co-ordinated project preparation, evaluation and promotion work to intensify the industrialization process, as requested by the New Delhi Declaration and Plan of Action, was illustrated by a study on project opportunities which culminated in an investment promotion meeting in October 1981. The main areas covered were the agro-based subsectors (wood, rubber, leather and textiles/garments), gem processing, engineering and metalwork. Preliminary pre-investment work had identified some 50 project opportunities and allowed enough time before the meeting to present them to potential sponsors.

88. In Pakistan, a project to plan the expansion of the portfolio of project proposals was another example of the result of an integrated approach to pre-investment work. The resultant opportunity studies will be passed on to the Investment Promotion Bureau of Pakistan, which will direct them to domestic as well as overseas investors. The Government is now considering setting up an

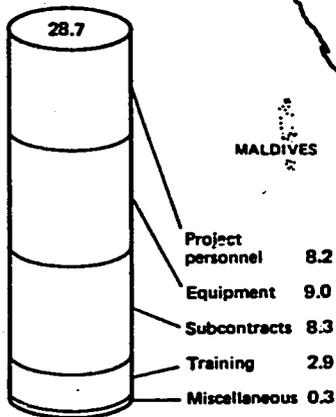
ASIA AND THE PACIFIC



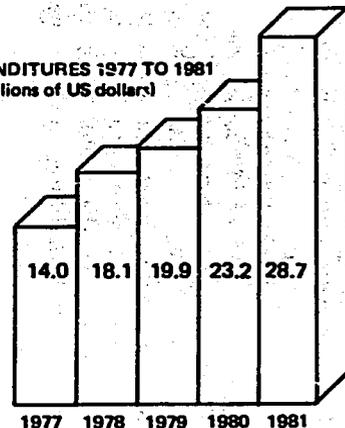
EXPENDITURES IN 1981 BY SOURCE OF FUNDS
(In millions of US dollars)



EXPENDITURES IN 1981 BY PROJECT COMPONENT
(In millions of US dollars)



EXPENDITURES 1977 TO 1981
(In millions of US dollars)



▲ SIDFA duty station
■ JPO duty station

107

industrial advisory unit, which would concentrate on food, chemical and engineering industries and would also have the task of upgrading the local capacity for pre-investment work.

89. Regarding pre-investment activities, it is worth mentioning the case of Indonesia where six projects amounting to over \$8.4 million in value are already under implementation. The seventh, valued at about \$3.5 million, will become operational during 1982. In addition to their own specific and separate objectives, each project is linked within a larger design aimed at achieving the twin objectives of investment generation and comprehensive development of the small-scale industries sector in order to stimulate employment and the economy. A UNIDO steering committee was set up at Headquarters and met regularly in 1981 to co-ordinate and expedite the activities of the main projects. The pre-investment work is progressing and is being closely supervised and evaluated to ensure a high standard.

90. A number of activities were undertaken at the regional level. A Workshop on the Regional Project for Co-operative Research among Metallurgical Research and Development Centres in Asia and the Pacific was held in Jamshedpur (India), December 1981. A study on minimum economic-size plants for steel processes in States members of the Association of South East Asian Nations (ASEAN) was also finalized, providing a number of suggestions for consideration, as well as an action-oriented programme. The iron and steel industry in ASEAN countries is at present characterized by a limited primary production of steel, sizeable but under-used secondary steel processing and finishing capacities, and heavy dependence on imports of semi-finished and finished steel products. With the growing awareness of the need to augment domestic steel production and the number of new schemes now under way, the availability of domestic steel is expected to increase considerably in the future. This will call for more co-operation among the ASEAN countries to make full use of existing capacities and establish new ones.

91. UNIDO organized a workshop on cement and concrete products in Brisbane in May 1981, in co-operation with the Government of Australia, with the active participation of 12 countries in the Asian and Pacific region. It was so successful that a proposal was made to organize a similar workshop on building materials in Sydney in 1982.

92. A programme was also drawn up for the regional development of industrial consultancy, which is recognized as one of the major priority areas of the region. In co-operation with ESCAP, a mission was organized to evaluate the situation in various countries, and a seminar to discuss ways and means of developing consultancy services was held in Jakarta (Indonesia) at the end of 1981. The main object of the programme in this field is to foster co-operation in scientific and technical areas and to promote joint ventures.

93. In November 1981, in collaboration with ESCAP, a workshop on the essential oils industry was organized in collaboration with the Government of India to analyse the development of the essential oils industry in the South and South-East Asian regions and possibilities of co-operative endeavours between the countries of the region. The R + D work carried out under UNIDF-financed projects to assist the Association of Natural Rubber Producing

Countries showed very promising results, which were disseminated at an international symposium held in Thailand in May 1981. Scope for regional co-operation was also identified in the packaging industry, and the Indian Institute of Packaging was helped to provide regional services, as part of a large-scale UNIDO project.

94. Preparations for the third country programming cycle were begun in 1981, and UNIDO participated actively in programming missions for the formulation of projects and programmes in the field of industry. Noteworthy is a high-level UNIDO programming mission to China at the end of 1981 which defined a number of large-scale projects in different fields. Possibilities of both technical and economic co-operation among developing countries were also looked into, for example in the energy field, where China's biogas experimental stations are of interest to members of OLADE. Also, as a result of this mission, a programme was formulated to assist the Chemical Reaction Engineering Laboratory for Extractive Metallurgy and the Zheng Zhou Light Metal Research Institute. The Government of China also indicated a desire for further UNIDO assistance in strengthening the work of the Institute of Metal Research in the field of materials science and in the production of aluminium doors and windows. After intensive preparatory work, the latter two projects are now being implemented.

95. At the beginning of the third UNDP country programming cycle, with the subsequent approval of individual country programmes, UNIDO will be in a better position to evaluate the main future directions and priorities established for industry by the countries of the Asia and Pacific region. Countries such as China, India, Indonesia and Thailand, which have been the greatest recipients of UNIDO assistance, will probably expand their requests for technical assistance. Other countries, such as Pakistan and the Philippines, will identify areas in the field of industry according to major changes dictated by present international economic factors. UNIDO will continue to give priority to requests from small island developing countries and the least developed countries in particular and strengthen regional co-operation, which was a main theme of UNIDO operational activities during 1981.

EUROPE

96. The value of projects implemented in developing countries of Europe in 1981 amounted to \$3.6 million, as compared to \$5.8 million in 1980, a decrease of about 38 per cent. A breakdown of delivery, by source of funds and project component, with corresponding figures for 1980, is provided in tables 12 and 13 below.

97. Most of the technical co-operation provided by UNIDO to the European countries had the long-term aim of ensuring that knowledge and experience gained in the implementation of such projects was ultimately transferred to serve the needs of developing countries in other continents. On this assumption, several new projects were initiated and further assistance was provided to ongoing projects, the results of which were already being used by a number of

TABLE 12. TECHNICAL CO-OPERATION EXPENDITURE IN EUROPE, BY SOURCE OF FUNDS

Source of funds	1980		1981	
	\$ thousand	%	\$ thousand	%
Regular programme	174	2.9	112	3.1
UNDP				
IPF and cash counterpart	4 804	82.5	3 019	84.5
SIS	574	9.9	339	9.5
Programme reserve and special measures	—	—	—	—
United Nations Interim Fund for Science and Technology for Development	—	—	—	—
Subtotal	5 378	92.4	3 358	94.0
Other funds				
UNIDF	137	2.4	55	1.6
Trust funds	119	2.1	40	1.1
SIS Trust Fund	—	—	—	—
Non-UNIDO funds	12	0.2	7	0.2
Subtotal	268	4.7	102	2.9
TOTAL	5 820	100.0	3 572	100.0

TABLE 13. TECHNICAL CO-OPERATION EXPENDITURE IN EUROPE, BY PROJECT COMPONENT

Project component	1980		1981	
	\$ thousand	%	\$ thousand	%
Project personnel	1 678	28.8	1 407	39.4
Subcontracts	449	7.7	722	20.2
Fellowships and training	900	15.5	552	15.5
Equipment	2 712	46.6	826	23.1
Miscellaneous	81	1.4	65	1.8
TOTAL	5 820	100.0	3 572	100.0

developing countries. This approach is clearly illustrated by the first technical co-operation project on earthquake-resistant building construction, a regional project initiated in 1981, involving Bulgaria, Greece, Hungary, Romania, Turkey and Yugoslavia, which will serve as a demonstration project for the design of similar activities in other regions. A further example is a project, implemented in co-operation with WHO, to reduce water pollution in the Spreca river basin (Yugoslavia). In the area of energy conservation and management, which is particularly important in the high-energy-consumption industries such as cement, ceramics and glass-manufacturing, the Joint UNIDO/Czechoslovakia Programme for International Co-operation in the Field of Ceramics, Building Materials and Non-metallic Mineral-based Industries organized a training workshop for least developed countries on energy conservation in the silicate industry.

98. In the field of engineering industries, emphasis was placed on projects to promote TCDC. In Romania, UNIDO introduced metal-spraying techniques to the central repair and maintenance workshop for the public transport services and established an extensive technical data basis for a parts rehabilitation programme. The experience gained, including practical knowledge of the training of personnel, will be shared with other developing countries. Furthermore, UNIDO continued to assist Hungary (using IPF funds) in establishing a training centre for the repair and maintenance of biomedical equipment.³⁴ In 1981, specialists from developing countries were invited to the Centre to receive supplementary training and to exchange ideas.

99. Countries with centrally planned economies were the recipients of more sophisticated, advanced technology transferred under UNIDO technical co-operation. Bulgaria and Czechoslovakia benefited from technical co-operation in the application of computers in the design, process control and manufacturing of tools and machinery. In addition, assistance in training was provided to Bulgaria in industrial cybernetics and robotics. Romania obtained comprehensive assistance in design and construction of lifts; manufacture of thermal engines; integrated circuit technology; and application of automatic data-processing equipment and micro-processors. Turkey was also provided with assistance in the electronics industry and with technology for energy conservation in selected industrial sectors. Malta received assistance in welding technology for its shipbuilding and ship-repair centre.

100. In the field of metallurgical industries, assistance continued to be provided through a number of ongoing projects in European countries with a view to expand the scope of, and the activities carried out within, those projects. Turkey received additional assistance in the development of its iron and steel industry. In Malta, UNIDO experts provided techno-economic and management expertise for planning and designing a foundry, commissioning the equipment and starting operations.

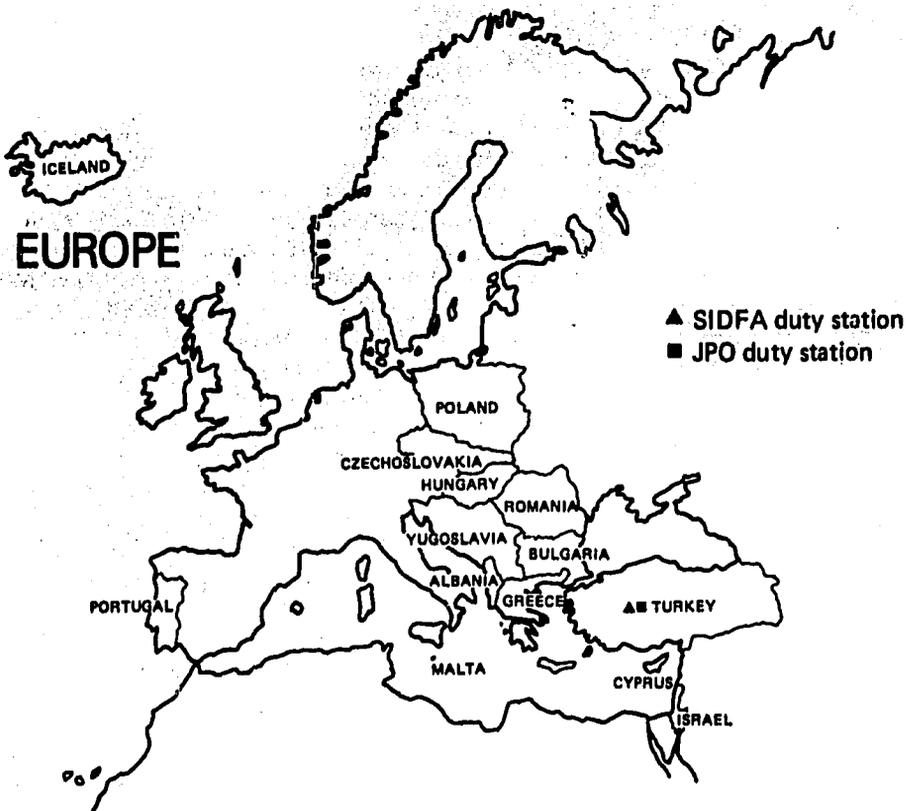
101. In the field of management, technical co-operation activities were concentrated in Turkey. In co-operation with the World Bank, a project was successfully implemented to design financial management systems for one of the most important public sector enterprises, dealing with cotton-processing.³⁵ A similar project, to develop general management information systems, including financial and cost-data information, is being designed for the State Economic Development Corporation for the production of agricultural tractors and diesel engines.

102. UNIDO continued in 1981 to provide assistance in the fields of standardization, quality control and metrology to Greece, Portugal and Turkey.³⁶ In the latter country, a large-scale project to establish an integrated national quality-control system was successfully implemented. The new concept on which this project is based consists in linking, co-ordinating and using to the greatest extent possible the technical, managerial, administrative and institutional resources available in government departments, professional organizations,

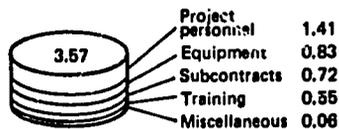
³⁴ID/B/260, chap. II, pa a. 103.

³⁵*Ibid.*, para. 105.

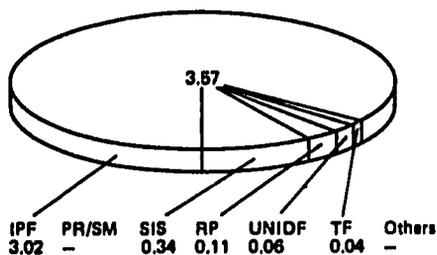
³⁶*Ibid.*, para. 110.



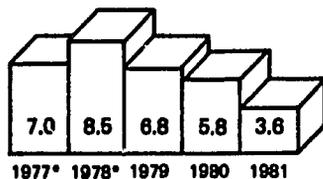
**EXPENDITURES IN 1981
BY PROJECT COMPONENT**
(In millions of US dollars)



EXPENDITURES IN 1981 BY SOURCE OF FUNDS
(In millions of US dollars)



EXPENDITURES 1977 TO 1981
(In millions of US dollars)



* The figures for 1977-1978 cover only Europe and Western Asia and include the twelve countries which, since 1975, are listed under Arab States.

specialized institutions, industry, universities etc., that are active in the fields of quality control, standardization, certification marking, testing and analysis, and research and development. The setting up and organization of a national quality-control system in Turkey involved the creation of, *inter alia*, a national quality control advisory board, a laboratory accreditation system, a national certification marking scheme and a Turkish quality control association. In addition, meetings and training courses on general and specific aspects of quality control were held. The Government of Turkey requested a second, three-year phase for this project, to start in 1982.

103. Within the framework of TCDC activities, a Group Meeting on Standardization and Quality Control in the Industrialization Process of Developing Countries was convened in Arandjelovac (Yugoslavia) and attended by participants from Africa, Asia, Europe and the Middle East (see para. 135 below). A Meeting on Industry-Research Institute Linkage with Special Reference to Instrument Design was also organized at the Bulgarian Institute for Instrument Design (NIPKIP) in Sofia (Bulgaria) (see para. 130 below).

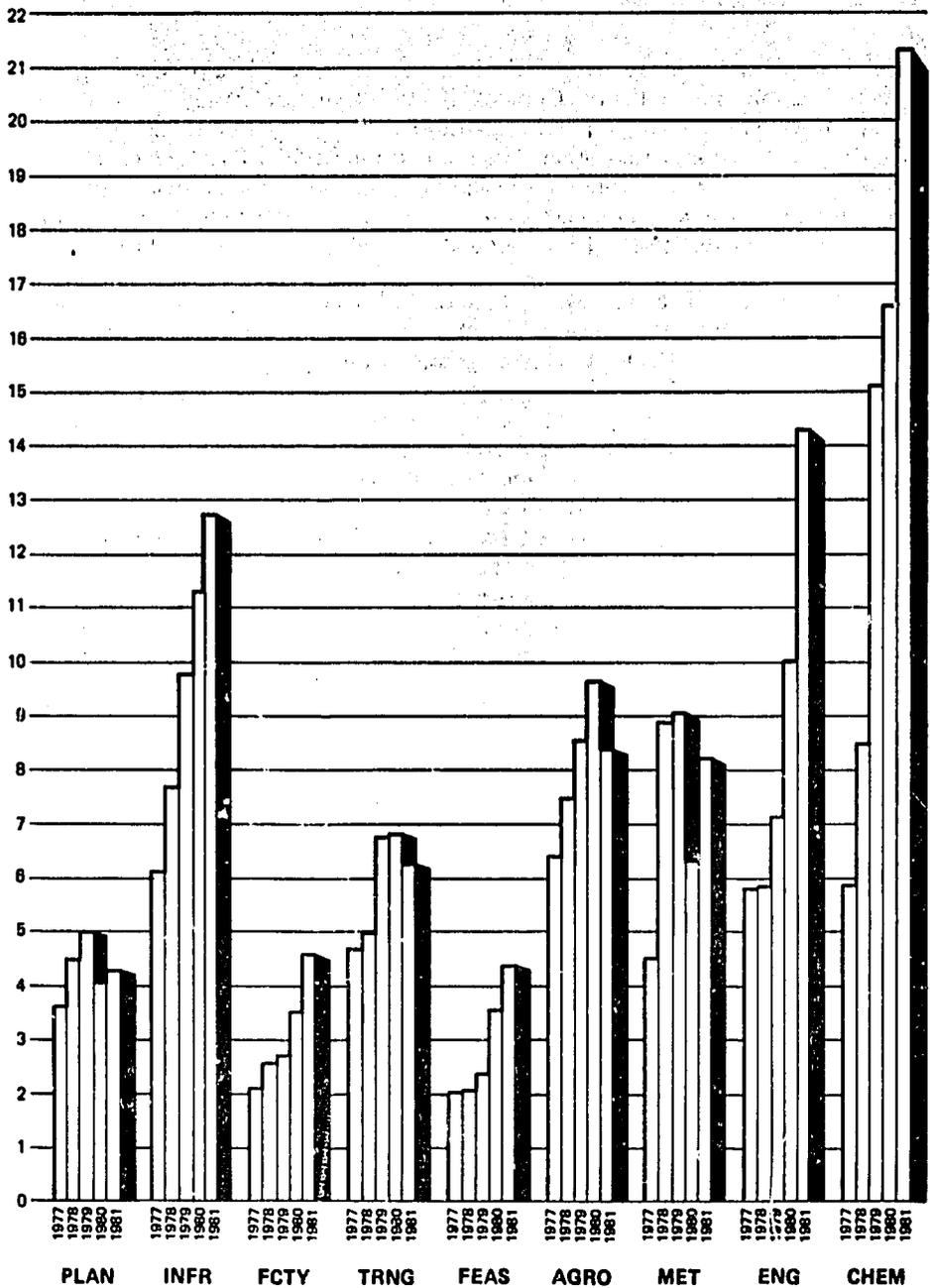
104. During the year under review there was a further increase in the activities of the joint UNIDO/national centres and programmes which have proved very useful in expanding UNIDO assistance and providing often necessary scientific and research back-up for UNIDO projects in developing countries. The Joint UNIDO/Czechoslovakia Programme, in addition to organizing a training workshop (see para. 254 below), undertook the testing of non-metallic minerals for a number of countries. The Joint UNIDO/Hungary Aluminium Industry Programme, initiated in 1977 to provide assistance to the aluminium industry in developing countries, continued its activities through the preparation of techno-economic studies for developing countries and, at the request of Governments, the provision of high-level experts at short notice. Under the same Programme, 15 candidates from developing countries attended a one-week training course in bauxite processing and alumina production at the Hungarian Aluminium Corporation.

C. Implementation by field of activity

105. The technical assistance provided by individual branches and sections in UNIDO's Division of Industrial Operations in 1981 are 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.

TECHNICAL CO-OPERATION EXPENDITURES BY FIELDS OF ACTIVITY 1977-1981

Millions of US dollars



106. The level of technical assistance delivered reached \$88.5 million in 1981. It is stressed, however, that this level can be maintained only if staff resources, particularly in the Division of Industrial Operations, are strengthened. In recent years, the staff of that Division, in addition to project implementation, have become increasingly involved in project development and project formulation, in view of the interrelationship of the three phases. Staff of the Division have also provided assistance to developing countries in drawing up project concepts and proposals (a) for financing under the United Nations Interim Fund for Science and Technology for Development, UNIDF and trust funds and (b) for cost-sharing arrangements.

INDUSTRIAL PLANNING

107. In 1981 technical assistance delivered under the heading industrial planning amounted to \$4.3 million, an increase of \$0.3 million (about 8 per cent) over the figure recorded in 1980 and of \$0.7 million (about 19 per cent) over expenditure in 1977 at the start of the second UNDP country programming cycle. Some 82 per cent of the total implementation was financed from UNDP resources (1980: 89 per cent).

108. Regional distribution of expenditure in percentages was: Africa (56); the Americas (26); Arab States (3); Asia and the Pacific (8); Europe (7); and interregional and global (—).

109. A total of 61 projects were implemented or under implementation in 1981 (1980: 72), comprising 9 projects greater than \$1 million in value (1980: 7), 22 projects greater than \$150,000 in value (1980: 25) and 30 projects below that value (1980: 40).

110. Over the last few years the experts' component in the project budgets averaged about 85 per cent; for this reason recruiting and backstopping experts and reviewing their reports also occupied considerable Professional staff time in 1981.

111. The Industrial Planning Section, during the year under review, implemented projects covering: formulation and implementation of industrial development plans and programmes, including provision for advice on strategies, policy planning techniques and institutional aspects; industrial surveys of countries and subregions; regional co-operation; and sectoral planning, especially for capital goods. There is a strong relationship between planning and surveys. A comprehensive industrial survey may provide major inputs into a forthcoming national plan or may modify an existing one. Since the programming of investment projects is an extension of activities derived from such a national plan it also falls within the activities of the Section. Industrial planning machinery must base its activities not only on overall national development goals but also on specific branches of industry. Technical co-operation projects in the field of planning therefore cover all industrial sectors. A major feature of assistance in the field of planning was the

development and upgrading of the necessary institutional and individual skills to initiate and carry out industrial planning and development tasks.

112. Large-scale industrial planning projects in 1981 were generally multi-disciplinary resulting in the definition of plans and in institution-building and investment programmes. Such projects also covered other development issues such as training, information provision, joint-venture negotiations and technology selection.

113. In Sierra Leone,³⁷ great progress was made in: formulating new industrial policies; undertaking an economic analysis for a proposed industrial free zone; and implementing specific projects in various industrial subsectors. In Kenya,³⁸ a new phase of assistance in macro- and sectoral planning was initiated, with several long-term experts taking on additional fields such as joint-venture negotiations and industrial and technological information. In this respect studies were also undertaken on the industrial development of electronics, rubber products, jojoba oil, hops, sugar packaging, soapstone and composite flour.

114. In Uruguay, assistance continued to be provided for the structuring of an evaluation unit to screen investment projects eligible for Government loans;³⁹ assistance was also given in managing a \$20 million World Bank loan for the rehabilitation of existing industries and for new investments. In Guatemala, a project to assist in strengthening planning capacity was completed and programmes for four priority sectors elaborated, together with a number of pre-investment studies.³⁹ In the Dominican Republic, advice was given on industrial planning and policy, the development of the metal mechanics industry, and cost analysis for the cement industry.

115. In Papua New Guinea, assistance was rendered in industrial planning at sectoral and regional levels and in the analysis of technology requirements. Malaysia received assistance in the preparation of an industrial master plan up to the year 1990, which takes account of the following priority areas: redeployment of industry; evaluation of technology requirements; energy planning; and the development of human resources. In Indonesia, field activities were initiated for the preparation of investment profiles on the basis of sectoral and regional plans.

116. In Qatar, under a project initiated in 1977, sectoral plans were developed for large-scale fertilizer, iron and steel, petrochemical and cement industries.⁴⁰ Technical services were also provided for the establishment of an industrial laboratory and an industrial port. In Algeria, a pilot project was completed to test the applicability of analysis of technological complexity within a defined environment.

³⁷ID/B/260, chap. II, para. 126.

³⁸*Ibid.*, para. 122.

³⁹*Ibid.*, para. 123.

⁴⁰*Ibid.*, para. 121.

117. In Cyprus, assistance continued to be provided through an industrial development services project in the fields of planning and programming; quality control and standardization; services to existing plants; and investment profiles for brick manufacturing and battery production.⁴¹

118. In the field of industrial technology, assistance continued to be provided to the Ivory Coast, under a project initiated in 1974.⁴² The project aims to develop, in particular, the capacity to evaluate different industrial techniques for industrial projects, so as to adapt imported technology to local conditions and also promote the development of local technology. Capital goods planning projects in Algeria, Mexico and Turkey concentrated on technology planning, identification of technology suppliers, investigations on commercial conditions for technology acquisition, and negotiations for technology development and transfer.

119. Assistance in sectoral planning was provided on a continuous basis in specific priority industrial branches. Activities centred on development programmes for the capital goods industries and technical assistance was provided to a number of developing countries to establish a development strategy, define policy instruments to sustain development, formulate a technology plan, identify investment opportunities, and finalize and implement an investment programme.

120. In Mexico, the third phase of the capital goods development programme was completed⁴³ and a large investment programme, comprising numerous feasibility and pre-investment studies as well as investment promotion activities, was successfully implemented with a total investment of more than \$1.5 billion. In Guatemala, a preliminary survey of the supply/demand situation for capital goods and equipment was completed. In Venezuela, preparatory assistance to a large-scale project for the development of the capital goods industry was initiated to investigate the supply/demand situation, define an incentive policy, and elaborate a methodology for project evaluation and development in the field of machine and equipment manufacturing.

121. In Turkey, a project was initiated to develop a methodology for the classification and codification of capital goods and the identification of certain priority subsectors in the production of specialized equipment in the following industrial areas: power, mining, pulp and paper, cement, food and beverages, chemicals, petrochemicals, fertilizers, pesticides, railway construction, machine tools, and general-purpose equipment. The Section also contributed to the preparation and organization of the First (1981) Consultation on the Capital Goods Industry.

122. In the field of energy planning, proposals were prepared for technical assistance to several countries in Africa and for global and interregional programmes for the third UNDP country programming cycle.

123. In accordance with the proclamation of the 1980s as the Industrial Development Decade for Africa, consideration was given to the development of

⁴¹*Ibid.*, para. 124.

⁴²*Ibid.*, para. 125.

⁴³*Ibid.*, para. 129.

specific technical co-operation projects for African countries. Africa continued to receive the largest share (55.6 per cent) of the Section's technical assistance delivery. The promotion of multinational industrial planning projects in Western Africa was carried out in co-operation with, *inter alia*, the Organization for the Development of the Senegal River (OMVS), the West African Economic Community (WAEC) and UDEAC. Advice was also given to the member States of these organizations with regard to negotiations for the establishment of multinational projects and the terms to be offered to countries participating in multinational investments. In addition to the technical co-operation projects in Africa mentioned in previous paragraphs, assistance was also provided to three least developed African countries (Central African Republic, Guinea-Bissau, Rwanda). Field experts advised on planning and investment programmes in Lesotho, Liberia, Nigeria and Zambia.

124. Missions for programming, evaluation, or the finalization of programmes were fielded to Cyprus, Honduras, Ivory Coast, Libyan Arab Jamahiriya, Malaysia, Nepal and United Republic of Cameroon. Programming missions and draft technical co-operation programmes/projects in the field of capital goods industry development were also finalized for Colombia, Egypt, and Trinidad and Tobago, and for a regional survey in Africa.

INSTITUTIONAL INFRASTRUCTURE

125. In 1981 technical co-operation expenditures under the heading institutional infrastructure amounted to \$12.7 million, an increase of \$1.4 million (about 12 per cent) over the figure recorded in 1980 and \$6.6 million (about 108 per cent) over expenditures in 1977 at the start of the second UNDP country programming cycle. Some 90 per cent of the total implementation was financed from UNDP resources (1980: 91 per cent).

126. Regional distribution of expenditure in percentages was: Africa (54); the Americas (8); Arab States (20); Asia and the Pacific (16); Europe (2); and interregional and global (—).

127. A total of 165 projects were implemented or under implementation in 1981 (1980: 169), comprising 18 projects greater than \$1 million in value (1980: 17), 64 projects greater than \$150,000 in value (1980: 65) and 83 projects below that value (1980: 87).

128. The objective of the Institutional Infrastructure Branch is to assist developing countries in establishing or strengthening institutions to serve in an integrated way the industrial sector as a whole. Such institutions, which are mostly governmental, are multi-disciplinary and cover the various aspects of industrial development of a country. Within this group are included the multi-purpose industrial research and services institutes, rather than the specialized institutes specifically created to meet the needs of particular branches of industry (metallurgical, engineering, chemical industries etc.) which fall within the competence of the technical branches and sections of the Division of Industrial Operations. The areas covered included: industrial research and

development; industrial information; standardization, metrology and quality control; small industry development and rural industrialization and other activities serving industrial development such as assistance to industrial fairs and to chambers of commerce and industry, investment promotion, product adaptation, international subcontracting and consumer protection (with respect to standards, quality control and certification).

129. With the overall aim of achieving technological self-reliance in the developing countries, UNIDO efforts were directed towards establishing or strengthening general-purpose multi-disciplinary industrial research and development institutions. Technological self-reliance is a complicated process, requiring not only substantial financial resources for buildings and equipment but highly motivated multi-disciplinary human resources; most of the training of such personnel (engineers, economists, technologists, sociologists) is done on the job, under the guidance of highly experienced international experts and consultants. In this connection assistance was provided to national councils for science and technology, industrial research and service institutes (IRSIs), industrial information services, institutions for intermediate and village technologies, technological innovation centres and industrial consultancy companies in the following 15 countries: Angola, Egypt, Indonesia, Kenya, Lebanon, Libyan Arab Jamahiriya, Mauritania, Mexico, Nepal, Nigeria, Syrian Arab Republic, Trinidad and Tobago, United Republic of Cameroon, United Republic of Tanzania and Zaire.

130. The first phase of a project in Mexico entitled "Centros Regionales de Investigación y Asistencia Técnica para la Industria" was completed at the end of 1981. A second phase will be implemented within the framework of a large-scale project to assist the National Council of Science and Technology in reinforcing all aspects of the institutional infrastructure for the application of science and technology; financing for this large undertaking will be provided in the form of a loan from the Inter-American Development Bank. Within the context of this project, a twinning agreement between the Institute for Timber, Cellulose and Paper in Guadalajara (Mexico) and the Paper, Printing and Packaging Industries Research Association (United Kingdom) is in a very advanced stage of negotiation. If this arrangement works satisfactorily, it is expected that similar agreements will be concluded among a number of other research institutes. A Meeting on Industry-Research Institute Linkage with Special Reference to Instrument Design was organized at the Bulgarian Institute for Instrument Design (NIPKIP) in Sofia (Bulgaria) (see also chap. VII, para. 17). Participants from developing countries reviewed UNIDO assistance to the host institute and discussed the possibility of twinning arrangements between this institute and IRSIs in developing countries. A number of such arrangements are under negotiation.

131. UNIDO consultants visited the ongoing projects for technology transfer registries in Egypt and the Philippines⁴⁴ and participated in conferences and training workshops on different aspects of technology transfer agreements. A large-scale project in technology assessment, policy and planning, and technology transfer is under preparation for implementation in Egypt. A feature of this project is that learning exercises will be based on local technology agreements, identified and prepared by local consultants, rather than on hypothetical cases.

⁴⁴*Ibid.*, para. 137.

132. In the field of industrial information, assistance continued to be provided to government agencies (particularly to Ministries of Industry) and institutions (IRSIs, industrial development and promotion centres) to establish or develop documentation and information services for the collection, processing and dissemination of technical information on and for industry. Six countries (Angola, Mauritania, Mongolia, Nepal, Nigeria and Portugal) and one regional intergovernmental organization (AIDO) were assisted. The third phase of a large-scale project to assist AIDO in developing an industrial information system for the Arab States was initiated during the year.

133. Developing countries are experiencing major difficulties in selling their industrial products on international markets due to deficiencies in quality, reliability, safety, performance, usefulness and presentation. This problem, as identified by the Agreement on Technical Barriers to Trade of the General Agreement on Tariffs and Trade (GATT), which entered into force in January 1980, is becoming more acute due to increasing competition, and a large number of institutional activities are necessary to achieve higher qualitative levels of production. The development of quality-consciousness in developing countries, in order to increase the marketability of finished products, calls for close co-ordination and integration of all activities in the fields of standardization, certification marking, laboratory testing and research and development—a trend which is already apparent at national, regional and international levels in the industrialized countries. Another factor of significance in this context is the basic need to establish national legal and industrial metrology systems, including the required laboratories to provide the necessary services for the calibration, repair and maintenance of measuring instruments and equipment. National metrology centres are also important for the provision of national primary reference standards, linked to international reference standards.

134. A large-scale project aimed at establishing an integrated national quality control system was successfully concluded in Turkey and the Government has requested a second, three-year phase of assistance in this field to start in 1982 (see para. 102 above). A project on standardization, metrology and quality control was implemented in Viet Nam during the year, with the aim of supplementing and improving existing testing and metrology laboratories at Bien Hoa; establishing newly equipped testing laboratories; training qualified staff in contemporary product-testing procedures; and establishing linkages between the institute and industries to improve the quality of manufactured goods and measurement methods. Assistance was also provided to Chile, Ethiopia, Greece, India, Indonesia, Iraq, Malawi, Mauritius, Nepal, Nigeria, Pakistan, Peru, Portugal, Saudi Arabia, Thailand and Zaire.

135. A Group Meeting on Standardization and Quality Control in the Industrialization Process of Developing Countries which was convened in Arandjelovac (Yugoslavia), with participants from Africa, Asia, Europe and the Middle East, endorsed the prime importance of action at national, regional and international levels to develop and strengthen standardization, quality control and metrology activities within developing countries and made explicit recommendations for action at all levels. UNIDO continued to maintain close contacts with other international organizations engaged in standardization and related activities (e.g. International Organization for Standardization, Inter-

national Trade Centre UNCTAD/GATT (ITC), ESCAP, World Intellectual Property Organization, International Organization of Legal Metrology, Arab Organization for Standardization and Metrology, European Organization for Quality Control).

136. In the field of small-scale industry development and rural industrialization, assistance was provided to 38 countries and to one intergovernmental organization with the objective of establishing and strengthening institutions that serve small-scale industry and provide liaison with other elements of the national institutional infrastructure which are not easily accessible to small-scale entrepreneurs or people in rural areas (technology delivery systems). Small-scale industry development is also of importance to the rural areas, especially with regard to village industry, in order to fulfil basic needs, provide employment opportunities, stem the exodus to urban centres, increase the monetary revenues of the weaker sectors of the community and attain a more equitable distribution of income. Rural industrialization also provides special opportunities for the integration of women and the direct participation of youth and the disabled in development efforts. For projects in most countries, priority was accorded to the following activities: decentralization of industries away from major urban centres; promotion of industries that make use of locally available raw materials; development of non-conventional sources of energy (eolian, biomass); expansion of agro-based industries, including agricultural implements and tools; and encouragement of export-oriented industries.

137. Assistance continued to be provided to Zambia in establishing a legal base for an effective and comprehensive development organization for small-scale industry;⁴⁵ the resulting Small-scale Industry Act has now become law. The project, to be enlarged in future years, has set up an institution that can act as an umbrella to serve small-scale and cottage industries and also co-ordinate bilateral assistance in this field, including TCDC arrangements. Other efforts within the framework of this project resulted in agreements by the Development Bank of Zambia and commercial banks to provide loans to small-scale industry. In Kinshasa (Zaire) a Working Group on Small-scale and Medium-sized Enterprises was set up, under the chairmanship of the Minister of Industry, with participants from the Zairian entrepreneurs' association and one UNIDO expert and the Senior Industrial Development Field Adviser to act as co-ordinators. It was agreed that high-level government staff would set up four sectoral commissions under the aegis of the Working Group, each consisting of permanent members from institutions in different sectors.

138. To direct industrialization to remote areas, the Government of Togo requested UNIDO assistance in the establishment and operation of an industrial estate in Lama Kara. In addition to the selection and installation of small industrial enterprises for the estate, a mechanical workshop was set up to manufacture animal-drawn implements on a limited scale. In Egypt, a Workshop on the Formulation of a Comprehensive Programme for Small- and Medium-Scale Industrial Enterprises in the Alexandria and Behera Provinces was held under the auspices of UNIDO and resulted in the formulation of a comprehensive development programme.

⁴⁵*Ibid.*, para. 143.

139. Important activities in small-scale industry development, directly related to the priority area of human resources development, included: institutionalizing programmes for human resources development in government agencies serving industry; establishing national support mechanisms for entrepreneurship development programmes; and formulating motivation and orientation programmes to enhance participation of young people, women and marginal groups in industrialization. Plans are under way to evaluate human resources development projects initiated two years ago in Hungary and Malaysia.⁴⁶ Projects were also being developed in response to a great number of requests for assistance, along similar lines, including requests from least developed countries (Lesotho, Nepal) and the island countries of the eastern Caribbean.

140. In the field of product adaptation, UNIDO provided assistance in the form of high-level short-term experts to examine specific products and their production processes and make recommendations for improvement. India and Kenya were helped through an integrated programme of technical assistance in co-operation with ITC. Such assistance entailed identification by ITC of markets in developed countries for the products of developing countries; selection of enterprises in developing countries with export potential; and supply of technical assistance by UNIDO to these selected enterprises. Areas covered included: tennis rackets; multi-speed hubs for bicycles; rubber moulded balls for tennis and golf; spectacle frames; yacht design; fishing rods and parts; precious stones; and dyeing and finishing of polynosic rayon, polyester, flax and silk. Assistance was also provided to the Republic of Korea.

141. On the basis of experience gained during the first and second UNDP country programming cycles, modifications were proposed for the third programming cycle, involving the introduction of a system to monitor implementation of the recommendations of UNIDO experts.

142. In co-operation with the International Organization of Consumer Unions, efforts continued to assist developing countries in organizing and promoting consumer movements to protect consumers against manufacturers' malpractices.⁴⁷ The programme also involves the provision of advice to Governments on matters affecting consumers, including legislation for the protection of consumers, and the provision of assistance in comparative testing and value analysis of consumer goods and services.

143. In 1981 assistance continued to be provided to Nigeria and to Tonga in strengthening investment promotion machinery.⁴⁸ In addition, requests for the creation or improvement of investment promotion machinery were processed from Antigua, Dominica, Montserrat, Saint Kitts-Nevis and Saint Lucia. Activities in the field of international subcontracting were developed to promote exports of manufactured articles. During 1981, a project was initiated to assist India in setting up an international subcontracting exchange. One such institution, set up in the Philippines in 1980 with UNIDO assistance,⁴⁸ became fully operational with the installation of a computer; on-the-job training in the operation of subcontracting exchanges was provided for fellows from the Philippines. Requests are also being processed from Costa Rica and Peru for assistance in setting up such exchanges.

⁴⁶*Ibid.*, para. 147.

⁴⁷*Ibid.*, para. 151.

⁴⁸*Ibid.*, para. 150.

144. Assistance continued to be provided to international fairs and exhibitions during 1981. The large-scale project, initiated in 1979⁴⁹ aimed at providing a detailed architectural and technical study on the planning of the new international fair in Tunis, was completed on schedule. At the express wish of the Government of Tunisia, the contract for preparation of the study was awarded to a national consulting firm and the study for the construction of the fair was successfully completed before mid-1981 for submission to international bidding.

FACTORY ESTABLISHMENT AND MANAGEMENT

145. In 1981, technical co-operation expenditures under the heading factory establishment and management amounted to \$4.5 million, an increase of \$1.0 million (about 29 per cent) over the figure recorded in 1980 and of \$2.4 million (about 114 per cent) over expenditures recorded in 1977 at the start of the second UNDP country programming cycle. As in the previous year, some 90 per cent of the total implementation was financed from UNDP resources.

146. Regional distribution of expenditure in percentages was: Africa (50); the Americas (23); Arab States (19); Asia and the Pacific (6); Europe (2); and interregional and global (—).

147. A total of 67 projects were implemented or under implementation in 1981 (1980: 73), comprising 6 projects greater than \$1 million in value (1980: 6), 25 projects greater than \$150,000 in value (1980: 24) and 36 projects below that value (1980: 43).

148. Technical co-operation activities continued to concentrate on the direct provision of management assistance to industrial enterprises and factories, so as to improve operations, increase productivity and, simultaneously, upgrade the national managerial capacities through on-the-job training. Developing countries are becoming increasingly aware that effective industrial management is just as essential as technological know-how and expertise for the optimum operational performance of industrial enterprises. The transfer of factory-floor management know-how and other on-the-job experience within the environment of a well-managed enterprise is considered to be essential for the development of industrial managers. Owing to the shortage of experienced industrial managers, the performance of industrial enterprises and factories in developing countries does not reach desired levels. Direct assistance projects aim to remedy the situation by creating a well-managed environment through the assignment of a number of experts specialized in various facets of industrial management to demonstrate how experienced industrial managers function and act as a team. Experience shows that such expert assistance has a considerable multiplier effect within the industrial sector, particularly the public sector. Projects providing expert assistance in industrial management were continued in El Salvador, Ethiopia, Guyana, Mauritius, Nicaragua, Somalia, Sudan and Uruguay. New projects with similar objectives were under preparation in Angola, Democratic Yemen and Malawi.

⁴⁹ID/B/240, chap. II, para. 128.

149. The fact that programmes of technical co-operation in areas of industrial management produce readily quantifiable results at plant level is probably the cause of the increasing number of requests particularly from the least developed countries for assistance in industrial management, including finance and accountancy and organization of production. Projects in industrial management require a sufficiently high level of expert inputs to achieve the desired demonstration and management team effect. One major problem continues to be the shortage of qualified national manager counterparts, since those who have gained sufficient experience often find better remuneration elsewhere. Unless this problem is overcome, it will continue to be difficult to improve industrial productivity and ensure capacity utilization of plants.

150. Strengthening management capacities within government bodies responsible for the operation of industrial enterprises and the establishment of new ones continued to be a further important activity in 1981. Projects were initiated or continued in Benin, El Salvador, Malawi, Swaziland, Zaire and Zambia with the aim of instituting organizational improvements; introducing modern management information and control systems, as well as financial management and accounting practices; and upgrading management capacities in general. At the sectoral level, the furtherance of management skills for the development and organization of enterprises is pursued through a number of projects in Nicaragua.

151. The development and strengthening of industrial management consultancy capacities at regional, national, local and enterprise levels continued to receive emphasis.⁵⁰ Two new regional projects to strengthen industrial management consultancy capacities on a broad basis are under preparation in co-operation with ESCAP and ECA.

152. Since industrial energy usage represents, on average, around 40 per cent of a country's total energy consumption, the strengthening of efficient industrial energy management capacities is imperative if industry in the developing countries is to remain competitive. However, there is an overall lack of expertise in this relatively new and complex field. Projects are under preparation in a number of countries, and it is expected that one will soon be approved in the Philippines.

153. The application of computers in industrial management is gaining momentum, although the shortage of software and programming capacities, rather than the cost of hardware, is currently a limiting factor. The regional project at the Asian Institute of Technology (Bangkok)⁵¹ progressed well in 1981 and generated considerable interest among the participating countries. Several countries are considering proposals to strengthen their advisory and consulting capacities for application of the computers in industrial management. Two projects introduced computer-based management information systems; one, at enterprise level, in Egypt; the other for the consultancy operations of the University of Aleppo (Syrian Arab Republic).

154. Given the universities' potential for providing a variety of useful services to industry in developing countries, a new project concept was developed by the

⁵⁰ID/B/260, chap. II, para. 157.

⁵¹*Ibid.*, para. 162.

Factory Establishment and Management Section in 1981. This concept aims at catalyzing industry/university co-operation and organizing national workshops to discuss and develop practical "plans of action" for such co-operation. The first pilot project of this type will be implemented in Uruguay in 1982, and its effectiveness will be assessed after its first year of operation.

155. While it is recognized that an efficient industrial distribution system is the corner-stone of a well-functioning industrial economy, particularly in respect of rural industrialization, the implementation of specific activities in this field continued to be a problem.⁵² Although the distribution costs of all types of industrial and consumer goods are known to be very high, and the issue is a well-known structural problem in the development process, the number of requests for assistance received from developing countries does not reflect the importance attached to the subject.

156. Assistance in factory establishment and management did not increase to the degree expected in 1981. Cost overruns are substantial and time delays are frequent during new factory erection projects in practically all developing countries. The major causes seem to be unrealistic planning, coupled with shortage of project implementation managers experienced in overseeing factory erection projects. A new project concept was designed to investigate requirements in this field and provide assistance in the form of immediate expert services and the development of local management capacities.

TRAINING

157. In 1981 technical co-operation expenditures under the heading training amounted to \$6.2 million, a decrease of \$0.6 million (about 9 per cent) below the figure recorded in 1980 and an increase of \$1.6 million (about 35 per cent) over the expenditures in 1977 at the start of the second UNDP country programming cycle. As in the previous year, some 26 per cent of the total implementation was financed from UNDP resources.

158. Regional distribution of expenditure in percentages was: Africa (20); the Americas (—); Arab States (3); Asia and the Pacific (16); Europe (10); and interregional and global (51).

159. A total of 323 projects were implemented or under implementation in 1981 (1980: 216), comprising 35 projects greater than \$150,000 in value (1980: 33) and 288 projects below that value (1980: 183).

160. Expenditures for fellowship and training components of all technical co-operation projects implemented by UNIDO in 1981, amounted to \$9.9 million (against \$11.2 million in 1980). Of that total, \$5.6 million⁵³ (1980: \$5.7 million) were spent for fellowships and study tours and \$4.3 million (1980: \$5.5 million) for group training activities and meetings.

⁵²*Ibid.*, para. 163.

⁵³Due to a change in the accounting system effective January 1981, an additional \$650,000 (approx.) for fellowships and study tours will be recorded as implementation for 1982.

161. Fellowships and study tours continued to be a most effective instrument in the framework of both UNIDO's training activities and its overall technical assistance operations. In spite of world-wide recessionary trends and the continuation of difficulties caused in the fellowship and study tour candidates' home countries (such as nomination at far too short notice, requests for postponement of ready arrangements, re-routing of itineraries or last-minute cancellations), the number of individual training programmes started in 1981 was 15.6 per cent higher than in 1980 (1,147 as compared to 992), while the number of placement arrangements by host country (not taking into account multiple arrangements within the respective host countries) increased by 28.2 per cent compared with 1980 (1,972 as compared to 1,538). 378 or 19.2 per cent of these placements were arranged in developing countries, thus contributing to technical co-operation among developing countries. 250 (21.8 per cent) of the trainees came from least developed countries; 120 (10.5 per cent) were female. The increase in the number of trainees, particularly from African and Asian countries (China alone had 146 trainees), is a consequence of an increase in the number of nominations submitted by Governments in 1981, while the increase of placement arrangements by host countries was only possible thanks to the excellent co-operation with the national supervising agencies in these countries. The trend towards study tours of high-level industrial personnel continued. The ratio between fellowship training and study tours was nearly 1 to 1. Due to the high level of both participants and the institutions and persons visited in many of these study tours, the results can be expected to affect positively the industrial development of the participants' home countries.

162. In the group training programmes, emphasis continued to be placed on transferring training capabilities to appropriate institutions in developing countries through special programmes for the training of managers and of trainers, in order to assist the development of appropriate national training programmes and policies.⁵⁴ Good examples of such an approach are: a recent programme in Angola to train policy-makers from Portuguese-speaking African countries; and a four-year project involving the University of Louvain (Belgium) and the Higher School for Commercial and Economic Sciences in Yaoundé (United Republic of Cameroon), currently progressing according to schedule. The first seminar under the latter project took place in Douala in May 1981 and a professor of the Douala institute is currently working as a full member of the team of professors at the University of Louvain giving lectures and organizing seminars for Belgian students in production management, in preparation for assuming more responsibility for the second Douala seminar which will be held in the spring of 1982. A large-scale \$1.5 million project to create a training capacity in the UDEAC subregion was approved. Of the 48 group training programmes carried out by the Training Branch during the year under review, 19 took place in developing countries as compared to 16 in 1980. Although UNIDO continued to play the major role in organizing these programmes, it is expected that in the course of time institutions in the developing countries will assume this function to a larger extent. The "centres of excellence" programme (see para. 166 below) is relevant in this connection.

163. The task of improving the training capacities of developing countries also continued to be pursued through the field operations programme. As

⁵⁴ID/B/260, chap. II, para. 171.

developing countries maintain progress in the field of industrialization, UNIDO has to organize increasingly sophisticated training programmes in more complex areas. In addition, UNIDO devotes a substantial amount of time and effort to providing advice to representatives of Governments and intergovernmental organizations on ways and means of best approaching their industrial training needs. All this, in turn, results in a higher workload for UNIDO staff.

164. The interrelationship between fellowships, group training and field operations was well demonstrated by training activities in industrial energy conservation and management. Fellowships and study tours were provided for policy- and decision-makers, group training programmes for selected technical and managerial personnel, and local training—through *ad hoc* programmes and strengthening of local training institutions—for executive and technical personnel at sectoral and enterprise levels.

165. During the year, a wide programme of training in industrial energy management and planning was formulated and initiated. The programme, which addressed itself to government and industry leaders, mainly covered the needs for (a) training in industry management and (b) energy management training centres. Some 84 policy-makers participated in these activities. Follow-up activities envisaged for 1982 include: additional regional meetings; group training programmes in specific sectors; projects to strengthen and upgrade existing training institutions; the compilation/preparation of a training manual on energy auditing; and other relevant training programmes. All of these activities are in various stages of development.

166. Further efforts to improve the training capacities of developing countries come under the "centres of excellence" programme⁵⁵ which made encouraging progress in 1981. Under this programme, the Secretariat seeks to identify existing training institutions/centres, assess their capabilities and potential, and develop technical co-operation projects to permit such centres to serve both national needs and, as appropriate, those of other developing countries. The programme since its inception in 1980 has also facilitated fellowship placement activities and in this way contributed towards TCDC arrangements. In an effort to identify existing capabilities, approximately 100 Governments were approached through the UNDP field network during 1981. Eighty-five Governments responded and 65 of these submitted details on more than 200 institutions (additional institutions continue to be brought to the attention of missions fielded). Identification and preliminary assessment missions were conducted in 20 Asian countries. Of the 87 institutions surveyed, 15 were identified as having the potential to offer services to trainees from abroad, and a similar number would require only limited assistance to improve substantially their ability to serve national needs. About 50 institutions in 13 African countries were also surveyed.

167. Training activities were increasingly oriented towards arrangements for TCDC and a close working relationship was maintained between the Training Branch and the Section for Economic Co-operation among Developing Countries as illustrated by the increasing number of fellows placed in developing countries. A group training programme for the cement industry in

⁵⁵*Ibid.*, para. 172.



At a group training programme organized jointly by the Cement Research and Development Centre, Ankara (Turkey) and UNIDO.

Above: Kiln-control room.

Below: Computer-linked machine for cement-sample testing.

Group training programmes are a key element of human resources development and are paramount to the dynamics of industrialization and the transfer of technology.



Turkey,⁵⁶ repeatedly held in previous years, led now to a project to establish a "centre of excellence". In China, training programmes for other developing countries in mini-hydro generators led to a decision to establish a regional training centre, to be implemented by the Government with UNIDO assistance. Previous training programmes, conducted in co-operation with the UNIDO Technology Group and the Engineering Industries Section⁵⁷ led to the establishment in 1981 of at least 17 mini-hydro-power generation facilities in two African countries.

168. Efforts made as a follow-up to the System of Consultations have so far resulted in two large-scale projects to be implemented in 1982 comprising: (a) in the leather sector, four training programmes for trainers from developing countries to be conducted in Italy between 1982 and 1984; and (b) in the agricultural machinery sector, a project to define training needs in selected developing countries and identify training facilities and opportunities available in the developed countries. A natural follow-up to this latter project would involve the creation of a mechanism to bring together needs and capabilities and the establishment or strengthening of institutions in the developing countries to provide training in the production, use, maintenance and repair of agricultural machinery. Preliminary investigations were undertaken, in co-operation with ECA, to develop a mechanism to facilitate and encourage TCDC activities in the field of industrial training in Africa. Similar investigations in other regions will be carried out in 1982.

169. Significant efforts were made in 1981 to develop a more integrated approach in meeting UNIDO's industrial training mandate and in planning activities so that each tended to complement or supplement the other. Co-operation with other branches and sections was strengthened, and a major effort was made to develop co-operative relationships with other United Nations bodies and organizations such as UNDP, the International Labour Organisation (ILO), including the International Centre for Advanced Vocational Training in Turin, UNESCO and the World Bank and other intergovernmental organizations such as the Council of Europe, the Council for Mutual Economic Assistance (CMEA), the European Economic Community (EEC), the International Centre for Public Enterprises in Developing Countries (ICPE), OAU and UDEAC. Co-operation with UNDP involved, *inter alia*, two major areas:

(a) Participation in the advisory committee of a UNDP-sponsored project to establish a co-operative research and training arrangement among selected universities and training centres in the field of energy planning;

(b) Participation in an inter-agency steering committee for the forthcoming UNDP-sponsored Conference of African Governmental Experts on Technical Co-operation among African Countries on Human Resources Development and Utilization, to be held in August 1982, for which a draft of a major discussion paper ("Training in industry") was prepared.

170. Staff of the Training Branch also represented UNIDO at a number of inter-agency meetings, consultations and conferences. Although such representations imposed a significant burden on the limited human and financial resources of the Branch, these efforts proved to be valuable and productive.

⁵⁶*Ibid.*

⁵⁷*Ibid.*, chap. III, para. 51.

171. Considerable time was devoted to the preparation of future programmes. Fifty-five group training programmes with an approximate total value of \$6 million, for which reasonable assurances of funding in 1982 were secured, were prepared. In addition, 22 field projects and group training programmes with a total value of \$2.6 million were also prepared at the request of Governments and approved by the UNIDO Project Review Committee for negotiation with potential donors.

172. The tenth issue of the "Guide to training opportunities for industrial development",⁵⁸ was published in 1981; demand for copies increased by more than 1,000 over the 1980 figure (approximately 7,000). During the year some 8,000 copies of the "UNIDO industrial training offer programme 1982"⁵⁹ were also distributed.

FEASIBILITY STUDIES

173. In 1981, technical co-operation expenditures under the heading feasibility studies amounted to \$4.3 million, an increase of \$0.8 million (about 22 per cent) over the figure recorded in 1980 and of \$2.3 million (about 115 per cent) over the expenditures recorded in 1977 at the start of the second UNDP country programming cycle. Some 85 per cent of the total implementation was financed from UNDP resources (1980: 81 per cent).

174. Regional distribution of expenditure in percentages was: Africa (38); the Americas (11); Arab States (32); Asia and the Pacific (18); Europe (1); and interregional and global (—).

175. A total of 63 projects were implemented or under implementation in 1981 (1980: 71), comprising 3 projects greater than \$1 million in value (1980: 5), 27 projects greater than \$150,000 in value (1980: 25) and 33 projects below that value (1980: 41).

176. Taking into account the decisions and recommendations of the Third General Conference of UNIDO and the priority areas laid down by that Conference, the Feasibility Studies Section in 1981 developed a new conceptual approach to technical co-operation which aimed to link pre-investment studies more closely with investment follow-up and hence increase the number of investments resulting from such activities.

177. To advance the industrialization process, an integrated approach is required, embracing not only the technical aspects of industrial production, but also the economic, financial, planning and pre-investment aspects. To this end, efforts were made to intensify teamwork among economists and engineers within the Division of Industrial Operations—a prerequisite for the efficient preparation and evaluation of pre-investment studies. Since June 1981, the Feasibility Studies Section has been acting as co-ordinator within UNIDO for the preparation and evaluation of industrial pre-investment studies.

⁵⁸PI/73.

⁵⁹PI/74.

178. To further strengthen investment follow-up, co-operation between the Investment Co-operative Programme Branch and the Feasibility Studies Section was further emphasized in 1981. In future, the Feasibility Studies Section will play an increasingly important role in this process by ensuring that, with the approval of the Governments in question, completed studies or series of studies produced by the Division of Industrial Operations are fed to the Investment Co-operative Programme Branch for promotion through the Investment Promotion Services and investment promotion meetings.

179. The 1981 Memorandum of Understanding on co-operative arrangements on investment follow-up signed between UNDP and UNIDO (see appendix B) will also lead to strengthening investment follow-up by upgrading and updating UNIDO pre-investment studies.

180. The high priority assigned by UNDP to improving pre-investment oriented technical co-operation is further reflected in the substantially increased allocation for that purpose in the third UNDP country programming cycle (1982-1986). Bearing in mind the conclusions of the 1980 Global Meeting of Resident Representatives of the UNDP, the Inter-agency Consultative Meetings held in January and December 1980 and the UNDP Governing Council at its twenty-seventh and twenty-eighth sessions, measures were taken to strengthen the national capabilities of developing countries to carry out pre-investment and investment work in order to cope successfully with the priority activity of increasing production. In accordance with the new requirements and the proposals made by the Consultative Committee on Substantive Questions of the Administrative Committee for Co-ordination (ACC) (Operational Activities)⁶⁰ the Section, with the primary objective of strengthening national capacities in the identification, preparation, evaluation and promotion of investment projects, drew up a proposal for the establishment of industrial advisory units within existing national machinery. Such units have already been established in 16 countries (Chile, Congo, Cyprus, Djibouti, Ethiopia, Gabon, Indonesia, Ivory Coast, Kenya, Libyan Arab Jamahiriya, Mali, Mauritania, Oman, Saudi Arabia, Sierra Leone, Uruguay.) During the third UNDP country programming cycle, new units are expected to be set up in, *inter alia*, China, Honduras, Madagascar, Pakistan, Paraguay, Senegal, United Arab Emirates and Upper Volta; these units will help to further improve UNIDO assistance in the preparation of industrial projects, particularly in the least developed countries.

181. The Section continued to develop activities aimed at strengthening the capabilities of developing countries in project preparation, evaluation and financing. Workshops⁶¹ and seminars are organized mainly at the national level, with programmes tailored to the respective country's requirements. Their aim is to increase the number of staff from developing countries who are trained in the techniques of project preparation and evaluation, with a view to improving the quality of pre-investment studies in those countries. Over 30 requests for this type of assistance were received during the past 15 months. In 1981, nine such workshops and seminars were held in Afghanistan, China, Democratic Yemen, Indonesia, Mauritania, Pakistan, Turkey, and at the

⁶⁰ACC/1980/7, paras. 5-17.

⁶¹ID/B/260, chap. II, para. 181.

Caribbean Development Bank and the International School in Bordeaux; about 15 are scheduled for 1982. Co-operation was initiated with the Economic Development Institute (EDI) of the World Bank for joint implementation of such workshops and seminars in developing countries during the third UNDP country programming cycle. The Section also contributed to an EDI seminar on pre-investment projects for UNDP resident representatives held in Washington D.C., November 1981.

182. During the year under review, one of the main concerns of the Section was to improve the quality of UNIDO pre-investment studies; activities included the dissemination of the *Manual for the Preparation of Industrial Feasibility Studies*⁶² and the promotion of the *Manual's* methodology through, *inter alia*, the above-mentioned workshops and seminars. In an effort to standardize pre-investment studies carried out by subcontractors, the "Guidelines for the preparation of industrial feasibility studies for consulting firms"⁶³ were prepared in 1980; these have now become an integral part of contracts for consulting companies carrying out pre-investment studies.

183. A computerized system based on the guidelines of the above-mentioned *Manual* was further developed in 1981 in order to facilitate project appraisal and financial analysis.⁶⁴ This system is intended to be an accompanying programme for project planning teams, permitting an easier evaluation of projects, including sensitivity analysis. Moreover, since consulting firms will be requested to list on the programme all project alternatives considered, indicating why certain alternatives were dismissed, the system will render more transparent the decisions implicit in pre-investment studies. UNIDO and its partners will thus have an opportunity to formulate additional project solutions. The accompanying programme, which will be made available to developing countries free of charge, will enable UNIDO to set up its own project evaluation service at Headquarters to appraise studies sent in from the field.

184. Substantive support was also given to other technical sections of UNIDO in the preparation of pre-investment studies. Co-operation with other units focused mainly on market, financial and economic analysis of industrial investment projects, to ensure (a) that all components of a pre-investment study were taken into consideration; and (b) that studies were prepared in accordance with the requirements of project sponsors, financing institutions and investment promotion agencies.

185. An increase in requests for technical co-operation in the pre-investment field was evident in 1981, and the numerous large-scale projects presently at the formulation stage for inclusion in the third UNDP country programming cycle indicate that the trend is likely to continue.

186. Although the activities of the Section were expanded in 1981, a further expansion of such a dynamically developing programme will only be possible if additional staff resources are made available.

⁶²ID/206; see also ID/B/260, chap. II, para. 178.

⁶³UNIDO/IO.401; see also ID/B/260, chap. II, para. 178.

⁶⁴ID/B/260, chap. II, para. 179.

AGRO-INDUSTRIES

187. In 1981, technical co-operation expenditures under the heading agro-industries amounted to \$8.3 million, a decrease of \$1.3 million (about 14 per cent) below the figure recorded in 1980 and an increase of \$1.9 million (about 30 per cent) over the expenditures in 1977 at the outset of the second UNDP country programming cycle. Some 70 per cent of the total implementation was financed from UNDP resources (1980: 80 per cent).

188. Regional distribution of expenditure in percentages was: Africa (38); the Americas (14); Arab States (6); Asia and the Pacific (34); Europe (2); and interregional and global (6).

189. A total of 216 projects were implemented or under implementation in 1981 (1980: 203), comprising 11 projects greater than \$1 million in value (1980: 14), 53 projects greater than \$150,000 in value (1980: 38) and 152 projects below that value (1980: 151).

190. As in the past, activities in the field of agro-industries concentrated on industrial production and covered a wide range of light industries including: textiles and wearing apparel; food processing; wood processing and wood products; leather and leather products; rubber products; and packaging.

191. During the year under review, most of the activities in the field of agro-industries, especially textile and packaging, were UNDP-financed. UNIDF financing, however, ranged high as regards projects in the wood, food and leather processing industries. Implementation during the year was influenced by the cyclic nature of funding and programming, since large-scale projects in the textile and food processing industries had begun early in the second UNDP country programming cycle with large expenditures on equipment to serve the projects as they progressed. Although the approval of a number of large-scale projects is expected during the third programming cycle (1982-1986), their inception may be somewhat delayed by general over-commitment of funds at the end of the second programming cycle.

192. In 1981, the character of the textile programme followed the pattern of previous years with two main project categories: (a) direct assistance to the industry; and (b) the strengthening and establishment of institutions. Projects of this latter type continued to predominate. Of the nine operational large-scale projects in the textile industry, four were completed in early 1981. In addition to the remaining five projects in Bangladesh (2), Egypt, India and the United Republic of Tanzania, there were only two medium-scale projects (Ghana, India), and one preparatory assistance project (Sri Lanka) in operation. Technical assistance expenditure in the textile industry was therefore relatively low compared with previous years. However, the situation is expected to change when nine large-scale projects prepared in 1981 become operational in 1982.⁶⁵

193. There was further co-operation with other international organizations in activities related to the textile industry. Within the framework of its lending

⁶⁵*Ibid.*, para. 188.

programme to Bangladesh, the World Bank requested to be associated with the technical advisory services established by UNIDO in that country in connection with an ongoing large-scale project providing direct assistance to the cotton industry. The Bank also requested UNIDO assistance in evaluating a textile project in Turkey.

194. In the vegetable oils and fats industries, a detailed evaluation of the situation in 12 countries of the Pacific region was undertaken and is expected to lead to closer regional co-operation in this sector. The Coconut-Processing Technology Consultancy Service, established within the framework of the Asian and Pacific Coconut Community,⁶⁶ continued its activities and evaluated and documented 150 different coconut-processing methods. Based on these results, a Coconut Technology Consultancy Service was established within the UNIDO Secretariat to extend available coconut-processing technology documentation and upgrade selected domestic processes to semi-industrial and industrial levels.

195. To contribute to the better utilization of capacities, a detailed study is being made of the local spare part and equipment production for the vegetable oils industry in seven selected developing countries. This study is expected to provide specific recommendations for international co-operation agreements concerning the local manufacture and distribution of spare parts and equipment for this branch of industry in developing countries.

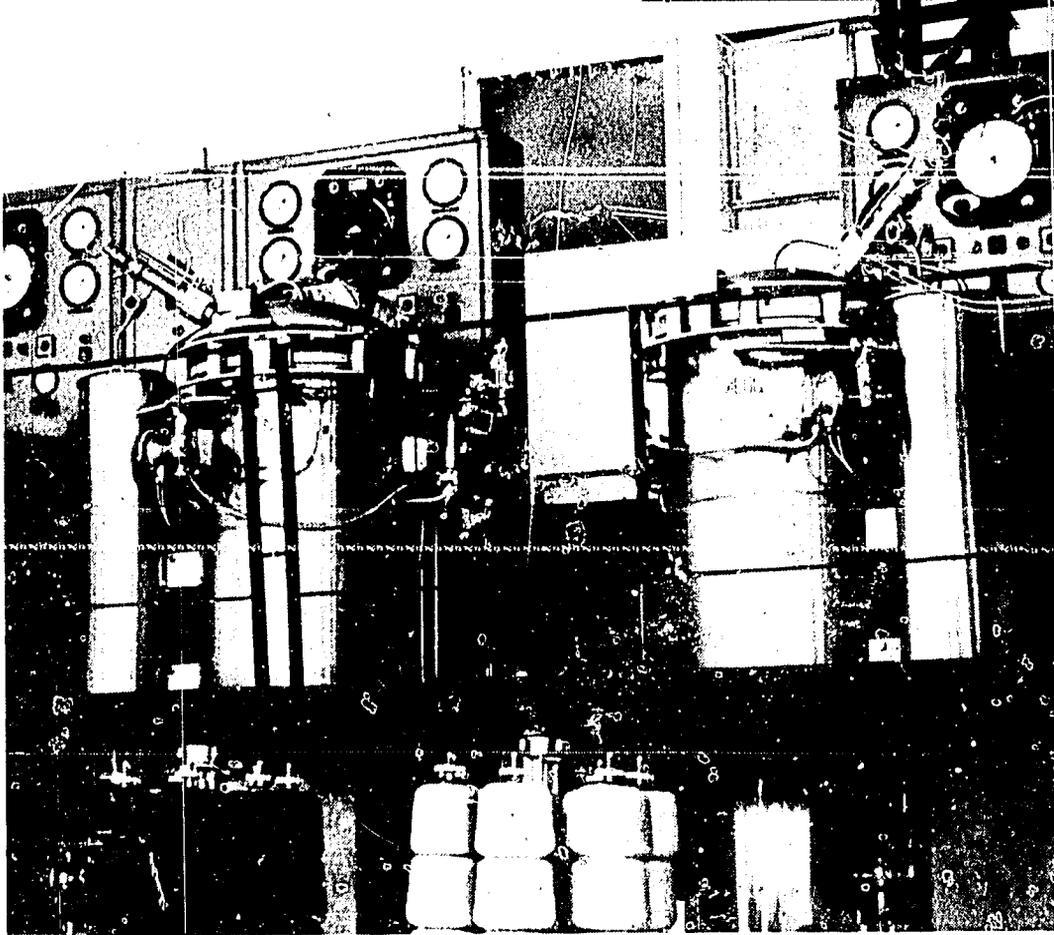
196. Special efforts in the development of non-conventional technologies continued within the framework of the UNIDF-financed technical co-operation programme.⁶⁷ Attention was paid to under-utilized and/or non-utilized agro-industrial raw materials. The evaluation of the jojoba seed production and processing industry led to the identification of a wide range of potentially valuable products and the development of a special jojoba-processing technology by UNIDO will greatly reduce losses in the jojoba oil and protein animal-feed production. Other development projects with large R + D components, covering cassava, *Balanites aegyptiaca*, rice-husk and castor-bean processing, are progressing.

197. Projects in the food processing sector also covered the expansion, modernization and integration of complexes for cane sugar and its by-products (Bangladesh, Dominican Republic, Mauritius). Work began on the establishment of a sugar industry development centre in Egypt as part of a large-scale project. Other projects, on a smaller scale, aimed at upgrading the production of industries—baker's yeast (Viet Nam); biscuits (Uganda); bacon (Kenya). Another project was a study for the Pepper Community on developing the pepper-processing and pepper products industry.

198. In Latin America, the large amounts of food required by increasing urban populations, coupled with the increasing costs of foodstuff transportation and storage have demonstrated that there is a need to process food as near as possible to rural areas. Besides improving the food supply to urban areas, an integrated agro-industry also creates employment in rural areas, thereby

⁶⁶ID/B/220, chap. II, para. 63; ID/B/240, chap. II, para. 79.

⁶⁷ID/B/260, chap. II, para. 193.

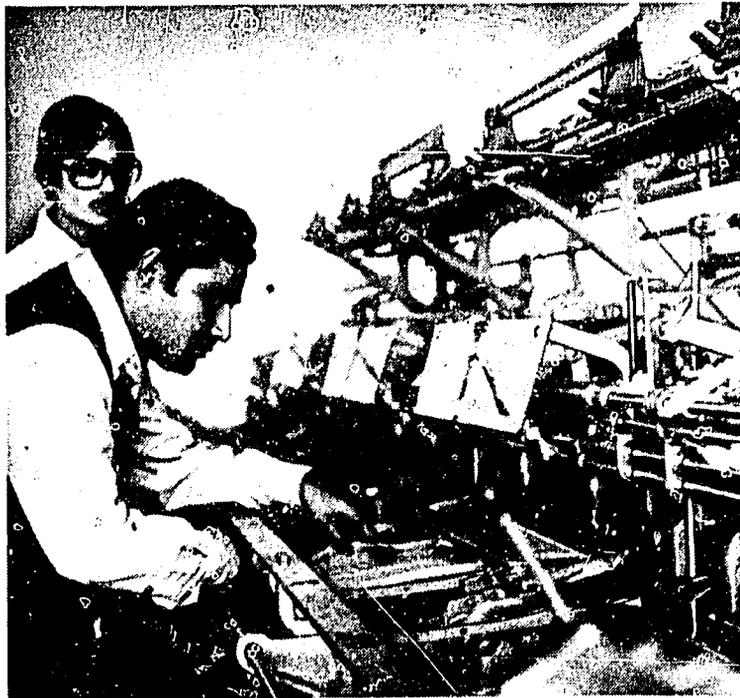


UNDP/UNIDO demonstration and service centre for the Punjab wool knitwear industry (1st phase completed in 1981).

Above: Cone dyeing.

Right: Full-fashioned knitting.

The selected technology permits yarn and knitwear processing to the "Woolmark" standards set by the International Wool Secretariat.



helping to reduce the exodus of rural populations. Assistance in the field of integrated agro-industrial development was requested by the Andean Group and other countries in the region.

199. Activities in the wood processing industries sector continued to be oriented towards assistance to existing industry on a small-scale but high-impact basis, for example in Indonesia, Singapore and Zambia. Seminars and workshops of proven success were repeated in 1981, including the tenth UNIDO Seminar on Furniture and Joinery Industries held in Lahti (Finland) and financed from special-purpose contributions to UNIDF. A new seminar, Wood-based Panels and Furniture Industries, conducted in China and financed under UNIDF, catered for the particular needs of industries in the least developed countries.

200. Although many developing countries with forestry resources are not yet fully aware of the role wood can play in construction programmes, the use of timber (including coconut stems) and agricultural residues in construction is expected to become the focus of increased activities in this branch of industry. The low-cost modular prefabricated wooden bridge system developed by UNIDO for Kenya some years ago,⁶⁸ aroused interest in other countries (Central African Republic, Honduras, Madagascar) wishing to improve their rural transport network and aware that a similar technology may be applied to other structures. The development of other timber structural products (e.g. jetties, roof trusses) also proved successful in Kenya and would be applicable to other countries. The Expert Group Meeting on Timber Stress Grading and Strength Grouping, held in Vienna, December 1981, aimed at increasing the use of timber in construction by drawing up standard rules and systems to assist designers and specifiers. In Sri Lanka, a large-scale project covering structural uses of coconut wood (e.g. in glued-laminated beams and roof trusses) and of rubber-wood was started during the year.

201. UNIDO provided a regional adviser in secondary wood processing to the Forest Industries Advisory Group for Africa in Addis Ababa, a project which is being implemented jointly by FAO as executing agency and ECA and UNIDO as associated agencies. In addition, two manuals were prepared for publication during 1981—on upholstery technology⁶⁹ and on jigs for the furniture industry.⁷⁰ The lectures given at the 1980 Milan Technical Course on Criteria for the Selection of Wood-working Machinery, which is expected to be repeated in 1982, were also published.⁷¹

202. Technical assistance priorities in the leather, leather products and rubber products fields were increasingly directed towards the leather products subsector, as most Governments are concentrating on the further development of manufacturing capabilities for footwear, leather goods, sports goods and leather garments. However, there was continued assistance to the tanning industry, directed mainly at improving quality and increasing the capacity utilization of tanneries. Assistance was also given to the manufacture of a variety of rubber products.

⁶⁸ID/B/160, chap. III, para. 114.

⁶⁹ID/275 (to be issued in 1982).

⁷⁰ID/265.

⁷¹ID/247.

203. Implementation of large-scale projects in the leather industry continued in Ethiopia, Indonesia, Pakistan, Philippines, Saint Kitts, Tunisia and the United Republic of Tanzania;⁷² small-scale projects were implemented in Angola, Brazil, Burundi, China, Kenya, Mozambique and Sri Lanka. Increasing attention was given to the strengthening of leather and leather products institutes and training and demonstration centres (Indonesia and Tunisia) and to the establishment of such centres (Pakistan, Philippines and United Republic of Tanzania). Since quality control is one of the main components of the leather industry, UNIDO assistance is being provided for the establishment of quality control laboratories such as those in China, Kenya and Sudan. Assistance in the manufacture of rubber products was provided to Burma and Papua New Guinea.

204. Technical backstopping services were provided as a follow-up to the Second (1980) Consultation on the Leather and Leather Products Industry; assistance was also given to the fifth session of the Panel on Leather and Leather Products Industry which was held in Vienna, November 1981.

205. Technical assistance projects in the field of packaging in 1981 followed the same lines as in previous years,⁷³ concentrating on establishing and strengthening national centres for the provision of specialized information, training, applied research, and quality control services to industries producing and using packaging products in the respective countries. Several centres achieved a standard enabling them to operate on a regional basis; these were the Moroccan Institute of Packaging, which is being converted into the Arab Regional Packaging Centre; the Mexican National Laboratories for Industrial Promotion, which carries out research programmes in food packaging and training courses particularly suited to Latin America; and the Indian Institute of Packaging, which is expected to assume regional functions and responsibilities in the near future. The Polish Packaging Research Institute was strengthened specifically to provide expertise and training for UNIDO-assisted developing countries.

METALLURGICAL INDUSTRIES

206. In 1981 technical co-operation expenditures under the heading metallurgical industries amounted to \$8.2 million, an increase of \$1.9 million (about 30 per cent) over the figure recorded in 1980 and \$3.7 million (about 82 per cent) over expenditures in 1977 at the start of the second UNDP country programming cycle. Some 82 per cent of the total implementation was financed from UNDP resources (1980: 93 per cent).

207. Regional distribution of expenditure in percentages was: Africa (27); the Americas (18); Arab States (11); Asia and the Pacific (34); Europe (10); and interregional and global (—).

208. A total of 94 projects were implemented or under implementation in 1981 (1980: 71), comprising 13 projects greater than \$1 million in value

⁷²ID/B/260, chap. II, para. 194.

⁷³*Ibid.*, para. 196.

(1980: 10), 33 projects greater than \$150,000 in value (1980: 21) and 48 projects below that value (1980: 40).

209. The technical assistance programme continued to concentrate on the development, transfer and application of metallurgical technology for the following branches and activities: light non-ferrous metals (aluminium, titanium); heavy non-ferrous metals (copper, rare metals); iron and steel; ferrous and non-ferrous foundries; evaluation, concentration and beneficiation of ores and minerals; and metal transformation (rolling, forging, extruding, heat treating).

210. The Metallurgical Industries Section was very active in supporting UNIDO's programming activities and a number of missions took place with the purpose of defining the assistance required and formulating new projects in the field of metallurgical industries. Professional staff members of the Section spent more than 200 man-days in the field for this purpose. The Section has a vast pipeline project portfolio for implementation during 1982 and onwards.

211. Technical assistance to the metallurgical industries sector continued to follow the broad pattern of previous years and covered: the planning, establishment and operation of new plants and foundries, together with the planning of national subsectoral activities; the technical evaluation and laboratory testing of raw materials, semi-finished and finished products; the provision of expertise for efficient plant operation, and for the selection and application of appropriate technologies, equipment and managed maintenance and standardization systems; the establishment and strengthening of centres, institutes, laboratories and testing or evaluation units for the development of metallurgical technologies; the establishment of pilot and demonstration foundries and foundry/forge technology development centres; the organization of metallurgical training programmes and workshops; and the preparation of technical papers.

212. The iron and steel branch received the greatest proportion of technical assistance within the Metallurgical Industries Section in 1981 (some 32 per cent of project delivery). The demonstration plant for the production of sponge iron at Andhra Pradesh (India), UNIDO's largest project to date,⁷⁴ was inaugurated on 31 December 1980 and in 1981 was operating at 10 per cent above its rated capacity of 30,000 tons/year. The plant, which uses non-coking coals as a reductant, is to allow other developing countries to carry out trials and investigations, financed either from national IPF budgets or by means of inter-country/regional projects, one of which has been formulated for UNDP approval. A number of developing countries have expressed great interest in making use of the available facilities, and finances were secured from national IPF sources to proceed with demonstration tests using iron ore samples from Turkey and the United Republic of Tanzania.

213. Other projects under implementation in 1981 in the field of iron and steel included: assistance to the industry in Argentina and Turkey and to the General Company for Iron and Steel Products (Syrian Arab Republic).

⁷⁴ID/B/200, chap. III, para. 120; ID/B/220, chap. II, para. 200; ID/B/240, chap. II, para. 195; ID/B/260, chap. II, para. 200.

Remarkable success was achieved in Mozambique, where three experts provided assistance to the Companhia Industrial de Fundação e Laminagem (SARL-CIFEL) plant which, in July 1981, produced the country's first steel billets.

214. In Angola, a study was being undertaken on the processing of iron ore; in addition a preliminary study of the iron ore deposits at Say (Niger) was initiated in September 1981. A master plan for the development of the iron and steel industry in Pakistan was prepared by a UNIDO consulting firm, in order to assess current iron and steel production and the requirements for the next 20-30 years.

215. In the iron and steel standardization branch, UNIDO's most comprehensive project involving standardization, quality control and quality certification, continued to be implemented in Brazil. The project, initiated four years ago,⁷⁵ has already led to the development and introduction of five standards in one plant with savings of about \$2 million/year and a stock reduction from 106,000 items to 60,000 over a two-year period. At an ASEAN/UNIDO Workshop on Regional Steel Standardization, held in Manila, July 1981, discussions centred around future co-operation in the gradual harmonization of the variety of national standards in use within the region and the status, structure and functions of the proposed Technical Working Group on ASEAN Iron and Steel Standardization of the Committee on Industry, Minerals and Energy (COIME).

216. Further projects in the iron and steel industry stemmed from the need for proper maintenance techniques for the high-cost industrial equipment involved. Ongoing UNDP/UNIDO assistance to the Egyptian Iron and Steel Co. in the introduction and development of a fully computerized managed maintenance system has brought increased productivity (10-12 per cent) and profitability and has resulted in greater demand for managed maintenance in other metallurgical and basic industries in Egypt. A project document was prepared to establish a centre for modern management techniques at the Egyptian Iron and Steel Co., with an expanded computer system to extend activities and provide training both for national purposes and for other developing countries in Africa. It is expected that the project will be implemented during 1982-1984. Following the successful introduction of a managed maintenance system in a plant in Czechoslovakia, a preparatory assistance project was approved to establish a consultancy and training centre in that country. An in-plant group training programme on the use of computerized maintenance systems to improve the operational efficiency of steel plants will be organized in 1982 for 15 participants from developing countries to transfer know-how to managers, planners, engineers and computer specialists from developing countries.

217. In the non-ferrous metals branch, the greatest proportion of UNIDO assistance was provided to the aluminium industry. The bauxite processing industry is one of the few significant industrial branches in which the developing countries' share of production surpassed by far the Lima target at the end of the 1970s; alumina production in developing countries has already reached 27 per cent of world production.⁷⁶ Projects initiated or continued

⁷⁵ID/B/240, chap. II, para. 199.

⁷⁶ID/B/180, chap. IV, para. 230.

during 1981 covered the establishment and strengthening of indigenous research and development facilities for testing and investigation of alumina raw materials and included: approval of a project valued at \$5 million, partially financed from the United Nations Interim Fund for Science and Technology for Development, aimed at upgrading the scientific and technological capabilities of the Jamaica Bauxite Institute; assistance to the Zheng Zhou Light Metal Research Institute (China) in strengthening R + D capabilities in bauxite processing, alumina and aluminium production; and assistance in the preparation of a project report and a detailed project design for the establishment of an aluminium research development and design centre in India where demand is growing at the rate of about 10 per cent annually. A joint UNEP/UNIDO Workshop on the Environmental Aspects of Alumina Production was organized in Paris, January 1981, at which, *inter alia*, the utilization of bauxite residue was considered as a raw material for the production of tiles and bricks, and pilot-scale testing of representative samples of red mud for profitable utilization in the building materials industry was requested by Jamaica.

218. The Joint UNIDO/Hungary Aluminium Industry Programme, initiated in 1977 to provide assistance to the aluminium industry in developing countries, continued its activities in 1981 through the preparation of techno-economic studies for developing countries and the provision, at short notice, of high-level experts requested by Governments. Under this Programme, 15 candidates from developing countries attended a one-week training course in bauxite processing and alumina production at the Hungarian Aluminium Corporation.

219. In the heavy non-ferrous metals branch, assistance was provided to Mauritania in assessing the viability of extracting gold and silver from Torco tailings at the disused Akjoujt copper mine. To determine the viability of establishing a regional joint-venture copper fabricating plant in Nigeria, based on copper cathodes and rods to be supplied by Zambia, UNIDO commissioned the services of a consulting firm.⁷⁷

220. In accordance with the New Delhi Declaration and Plan of Action, emphasis was placed on the processing of metallurgical minerals and laboratory and pilot test work to identify optimum use of indigenous raw materials for local processing into added-value products. An investigation of heavy mineral black sands continued in Mauritania. A "Profile of transferring technology in testing, investigation and evaluation of bauxite" was prepared and two papers "Options and opportunities of metallurgical progress in Africa" and "Mining progress in Africa: options and opportunities" were presented at ECA meetings on these subjects during the year.

221. In the foundries branch, there were increased efforts to identify and implement foundry projects to supply local markets with urgently needed agricultural implements, tools and spare parts and reduce imports. Projects under implementation comprised: a market survey for foundry products (Central African Republic); the establishment of a pilot and demonstration foundry (Nepal); the establishment of a foundry with integrated mechanical workshop (United Republic of Tanzania) incorporating a pledge of some

⁷⁷ID/B/260, chap. II, para. 206.

\$600,000 by the Government of Yugoslavia for the development of the foundry industry in that African country; the rehabilitation of the national workshop in Freetown (Sierra Leone); the development of industrial production of ductile iron castings (Hungary); and the identification of metal scrap reserves for the foundry industry (Niger). An expert provided to Rwanda prepared two pre-feasibility reports on the establishment of a foundry and a 6,000 tons/year rolling mill, to be erected at the Kigali site. Assistance to strengthen a foundry and mechanical workshop was initiated in Democratic Yemen.

222. Further activities in 1981 covered the establishment and strengthening of metallurgical technology centres; with the aim of creating a nucleus for technology in specific developing countries and reducing the dependence on technology imports. Such centres, which have already been successfully established in a number of developing countries,⁷⁸ provide training for metallurgical R + D personnel and thus play an important role in the development of local human resources. Assistance was given to: Nigeria, in the establishment of a central metallurgical research and development institute at Jos, a project initiated with financing from the United Nations Interim Fund for Science and Technology for Development; Pakistan, in the establishment of a silicon technology development centre, including a pilot plant and training facilities for the testing and production of high-quality silicon wafers and materials for photovoltaic cells, also with United Nations Interim Fund for Science and Technology for Development financing; Turkey, to promote more efficient use of metallurgical R + D facilities developed at the Marmara Scientific and Industrial Research Centre; and India, to improve the facilities of the National Welding Research Institute at Tiruchirappalli, through the provision of sophisticated laboratory equipment and the setting up of a pilot plant for development and production of filler materials and fluxes. Apart from training nationals, it is planned to extend the training facilities and consultancy and quality control services to other developing countries.

223. In view of the importance of co-operation among existing metallurgical R + D institutes in promoting, *inter alia*, the flow of scientific information and the possibilities for training, UNIDO convened a Workshop on the Regional Project for Co-operative Research among Metallurgical R + D Centres in Asia and the Pacific, which was held at the National Metallurgical Laboratory, Jamshedpur (India), December 1981, and resulted in a mutually agreeable scheme for future co-operation.

ENGINEERING INDUSTRIES

224. In 1981 technical co-operation expenditures under the heading engineering industries amounted to \$14.3 million, an increase of \$4.2 million (about 42 per cent) over the figure recorded in 1980, and \$8.6 million (about 151 per cent) over expenditures at the start of the second UNDP country programming cycle in 1977. Some 95 per cent of the total implementation was financed from UNDP resources (1980: 94 per cent).

⁷⁸ID/B/240, chap. II, para. 193.

225. Regional distribution of expenditure in percentages was: Africa (15); the Americas (11); Arab States (7); Asia and the Pacific (62); Europe (5); and interregional and global (—).

226. A total of 149 projects were implemented or under implementation in 1981 (1980: 139), comprising 18 projects greater than \$1 million in value (1980: 17), 40 projects greater than \$150,000 in value (1980: 33) and 91 projects below that value (1980: 89).

227. The value of projects approved under this heading in 1981 increased by 50 per cent; taking account of the 1980 figures, the value of the project portfolio has increased by almost 100 per cent in the last two years. In addition, measures to augment the efficiency of the technical co-operation activities involved the inclusion of technical staff in programming missions which (a) eliminated the need for follow-up technical missions once specific projects were defined by the programming missions; (b) permitted backstopping staff to review projects under implementation in different areas at no extra cost; and (c) produced a number of new projects. Close co-operation was maintained with other branches, sections and units of the Division of Industrial Operations to integrate project formulation, speed up implementation rates, improve the use of available resources, and trim administrative and other costs. A valuable input into the programmes proposed to and for developing countries was provided as a result of the continuous study of new technologies suitable for different countries and regions, the evaluation of new engineering techniques and efforts to keep abreast of the latest innovations in the field of science and technology.

228. The broad sectors covered continued to be: design, manufacture and maintenance in the machinery manufacturing industries, including agricultural machinery; equipment and installations for the manufacturing sector; electronic and electrical machinery and equipment; land-based and water-borne transport equipment; measuring and control instruments; metal products; computer and other advanced technology; and a number of allied subsectors, activities and products. New programmes involved the design and manufacture of mining equipment, of food processing machinery and equipment and of installations for processing industries. To facilitate the implementation of enlarged programmes in the agricultural equipment and metalworking sectors, two organizational units were set up within the Engineering Industries Section.

229. During the past few years, the changing agricultural pattern has created an increased demand for industrial inputs in agriculture. Technical assistance to the agricultural machinery industry in 1981 continued to be in accordance with existing levels of national production and technological infrastructures, concentrating on the production of agricultural equipment at industrial, small-scale and artisan levels. Countries assisted included Algeria, Angola, Bahrain, Ethiopia, Kenya, Pakistan, Papua New Guinea, Somalia, Uganda and the United Republic of Tanzania.

230. With regard to large-scale industrial production, assistance aimed at the integrated development of both the agricultural machinery industry and related sectors of the economy in order to use fully the existing facilities—an approach applied to all current UNIDO projects and proposals. At the artisan and small-

scale levels, particular attention was given to the use of proper raw materials, the quality of products, and the need to establish and/or upgrade common service and production facilities. As in previous years, the majority of the projects in the least developed countries involved small-scale production and intermediate technology, with the aim of reducing imports of agricultural equipment, including hand tools.

231. In support of the above-mentioned technical projects in the field of agricultural engineering, there was co-operation with other branches, sections and units of UNIDO as well as with a number of international organizations and bodies. Consequently there was substantive support for the System of Consultations in the planning and organization of the Second Consultation on the Agricultural Machinery Industry and the First Regional Consultation on the Agricultural Machinery Industry in Africa; assistance was also provided in the preparation of background studies for these Consultations. At the same time, the Section benefited greatly from the results of the work of the System of Consultations. Co-operation continued to be strengthened with United Nations regional commissions, economic communities and regional agricultural institutions. Within the framework of the regional network for agricultural machinery, in Asia and the Pacific⁷⁹ there was continued co-operation with ESCAP, as executing agency, and FAO, as associated agency, in the fields of agricultural machinery design and production technology development. Co-operation was also strengthened with the African Regional Centre for Industrial Design and Manufacturing. A particularly close working relationship was maintained with FAO in the planning of an \$8 million agricultural machinery project in Algeria, scheduled for implementation in 1982.

232. To establish and strengthen the basis for the design and manufacture of metal products and machinery, 1981 activities centred on the design and manufacture of tools, dies, jigs and fixtures; rehabilitation and manufacture of parts and components; provision of common technical services, such as assistance in production planning and control; establishment of factory standards; and the introduction of related technical services, leading to higher productivity and improved product quality. This assistance was rendered either through institutions, such as design and engineering centres and tool centres or directly to industries. Further activities in 1981 included the provision of assistance in the development of low-cost water-pump technology, of special interest to rural areas in developing countries, and a subcontracted study on drilling rigs for oil and water.

233. The Numerical Control Centre for Metal-working Industry in India received UNIDO assistance in 1981 and was fully equipped with up-to-date numerically controlled machine tools, digital measuring devices and a medium-sized computer. The technical staff were trained to an international standard with the result that the Centre, which plays a vital role in providing training and consultant services to local industries, is now able to analyse and evaluate new designs and applications of numerical control-systems and perform simulation using numerical methods, dynamic and static calculations. The Specialized Institute for Engineering Industries (Baghdad, Iraq) is assisted by UNIDO and is becoming an important centre for Arab engineers, particularly

⁷⁹ID/B/260, chap. III, para. 216.

in the fields of design and manufacture by providing direct services to industry. The Centre is also working in very close contact with AIDO.

234. As in previous years, there was considerable variety in the projects carried out in the fields of electrical engineering and electronics. An important trend in 1981 was the provision of technical assistance for the application of mini- and micro-computers to industrial processes and design. Since the developing countries are increasingly aware that computers represent a powerful tool for increasing industrial efficiency at relatively low cost, many requests for projects in this field were received and specific services provided. A programme was devised to promote the development of the manufacture of telecommunications equipment in Africa. This project, to be implemented with assistance from the International Telecommunications Union, ECA and the Pan-African Telecommunications Union, marks a serious attempt to establish a viable telecommunications manufacturing industry for the benefit of countries in the entire continent. Projects in the electronics industry in more advanced developing countries covered the development of design, application and fabrication methods. In the Democratic People's Republic of Korea, a project for a pilot production and turn-key training plant for bipolar digital integrated circuits (the largest UNIDO engineering project to date) became operational during 1981.⁸⁰ The plant, which aroused great interest in other developing countries, was established under subcontract by an organization attached to the Government of India. Requests to establish similar facilities have since been received from countries in South America, Asia and Europe.

235. New projects prepared in 1981 for implementation include assistance to the heavy electrical manufacturing industry, particularly in the development of specific equipment, electrical maintenance and repair facilities and assistance in creating electronics industries. Countries served in 1981 include China, Cuba, Egypt, Hungary, Mexico, Pakistan, Republic of Korea, Romania, Sao Tome and Principe, Thailand and various countries in the Caribbean region. Assistance was also given to Hong Kong.

236. In the field of transport, engineering projects took into account the increasing importance to developing countries of ship-building and repair, and automotive and railway engineering. The programme developed and implemented within the current United Nations Transport and Communications Decade for Africa (1978-1988) comprises: measures for the effective application of modern techniques; establishment and strengthening of appropriate production units; development of new technologies; manufacture of spare parts; and training of personnel. Projects in automotive engineering and related fields were under implementation in Bhutan, Maldives, Romania, Yugoslavia (where assistance was also provided in the rehabilitation of ship-repairing facilities destroyed by earthquake) and Viet Nam. A large-scale UNIDF project was approved and initiated in 1981 to establish a boat-building and maintenance yard in the Seychelles. Following urgent requests, prompt assistance was provided to Trinidad and Tobago and Turkey in the field of maritime engineering. A number of project proposals in transport engineering and related fields, mostly for island countries, were submitted for government consideration for possible inclusion in the third UNDP country programming cycle.

⁸⁰*Ibid.*, para. 221.

237. The increasing application of computer-aided design and manufacture (CAD/CAM) in developing countries can help to narrow the gap between those countries and the industrialized countries. Proper development of these capabilities will result in the increased employment of unskilled labour, since skilled functions are carried out by the capital equipment. During programming and monitoring missions in 1981, several new projects in CAD/CAM, robotics, fibre optics and automation were formulated for more advanced developing countries. Since these countries placed particular emphasis on CAD/CAM, UNIDO developed a plan to fuse existing and potential CAD/CAM projects into a strong cohesive programme to be drawn up at a meeting scheduled for 1982. Projects proposed in 1981 aimed to demonstrate the quality, reliability and, hence, marketability of products manufactured using CAD/CAM techniques. Fibre optics projects were proposed to improve industrial controls and save energy in communications. Countries such as China, India and Pakistan which have set the trend in this field are expected to yield early returns in terms of quality products. Technical co-operation programmes in the fields of industrial automation and communications in 1981 centred around semiconductor design and manufacture, computer sciences, numerical control systems and telecommunications equipment manufacture.

238. The above-mentioned advanced technology programmes and projects were carefully selected to help developing countries take full advantage of industrial development opportunities and avoid the application of obsolete technology. However, such programmes also create problems in obtaining the services of experts for project areas and in placing fellowship holders. These difficulties are due to the reluctance of relevant industries in developed countries to participate in technical co-operation programmes, partly because of long-term commitments and partly because of company policies.

239. The application of non-conventional sources of energy to practical technical problems was the subject of a number of projects that were implemented in 1981. Within a large-scale project in the Comoros, tests attempted to prove the technological and economic viability of using solar energy for distillation purposes, using locally manufactured equipment and installations. The results obtained are being successfully applied in other sectors such as the processing of food and agricultural products. Assistance in the fields of alternative sources of energy and energy conservation was provided to Mali, Niger, Seychelles and Turkey and, through OLADE, to a number of Central American countries.

240. Within the framework of TCDC activities, the Section placed emphasis on repair and maintenance of plants, machinery and equipment in order to optimize capacity utilization. In Romania, the Central Repair and Maintenance Workshop for the Public Transport Services received UNIDO assistance in the introduction of metal-spraying techniques for the rehabilitation of worn components and engine parts. The Romanian project has established an extensive technical data basis for an intensive parts rehabilitation programme and experience will be shared with other developing countries and personnel training programmes established.

241. As a result of high-level contacts with the Government of Gabon, a project aimed at centralizing equipment procurement and maintenance services

in developing countries, the first of its kind, was initiated in 1981. While this project will initially serve the needs of only the host country, it is expected that all member States of UDEAC will benefit financially in the near future from quantity purchasing; professional methods of procurement; and faster deliveries of equipment, spare parts and raw materials. The project relies only to a minor extent on international expertise.

242. A Symposium on Project Design and Installation of Small Hydro-Power Plants was organized in Vienna, June/July 1981, financed jointly by the Government of Austria and UNIDO. The Symposium, which confirmed the less industrialized countries' great interest in developing hydro-power, provided an opportunity for the exchange of technical knowledge and experience on design and construction of such plants and paved the way for extensive follow-up work in this field.

243. Importance was attached to the dissemination of the latest scientific and technical information to the developing countries, an exercise of particular value to authorities in developing countries engaged with country programming exercises. A document entitled "Technical concepts for a programme of action for integrated development of engineering industries (1982-1986)" was distributed to SIDFAs and Junior Professional Officers (JPOs). The document aims to facilitate their work in advising Governments on available assistance for the third UNDP country programming cycle in the twelve areas covered by the Engineering Industries Section. Three information booklets were also prepared on UNIDO activities in the fields of metalworking, agricultural machinery and implements, and transportation. These booklets, which are to be widely distributed, are expected to be issued during 1982.

244. Assistance was provided in organizing the UNIDO input to the Congress and Conference of the World Federation of Engineering Organizations held in Argentina, November 1981. There was also active participation in the work of the UNIDO Task Force for the International Year of Disabled Persons (1981). Within the scope of engineering projects under implementation in specific developing countries, designs are being provided for the pilot production of personal and hospital equipment for the disabled.

245. Co-operation was strengthened with intergovernmental organizations (e.g. Mano River Union) and a number of international non-governmental organizations (e.g. Association of International Fairs of America; Club de Dakar; International Council of Societies of Industrial Design; "Pio Manzu" International Research Centre on the Habitat). It is expected that joint field projects will be launched with some of these organizations.

CHEMICAL INDUSTRIES

246. In 1981, technical co-operation expenditures under the heading chemical industries amounted to \$21.3 million, an increase of \$4.8 million (about 29 per cent) over the figure recorded in 1980 and \$15.4 million (about 261 per cent) over expenditures in 1977 at the start of the second UNDP country programming cycle. Some 74 per cent of the total implementation was financed from UNDP resources (1980: 71 per cent).

247. Regional distribution of expenditure in percentages was: Africa (24); the Americas (11); Arab States (18); Asia and the Pacific (42); Europe (3); and interregional and global (2).

248. A total of 302 projects were implemented or under implementation in 1981 (1980: 308), including 23 projects greater than \$1 million in value (1980: 17), 73 projects greater than \$150,000 in value (1980: 56) and 206 projects below that value (1980: 235).

249. In addition to its main functions related to project implementation, the Chemical Industries Branch co-operated closely with the Division of Policy Co-ordination in project identification and in programming missions to selected countries for the third UNDP country programming cycle. As a result, some 80 new projects were approved in 1981 for implementation in the chemicals sector. Four of these new projects—with a total value of \$2.8 million—were approved for financing by the United Nations Interim Fund for Science and Technology for Development (see para. 13 above).

250. As mentioned before (see paras. 16 and 17 above), certain innovative approaches by UNIDO in technical co-operation, entailing arrangements with international development banks and trust-fund agreements with Governments, were particularly successful in the chemicals sector. Another approach, combining technical assistance with commercial co-operation, was applied in the provision of UNDP/UNIDO assistance to a public sector chemical dyestuff company in Egypt. The project, which aimed at rehabilitating existing production facilities and tripling plant output by 1982, included the provision of technical advisory and training services by a firm under contract to UNIDO. This firm—the original supplier of the plant—entered into a commercial agreement with the Egyptian dyestuff company, guaranteeing increased production and sales.

251. In the field of energy, activities concentrated largely on the production of biofuels, synthetic fuels and related feedstocks from conventional petroleum resources, as well as from coal, natural gas, peat and biomass. In co-operation with the Central American Research Institute for Industry (ICAITI) in Guatemala City, UNIDO initiated a project for the establishment of a pilot plant for the EX-FERM process of ethanol production at ICAITI, the preparatory phase of which was financed by the United Nations Interim Fund for Science and Technology for Development. The EX-FERM process, developed by ICAITI, has a high potential for lowering costs of ethanol production from sugar cane. The projects on coal conversion technology in Poland and China⁸¹ will be continued into the third UNDP country programming cycle. In Upper Volta, a project to demonstrate and transfer Indian biogas technology was nearing completion at the close of the year.

252. A Workshop on Petroleum Processing was held in Vienna, April 1981, jointly financed and sponsored by UNIDO, the OPEC Fund for International Development, the Government of Austria and the Austrian state-owned oil company. The workshop, which was chiefly attended by technical managers of small, state-controlled refineries in developing countries, provided an opportunity for the exchange of experience and information and the development of

⁸¹*Ibid.*, para. 228.

closer co-operation among these refineries and with the Austrian oil company. A similar workshop is planned for next year to cover more specialized topics such as process development, production planning techniques and energy conservation.

253. The Islamic Development Bank requested UNIDO to provide technical advisory services in executing a project, financed by the Bank, on petroleum storage and unloading facilities in the Comoros. Arrangements were initiated to provide the requested services under a trust-fund agreement between the Bank and UNIDO, thus marking the beginning of a new partnership in technical co-operation activities.

254. Energy management is particularly important in the cement, ceramics and glass industries, in view of their high energy consumption. The Joint UNIDO/Czechoslovakia Programme for International Co-operation in the Field of Ceramics, Building Materials and Non-metallic Mineral-based Industries organized a training workshop on energy conservation in silicate industries for the least developed countries in Czechoslovakia, October 1981. At the workshop, considerable interest was aroused by the demonstration of a mobile diagnostic unit which could be made available through UNIDO to interested countries for on-the-spot investigations of the firing process.

255. The project on rehabilitation of the methane-gas pilot plant at Lake Kivu (Rwanda)⁸² entered its final phase. Replacement of pipelines in the lake for gas extraction and repairs to the onshore gas purification plant were nearing completion and the plant is expected to be in operation in early 1982. Since the gas will replace a relatively large quantity of imported fuel oil, the project is of prime importance to Rwanda, a land-locked least developed country, which seriously suffers from the ever-increasing fuel prices and has, as yet, no alternative sources of energy.

256. Technical expertise continued to be provided by UNIDO in the recycling of wastes. Such assistance was instrumental in obtaining a positive investment decision for a 700 tons/day compost plant in Damascus (Syrian Arab Republic).⁸³ The estimated cost of around \$20 million was provided jointly by the OPEC Fund for International Development, the Islamic Development Bank and the Arab Fund for Economic and Social Development. UNIDO continued to provide technical advisory services to assist the Government in planning the project. In co-operation with the Government of the Republic of Korea, a project was implemented and financed under the United Nations Interim Fund for Science and Technology for Development, to establish a pilot plant to recycle chemical wastes and by-products.

257. Environmental management programmes continued in a number of developing countries with the aim of preventing pollution from industrial wastes and of promoting low-waste technologies and recycling.⁸⁴ In Qatar, a committee on environment and industry was set up and plans were made for

⁸²*Ibid.*, para. 38.

⁸³*Ibid.*, para. 227.

⁸⁴*Ibid.*, para. 229.

the establishment of an industrial pollution control centre which would serve the region in co-ordinating environmental protection and industrial pollution control activities. Co-operation between UNEP and UNIDO was reinforced by the adoption of a joint programme of activities; UNIDO also co-operated with WHO in implementing a project to reduce water pollution in the Spreca river basin (Yugoslavia).

258. In the field of construction materials, the first technical co-operation project on earthquake-resistant building construction was initiated during 1981, with the participation of Governments and specialized institutes in Bulgaria, Greece, Hungary, Romania, Turkey and Yugoslavia. The chief aim is to reduce seismic risk to human life and property and increase the economic efficiency of building activities in the region. The project will serve as a key reference for the design of similar projects in other regions. In Brazil, a project approved for financing under the United Nations Interim Fund for Science and Technology for Development, deals with the development of precursors to carbon fibres which, in combination with plastics, produce composite construction materials with a wide variety of applications.

259. The developing countries, and particularly the least developed countries, continued to receive assistance in the development of non-metallic minerals for use as building materials. Increasing attention was given to the promotion of small-scale building material manufacturing units in order to promote decentralized industrial development, based on local natural resources, energy and manpower. In addition to several projects already implemented, a determined programming effort during 1981 resulted in the formulation of a number of new large-scale projects, most of which will become operational in 1982, for the manufacture of clay bricks, lime and other simple building materials in rural areas. One of these projects, formulated in close co-operation with the United Nations Centre for Human Settlement (HABITAT), which will also act as the associate agency during execution, aims at accelerating the integrated development of local building material manufacture and upgrading the quality of housing in rural areas and smaller urban centres in the United Republic of Cameroon.

260. The Cement Development and Research Centre in Turkey, established with UNIDO assistance,⁸⁵ was the subject of a project to create a "centre of excellence" for training and facilitating TCDC activities in this field. In addition, in 1981 the first high-level meeting on co-operation among developing countries in the cement, lime and related industries was held at the Centre. In the Libyan Arab Jamahiriya, a UNIDO project in plant operation and personnel training⁸⁶ was so successful that similar assistance was requested for a cement factory under construction in Derna. A large number of specialists in cement technology to be financed under trust-fund arrangements are to be provided to train Libyan personnel and help solve production and management problems. The experience gained by UNIDO from this project is of value in designing similar projects in other countries. In the field of pottery, a UNIDO project for the upgrading of pottery technologies in the Cochabamba Valley (Bolivia) gathered momentum during 1981. Financed from the Voluntary Fund

⁸⁵*Ibid.*, para. 172.

⁸⁶*Ibid.*, para. 230.

for the United Nations Decade for Women, the project will focus particularly on the enhancement of the role of women in the production process.⁸⁷

261. The UNIDF-financed project to assist the Association of Natural Rubber Producing Countries⁸⁸ in raising the competitiveness of natural rubber against synthetics through the development of thermoplastic, powdered and liquid rubber was successfully completed. The results of R + D work on some of these processes were so commercially promising that joint-venture arrangements based on these results were made between the natural rubber producing countries and large European chemical companies. The project will serve as a key reference for future UNIDO technical co-operation activities, since it represents an ideal combination of TCDC activities, co-operation between developing and developed countries, investment follow-up, development of natural resources and transfer of technology. The results of the project were also disseminated to the rubber producing developing countries and the rubber-processing industrialized countries at an International Symposium: Increasing the Competitiveness of Natural Rubber—Thermoplastic and Powdered Forms of Natural Rubber, held in Thailand, May 1981.

262. In accordance with General Assembly resolution 35/18 of 10 November 1980, which proclaimed the period 1981-1990 as the International Drinking Water Supply and Sanitation Decade, UNIDO initiated a number of activities related to the production of plastic pipes for use in water supply and sanitation. A feasibility study was made on producing high-density polyethylene pipes in Bhutan; plans were also being made to assist such countries as Bangladesh, Burma and Morocco in the local manufacture of polyethylene and PVC pipes in support of the national programmes for improving water supply and sanitation.

263. In response to the emphasis which the New Delhi Declaration and Plan of Action placed on applied research to boost industrial production in developing countries, UNIDO carried out a number of activities leading to the establishment of pilot and demonstration plants. One notable example is the pulp and paper pilot plant project in Burma⁸⁹ (UNDP inputs \$4.1 million), of which the paper machine department became operational in June 1981. Using bamboo pulp and waste paper as raw materials, the pilot production of machine-glazed packaging papers and machine-creped hygienic papers was undertaken for the first time in this country. It is expected that the pulp pilot plant will be erected in 1982 to supply the paper pilot plant with enough raw material to develop other products, such as grease-proof papers, high-tensile kraft papers, and corrugating medium.

264. In the field of pesticides, local manufacture in developing countries calls for effective R + D institutions specializing in synthesis, formulation and testing. A number of countries, including Algeria, China, Cuba, Egypt, India and the United Republic of Tanzania are receiving technical assistance from UNIDO in establishing or modernizing national pesticide R + D institutions to provide continuous support to manufacturing units, improve product quality

⁸⁷*Ibid.*, para. 233.

⁸⁸ID/B/240, chap. II.

⁸⁹ID/B/260, chap. II.

and start production of new, selected pesticides. These activities were pursued through adaptation of technology to suit local conditions, including the raw-material base and the proposed applications. The new institutions will also provide an effective training ground for pesticide technicians.

265. In the field of chemical fertilizers, feasibility studies were made on establishing small-scale nitrogen fertilizer plants in Argentina and Nepal. Technical assistance was provided to the PAKARAB nitrophosphate plant (Pakistan) to increase the water solubility of the product and improve the capacity utilization of the plant. Assistance continued to be provided to the Bangladesh Chemical Industries Corporation to increase plant utilization at the Chittagong and Ghorasal sites; UNIDO also assisted in formulating plans to establish a central fertilizer training institute at the Ghorasal plant. In co-operation with FAO, AIDO and the Arab Federation of Chemical Fertilizer Producers, a programme was undertaken for the development and promotion of fertilizer production and utilization in the Arab region.

Pharmaceutical industries

266. Due to the developing countries' increased awareness of the importance of pharmaceutical industries in health care, the value of annual implementation under this heading, within the Chemical Industries Branch, increased from about \$530,000 in 1977 to over \$3.8 million in 1981. Projects concentrated on improving the supply of drugs for overall health care through the provision of technological capabilities for local production of essential pharmaceuticals. Particular emphasis was placed on projects in the least developed countries.

267. The type of technical assistance provided is geared to the state of development of a country. In the following least developed countries projects relate to the establishment of simple pharmaceutical formulation units and medicinal plant extraction units: Afghanistan, Bhutan, Botswana, Cape Verde, Democratic Yemen, Guinea-Bissau, Nepal, Rwanda and Upper Volta. Further progress was made in the establishment of large-scale pharmaceutical formulation plants in Zanzibar (United Republic of Tanzania) and Guinea⁹⁰ which are expected to be commissioned in 1982-1983. Also in the African region, in Mozambique, another large-scale project was formulated for the establishment of a pharmaceutical dosage form production unit, which will start in 1982. In relatively more advanced developing countries, such as Brazil, Cuba and India, projects are being implemented or planned which involve sophisticated technology for the manufacture of synthetic drugs.

268. During the year under review there was significant progress in the establishment of a multipurpose plant for the production of 15 essential synthetic drugs in Cuba, for which UNIDO has been providing assistance since 1978,⁹¹ and which is expected to be commissioned during 1982. Major equipment was received on site and Cuban technicians underwent training in

⁹⁰*Ibid.*, para. 234.

⁹¹ID/B/220, chap. II, paras. 56, 232; ID/B/240, chap. II, para. 225; ID/B/260, chap. II, para. 234.

India. Also in Cuba, a plant for the production of Hecogenin from sisal plant was commissioned in May 1981.

269. Assistance in production management, quality control and good manufacturing practice provided over the last three years to an intravenous equipment plant in Lusaka (Zambia) is a good example of further development of the pharmaceutical industry as a follow-up to bilateral assistance. The project was concluded by the end of 1981 and since then the plant is being managed by Zambian staff.

270. The UNIDO-sponsored mobile units⁹² showed further results in 1981, particularly in Africa, where projects were initiated in several developing countries with the aim of producing plant-derived pharmaceuticals for overall health care. Such projects continued to be implemented in Algeria, Botswana, Rwanda and United Republic of Cameroon and were initiated in Nepal, Senegal and Upper Volta.

271. In collaboration with the Government of India and ESCAP, UNIDO organized a Workshop on the Essential Oils Industry held in Lucknow (India), December 1981, dealing with the development of the essential oils industry in South and South-East Asia and possibilities for co-operation between the countries of the regions.

272. As a follow-up to the 1979 Regional Seminar on Industrial Application of Microbiology in the Pharmaceutical Industry held in Havana (Cuba) the United Nations Interim Fund for Science and Technology for Development at the request of developing countries, financed a study for establishing a fermentation research centre in Latin America. The study, carried out by international experts and an advisory group nominated by the initiating countries, was completed in 1981. It recommended the establishment of a centre for fermentation and development of micro-organisms in Mexico, which should serve Latin American developing countries as well as developing countries of other regions in the development of their basic pharmaceutical industries. The project, to be financed by the Government of Mexico and the United Nations Interim Fund for Science and Technology for Development, will become operational in 1984.

273. Co-operation with WHO continued, particularly in the implementation of the joint project dealing with primary health care in Nepal.⁹³

⁹²ID/B/220, chap. II, para. 71; ID/B/260, chap. II, para. 235.

⁹³ID/B/260, chap. II, para. 237.

Chapter VI

REVIEWS AND EVALUATIONS

1. Recognizing the close interrelationship between reviews and evaluations, the present chapter marks a new approach to coverage of these subjects and attempts to present a more balanced picture of UNIDO activities in these fields. Although both exercises have the common objective of improving the quality and speed of UNIDO programmes and services, reviews are generally repetitive, formative in character and semi-rigorous in methodology; evaluations, on the other hand, are used to describe a rigorous and often summative process which attempts to determine as systematically as possible the relevance, effectiveness and impact of selected activities in the light of their objectives.¹

2. Reviews are undertaken regularly at various levels of the administrative structure and may, according to requirements, cover broad subsectors, specific projects or different types of projects financed from single sources of financing, e.g. the United Nations Industrial Development Fund (UNIDF).

3. The principal mechanism for reviewing the performance of UNIDO as a whole is the implementation review meeting, held twice a year, chaired by the Executive Director and attended by all divisional directors and managers of major programmes. As in previous years, two such meetings were held in 1981. The principal objective of these reviews is to assess the progress of the annual work programme and foster the efficient implementation of the interlocking activities of the Organization. The various programmes and subprogrammes are taken up for review and assessment one by one. The director or programme manager concerned describes progress made and explains any significant experiences, problems and orientations. In this connection, he also presents his perspective of the immediate future (covering a period of six months to one year) and describes assistance received from or given to other programmes, or the lack thereof. A general discussion ensues in which suggestions, constructive criticisms, relevant explanations etc. are offered. In summing up the discussion, the Executive Director gives instructions for further action. Sometimes the decisions taken in these meetings lead to detailed examination of certain points which help the Executive Director to initiate processes and actions for increased productivity or more effective internal co-ordination.

¹For a UNIDO glossary of evaluation terms, see "Instructions and guidelines for the self-evaluation of UNIDO-executed technical co-operation field projects", UNIDO/PC.31, appendix 4.

4. Where a topic concerning UNIDO activities as a whole cannot be adequately considered in the implementation review meetings due to time or other constraints, it is taken up at a subsequent directors' meeting, held more frequently than implementation review meetings. In this smaller group it is possible to identify the progress achieved by individual programmes and any problems requiring action; guidelines for future development may also be laid down. A directors' meeting is in fact a speedy instrument for achieving a wide range of purposes, including: initial planning for a general conference of UNIDO; the Industrial Development Decade for Africa; recruitment of experts for technical co-operation projects; UNIDO's energy programmes; briefing of directors after the Executive Director's missions for follow-up action etc.

5. At the divisional level, performance is reviewed at regular meetings, usually on a monthly basis, which are chaired by the director of the division concerned and attended by the heads or chiefs of branches or sections. These meetings provide an opportunity to monitor closely the progress of the work of the division in the light of established targets and examine the achievements of individual programmes and sections. The availability of project evaluation reports in 1982 under the UNIDO internal evaluation system will also permit a review of performance in terms of results and quality.

6. At branch and section levels, meetings are convened by heads and chiefs on an *ad hoc* basis to examine overall progress with the officers concerned and to exchange views on the development of major projects falling within the responsibility of the branch or section.

7. Review at country level is carried out largely in connection with the development and revision of the programme for a specific developing country. On this occasion, a review of the effectiveness of the assistance provided by UNIDO during the earlier country programme is undertaken, involving the officers concerned with programme development and those responsible for implementing projects in that country. This review is aimed at optimizing the impact of assistance to be provided in the forthcoming country programme. On the occasion of visits to a developing country by senior officers of UNIDO, an informal assessment of previous and ongoing UNIDO assistance to the country may also be undertaken.

8. With regard to programme funding, periodic reviews are made of the UNIDO regular programme of technical co-operation and the Special Industrial Services programme. The purpose of such reviews, which are also planned to cover UNIDF, is to assess the overall implementation of approved projects.

9. All the above-mentioned reviews and assessments are largely an internal exercise. The Executive Director can, however, draw upon external knowledge and expertise in reviewing individual programmes where he considers it to be of value to the review. For example, in 1981 three distinguished persons with extensive experience in development co-operation were requested to review progress on several important Headquarters programmes and offer advice on future activities.

10. When timing and funding permit, Senior Industrial Development Field Advisers and Headquarters backstopping staff also participate in annual tripartite reviews of large-scale projects funded under the United Nations Development Programme (UNDP). These exercises involve representatives of the Government, UNDP and UNIDO. In 1981 approximately 57 staff members of the Division of Industrial Operations participated in such reviews.

11. The exercises described in paragraphs 3 to 10 above may identify problems which lead to subsequent formal evaluations at programme, project and/or process levels. Evaluations may also originate from outside sources (e.g. the intergovernmental Committee for Programme and Co-ordination, UNDP etc.) or from routine management requirements (e.g. project self-evaluation). The following paragraphs provide a brief summary of progress in evaluation and related activities achieved in 1981 and planned for 1982 and the future, including system design. A detailed report will be submitted to the Permanent Committee of the Industrial Development Board at its seventeenth session in May 1982.

12. Headquarters staff participated in approximately 40 in-depth project reviews and evaluations during 1981. Such exercises are usually preparatory to major tripartite decisions regarding project continuation, redesign etc. and are given high priority by the Secretariat. UNDP changes now in process, including mandatory project funding for such evaluations, will increase the importance and frequency of these exercises and, hopefully, of Headquarters participation. Considerable activity was also directed during the year towards the design and installation of the field project self-evaluation component of the UNIDO comprehensive internal evaluation system.

13. The Secretariat continued its comparatively heavy involvement in designing, negotiating and participating in inter-agency evaluation exercises. In response to a request by the Committee for Programme and Co-ordination,² the United Nations (Department of International Economic and Social Affairs, Office for Programme Planning and Co-ordination) together with UNDP and UNIDO initiated phase I of an in-depth evaluation of UNDP-financed and UNIDO-executed technical co-operation field projects covering manufactures. A staff member participated in a field mission in connection with the thematic evaluation of industrial training sponsored by UNDP and involving the International Labour Organisation (ILO) and the United Nations Educational, Scientific and Cultural Organization (UNESCO).³ In addition, a prototype internal programme evaluation was completed by the evaluation staff. Additional exercises are planned for 1982 and beyond as the UNIDO internal evaluation system expands its coverage.

²A/35/38, para. 345.

³ID/B/260, chap. V, para. 9.

Chapter VII

CO-ORDINATION, FIELD AND LIAISON ACTIVITIES AND PUBLIC INFORMATION

RELATIONS WITH GOVERNMENTS AND INTERGOVERNMENTAL ORGANIZATIONS

1. In 1981 UNIDO continued to promote relations with the Governments participating in its activities, enlisting their active support for the aims, initiatives and programmes of the Organization. It also pursued its traditional policy of strengthening and expanding institutional ties with the various intergovernmental organizations, in particular with those active in industrial development at the regional and subregional levels. Other important activities included fund-raising for the United Nations Industrial Development Fund (UNIDF); the monitoring of the implementation of letters of understanding, joint communiqués and other instruments of co-operation between UNIDO on the one hand and individual countries or intergovernmental organizations on the other; and work related to the National Committees for UNIDO.

2. As in previous years,¹ high-level contacts with the Governments of States participating in the activities of UNIDO were maintained through the Permanent Missions accredited to UNIDO and through the Resident Representatives of the United Nations Development Programme (UNDP) and the Senior Industrial Development Field Advisers. The Executive Director again paid official visits to several countries to promote, at the highest level, the strengthening of their co-operation with UNIDO. He also received at UNIDO Headquarters ministers and other senior representatives of countries participating in the activities of UNIDO for official contacts. The Executive Director attended the United Nations Conference on New and Renewable Sources of Energy, held in Nairobi in August 1981, the United Nations Conference on the Least Developed Countries, held in Paris in September 1981, and the eighteenth session of the Assembly of Heads of State and Government of the Organization of African Unity, held in Nairobi in June 1981, where he met several Heads of State of African countries. He also attended and addressed the Solidarity Meeting of Ministers of Industry for Co-operation in the Industrial Development of the Sudan, held in Khartoum in March 1981, and the First Consultation on the Food Processing Industry, held in The Hague in November 1981, and participated, *inter alia*, in the inauguration of the UNIDO Investment Promotion Service in Paris.

¹ID/B/260, chap. V, paras. 32-33.

3. The UNIDO network of institutionalized channels of communications with the countries participating in its activities through the Permanent Missions accredited to the Organization was significantly expanded in 1981 through the establishment of seven new Permanent Missions (those of Burundi, Ghana, Grenada, Jordan, Lesotho, Mauritius and the United Republic of Tanzania) bringing the total number of Permanent Missions up to 103. Sixty-eight of these have their seat in Vienna, 18 in Geneva, 11 in Bonn, 3 in Brussels and 1 each in Berne, Paris and Rome. In addition to receiving the credentials of Representatives of the newly established Permanent Missions, the Executive Director also received the credentials of 27 new Permanent Representatives, 17 of whom were also formally accredited to the other organs of the United Nations in Vienna and to all meetings held in Vienna under the auspices of the United Nations. In June 1981, the Executive Director requested the Permanent Missions to ensure that, henceforth, all contacts between the Secretariat and the Permanent Representatives of Member States should take place exclusively through the Division of Conference Services, Public Information and External Relations, and more precisely through the Governments and Interregional Organizations Relations Section within that Division.

4. The Secretariat continued to enlist member countries' support for UNIDF keeping in mind the target set by the Industrial Development Board and the General Assembly for an annual funding level of \$50 million. Although there was a slight increase in pledges and contributions in 1981 over the previous year, it seemed clear that the unfavourable economic conditions prevailing throughout the world would add to the difficulty of reaching the target. The Secretariat will continue to urge Member States to make additional efforts to support the Fund. The first results of the United Nations Pledging Conference for Development Activities for 1982 were not encouraging in this respect (see also chap. II, "Sources of funds", and appendix P) and it is hoped that many other countries will announce pledges at a later stage.

5. In addition to the traditional working relationships with the national development assistance agencies of several industrialized countries, new avenues of co-operation were explored, which could have beneficial results once the arrangements are completed. In particular, mention should be made of the contacts between the Secretariat and the authorities of the United States of America regarding co-operation with the United States Trade and Development Programme.

6. The joint programmes established between UNIDO and various countries continued their assigned activities and each of the joint committees set up under the respective co-operation arrangements held meetings to review the progress achieved and decide on the work programmes. The Committee of the Joint UNIDO/Yugoslavia Centre for Industrial Co-operation in the Development of Agro-Industries in the Developing Countries met in March and December 1981. The Committee of the Joint UNIDO/Romania Centre and the Committees of the Joint UNIDO/Hungary Programmes for International Co-operation held meetings in March 1981. Furthermore, the Committee of the Joint UNIDO/Czechoslovakia Programme for International Co-operation in the Field of Ceramics, Building Materials and Non-metallic Mineral-based Industries met in June and the Committee of the Joint UNIDO/Poland Programme for International Co-operation in the Development of Industrial

Co-operatives in the Developing Countries met in November. Negotiations with the Government of Hungary on the establishment of two new joint programmes, one in the field of pharmaceuticals and the other on the industrialization of construction and its environmental and energy implications, reached an advanced stage. The Secretariat also envisaged the possibility of extending the concept of the joint programmes to other countries, particularly developing countries, and several initiatives in this direction are now under consideration.

7. The Organization pursued its policy regarding the National Committees for UNIDO, based on the belief that these Committees should become more active in playing the role originally recommended for them by the International Symposium on Industrial Development in 1967.² For a general assessment of the present status of the National Committees, the Secretariat approached the individual Committees in February 1981, requesting information on their current organizational structure, operational methods, and programmes and activities. The replies received encouraged the Secretariat to organize an expert group meeting to review the scope of the responsibilities of the National Committees for UNIDO in the light of the New Delhi Declaration and Plan of Action and of the present and future programmes and activities of UNIDO. Representatives of eight selected National Committees participated in this meeting which was held in Vienna in December 1981. The meeting recommended, *inter alia*, that (a) the National Committees should play an important role in assisting the industrialization process of the developing countries; (b) communication between the Committees and the UNIDO Secretariat should be more direct and substantial; (c) the Committees should increase their efforts to disseminate nationally information on the role and potential of UNIDO and the opportunities afforded by it; and (d) closer and more active co-operation should be developed among the Committees themselves.

8. With regard to intergovernmental organizations, emphasis was placed in 1981 on an expansion of the institutional relations that UNIDO maintains with the interregional organizations of the Islamic world and with Arab regional organizations. Following the participation by UNIDO, in an observer capacity, in the Twelfth Islamic Conference of Foreign Ministers, held in Baghdad in June 1981, and a UNIDO visit to the headquarters of the Organization of the Islamic Conference, a co-operation arrangement between the two organizations is now being finalized. As a result of several visits exchanged with the Islamic Development Bank, a formal co-operation arrangement between UNIDO and the Bank, signed in July 1981, is being implemented and UNIDO will be acting as the executing agency for the Bank under a trust fund arrangement. In September 1981, a co-operation arrangement between UNIDO and the Council of Arab Economic Unity was signed on the occasion of a visit to UNIDO Headquarters by the Secretary-General of the Council. Co-operation arrangements with the Arab Fund for Economic and Social Development and with the Arab Organization for Mineral Resources are also under consideration and it is hoped that they will soon be finalized. Contacts at the highest level were also established with the Arab Gulf Programme for United Nations Development Organizations. In October 1981, the Joint Committee established by UNIDO and the Arab Industrial Development Organization held its sixth session

²See *Report of the International Symposium on Industrial Development, Athens, 1967* (United Nations publication, Sales No. E.69.II.B.7), paras. 69-73.

and discussed, among other things, the preparation of the Sixth Conference on Industrial Development for Arab States.

9. In the year under review, UNIDO also intensified its co-operation with the regional intergovernmental organizations of Africa, and in particular with the Organization of African Unity (OAU). Jointly with the Economic Commission for Africa (ECA), the two organizations prepared proposals for the formulation and implementation of a programme for the Industrial Development Decade for Africa, which were subsequently adopted by the Sixth Conference of African Ministers of Industry, held in Addis Ababa, November 1981. UNIDO also established closer contacts with the Pan African Telecommunications Union and with the African Union of Railways and negotiated co-operation arrangements with them; the arrangement with the Pan African Telecommunications Union was signed in November 1981. Another co-operation arrangement is being negotiated with the African Intellectual Property Organization. The implementation of co-operation arrangements with the regional and subregional organizations of Latin America signed in the preceding years was promoted. In view of the ongoing programming preparations for the third UNDP country programming cycle, a general theme in the Secretariat's dealings with various intergovernmental organizations in all the regions and subregions in 1981 was the possible participation by UNIDO in the preparation and implementation of regional programmes sponsored by UNDP, in which the relevant programmes would be implemented either jointly with or for the benefit of the respective intergovernmental organizations.

10. Finally, active efforts for the ratification of the new Constitution of UNIDO were pursued in 1981 and significant progress was made inasmuch as, at the year's end, the total number of signatures was 121 and the total number of ratifications was 66, i.e. over two thirds of the number required for the Constitution to enter into force.

CO-OPERATION WITH NON-GOVERNMENTAL ORGANIZATIONS AND BUSINESS AND INDUSTRIAL INSTITUTIONS

11. In 1981, UNIDO continued to promote and strengthen co-operation between non-governmental organizations (NGOs) and public and private industrial enterprises and institutions in developed and developing countries along the lines described in last year's *Report*.³ Joint activities, covering most of the UNIDO fields of work, were initiated with numerous organizations and implemented by the Non-governmental Organizations Section in close collaboration with other UNIDO units.

12. The International Chamber of Commerce, the Industry Council for Development, the International Council of Societies of Industrial Design, the International Measurement Confederation, the European Centre for International Co-operation, the Club de Dakar and the International Co-operative Alliance were amongst the NGOs with which UNIDO had contacts or co-

³ID/B/260, chap. V, para. 40.

operated during the year. Memoranda of understanding for co-operation were signed with a number of NGOs and industrial institutions such as Licensing Executives Society International, the Korean Advanced Institute of Science and Technology, and the International Organization of Consumers Unions. Noteworthy was the co-operation with the International Organization for Standardization (ISO) with which UNIDO had signed a memorandum of understanding in 1979. In accordance with the Joint ISO/UNIDO work programme, a Group Meeting on Standardization and Quality Control in the Industrialization Process of Developing Countries was held at Arandjelovac (Yugoslavia), September 1981 (see chap. V, para. 135), jointly organized with Yugoslav institutions and financed on a cost-sharing basis. The Meeting, in which the Institutional Infrastructure Branch of UNIDO and a number of Yugoslav institutions co-operated, formulated a number of recommendations with regard to standardization and related activities in developing countries and identified possibilities of co-operation between developed and developing countries in this field. The success of that Meeting was evidenced by the number of agreements for co-operation discussed and formulated by the participating countries. A new aspect of co-operation between UNIDO and ISO is the programme for providing personnel from developing countries with training opportunities abroad and enabling them to participate in the meetings and activities of ISO technical committees.

13. Co-operation with NGOs and industrial institutions was influenced in 1981 by the requirements of the Industrial Development Decade for Africa and the System of Consultations. The African workshop on design and development of agricultural equipment, to be hosted by the Engineering and Industrial Design Development Centre in Cairo in October 1982, is one example. Designed to suit conditions in the African countries, the workshop has been organized by UNIDO in close co-operation with a number of NGOs and industrial institutions and enterprises from 20 African countries, from India and from European countries. A preparatory meeting for this workshop was held in November 1981, attended by representatives of all participating organizations, including the Academy of Agricultural Mechanization Science and the Society of Agricultural Machinery in China, and the African Regional Centre for Engineering Design and Manufacturing, Ibadan (Nigeria).

14. In 1981, preparatory studies were finalized for a meeting on the role of African NGOs and industrial institutions in the further development of the vegetable oils and fats industry in Africa, a follow-up to the First Consultation on this sector held in Madrid in December 1977.⁴ Because of delays in the collection of field information, the meeting was postponed until 1982 when it is expected to be held in co-operation with OAU.

15. In Latin America a programme of co-operation with NGOs and industrial enterprises and institutions—initially to cover agro-industry, wood-working, metalworking and standardization and quality control—is presently under discussion with such organizations as the Latin American Association of Development Financing Institutions, the Latin American Agribusiness Development Corporation, the Federation of Central American Chambers of

⁴*Ibid.*, para. 46.

Commerce and Industrial Associations, and the Association of Business Managers of Costa Rica.

16. Non-governmental organizations and industrial institutions were also involved in UNIDO technical co-operation activities through the provision of qualified candidates to the UNIDO roster of experts. In close co-operation with the Institutional Infrastructure Branch and the Project Personnel Recruitment Section, some 50 organizations were approached with a view to identifying experienced sociologists, environmentalists and integrated community development specialists for UNIDO rural industrialization projects, particularly those involving work under difficult conditions. In addition, through co-operation with NGOs and industrial institutions, companies were added to the UNIDO roster of engineering and consulting firms for purchase and contracting activities; training opportunities for personnel in developing countries were also identified in several industrial sectors.

17. Activities designed to foster co-operation with universities, industrial R + D institutes and industry were undertaken at the national and sectoral levels as a follow-up to the 1976 *ad hoc* expert group meeting on the subject.⁵ These activities aimed, *inter alia*, at establishing twinning agreements for co-operation between industrial R + D institutes in developed and developing countries and creating appropriate linkages between universities and R + D institutes on the one hand and industry on the other. For example, a project proposal for the establishment of an industrial research and consulting unit and the development of an industrial management programme in Malaysia⁶ was prepared jointly by the Universiti Sains Malaysia (University of Science) and UNIDO, and will be implemented in close co-operation with the Scottish Business School and the University of North Sumatra (Indonesia). The Meeting on Industry-Research Institute Linkage with Special Reference to Instrument Design, organized on a cost-sharing basis by UNIDO and the Bulgarian Institute for Instrument Design (NIPKIP) and held in Sofia from 20 to 24 April 1981, is another example of these activities. The Meeting discussed the relevant problems of the participating countries in this field, and ways and means of alleviating them through international co-operation. It also provided a forum for bilateral consultations between representatives of individual countries, which led to the development of a number of twinning agreements for co-operation between the participating organizations from such countries as Bulgaria, Egypt, the Syrian Arab Republic and Thailand. These agreements cover co-operation in the exchange of research results, the training of researchers, joint research activities, joint organization of relevant workshops and seminars and the provision of research facilities.

18. Proposals for co-operation with public and private industrial enterprises in developed and developing countries included: projects for the establishment of quality control laboratories in developing countries that are producers of coconut and palm oil, with a Swedish company; and co-operation in the field of renewable sources of energy with the Institut belge de formation et de transfert de technologie in Belgium. In addition, a portfolio of opportunities and

⁵ID/B/180, chap. III, para. 62.

⁶ID/B/260, chap. V, para. 47.

resources for international industrial co-operation was established in 1981, on the basis of responses received from NGOs, industrial enterprises and institutions in developed and developing countries. The information collected in 1981 made an early start possible on the matching process between potential co-operators from developed and developing countries at the organization and project levels. The portfolio covers such areas of activity as joint ventures, transfer of technology, international subcontracting, industrial research and development, product design and development, marketing, management, training and provision of expertise.

19. Emphasis was given in 1981 to the development of rural areas by means of intensified industrial co-operation. The work programme in this field involved co-operation with national industrial co-operatives as well as with relevant international, regional and national NGOs. One example of these activities is the co-operation established with the Joint Committee for the Promotion of Aid to Co-operatives (COPAC). Through this Committee, joint projects are being designed to assist developing countries in establishing and improving industrial co-operatives. UNIDO's role is to identify viable industrial co-operative projects while COPAC helps in obtaining the required resources in the form of credits or small grants. Identification of these projects was undertaken in some 15 countries in 1981.

20. In close co-operation with the International Co-operative Alliance and the Tanzanian authorities, preparatory work was undertaken on a conference on the economic and social potential of industrial co-operatives in developing countries, to be held at Arusha from 15 to 19 February 1982. The meeting, which will be attended by representatives of industrial co-operatives and co-operative organizations from selected developing and developed countries, has as its main objective the establishment of industrial co-operatives and the improvement of existing ones in participating developing countries, through international industrial co-operation. Two consultants have been assigned to familiarize developing countries concerned with the objectives of the meeting and help them to submit project ideas and proposals for possible co-operation.

21. As part of the Joint Programme for International Co-operation in the Development of Industrial Co-operatives in Developing Countries, established by UNIDO and the Central Union of Polish Work Co-operatives⁷ in 1977, assistance was provided to the Government of Botswana in the establishment of a knitwear industry, which was financed on a cost-sharing basis by UNIDO and the Union.

22. The dialogue and co-operation between UNIDO and the international, regional, national and sectoral trade unions was strengthened and expanded in 1981. In addition to activities related to the System of Consultations, co-operation with trade unions was extended to such areas as management and training. UNIDO also participated in the 1981 world conferences of the three international trade unions: the International Confederation of Free Trade Unions, the World Confederation of Labour and the World Federation of Trade Unions.

⁷ID/B/200, chap. VI, para. 33.

NEW YORK LIAISON

23. The primary function of the UNIDO Liaison Office in New York is to ensure UNIDO's presence at United Nations Headquarters. The Office maintains close contacts with Permanent Missions of Member States of the United Nations to assist them and to provide data on the activities and budget of UNIDO. The Office also maintains close relationships with UNDP and with the United Nations Interim Fund for Science and Technology for Development at both policy and operational levels, and helps to expedite approval of UNIDO projects.

24. In 1981, the Liaison Office continued to provide an increasingly wide range of services in connection with UNIDO's expanding programmes and activities. At the thirty-sixth session of the General Assembly representation and reporting services were provided, particularly in monitoring agenda item 69 (d) "Industrialization", items dealing with UNIDO's programme budget for the biennium 1982-1983 and other items of direct concern to UNIDO which were allocated to the Second and Fifth Committees. Delegations' requests for information on UNIDO activities were also complied with.

25. The Office provided representation and reporting with regard to other intergovernmental, inter-agency and expert group meetings as well as technical panels and working groups convened at United Nations Headquarters. These included sessions of the Economic and Social Council, the UNDP Governing Council, the Committee for Programme and Co-ordination, the 1981 United Nations Pledging Conference for Development Activities and various preparatory committee meetings for the United Nations Conference on New and Renewable Sources of Energy. The Office represented the Executive Director at a ministerial level meeting of the Inter-American Economic and Social Council of the Organization of American States, held in Washington D.C., and was also represented on the UNIDO delegation at the United Nations Conference on New and Renewable Sources of Energy.

26. During 1981, contacts were maintained with other international organizations, particularly those in New York and Washington, including the World Bank, the United Nations International Business Council for Development, the Inter-American Development Bank, the Organization of American States, and the Alliance to Save Energy.

27. The Office's documentation centre expanded its activities in supplying documentation and information to members of Permanent Missions, to units and departments of the United Nations system and to other international organizations, manufacturing industries, technical experts and financial, academic and research institutions in North and South America. Efforts were intensified to enlarge contacts with professional associations and producers of technical periodicals in various branches of industry for the mutual exchange of publications and information. In this regard, technical publications, economic studies and related publications were obtained from sources in North America and sent to staff members at UNIDO Headquarters especially within the Division for Industrial Studies and the Division of Industrial Operations.

Arrangements were made with the United Nations Statistical Office for the compilation of detailed industrial data for different countries and regions, designed to service the needs of various units at UNIDO Headquarters.

28. The Office assisted in planning and co-ordinating a training seminar for participants from developing countries in the field of energy management, held at the Institute for Energy Research of the New York State University at Stony Brook in December 1981. Further areas in which a direct contribution was provided included: organizing study tours and assisting in the placement of fellowships; briefing and debriefing UNIDO field experts; assisting in the search for qualified candidates for field assignments; and undertaking arrangements with suppliers of equipment and contractor services. The Office was also requested to undertake *ad hoc* assignments, including field missions and work in the areas of transfer of technology, energy, training and investment promotion.

UNIDO REPRESENTATION IN GENEVA

29. During 1981, the staff of UNIDO representation in Geneva was scaled down by one General Service staff member, reducing the present complement to two Professionals and one General Service. In the course of the year, the office covered over 50 meetings held in Geneva, in addition to providing support to delegations from UNIDO Headquarters attending other meetings. The meetings covered were those most relevant to UNIDO from among the 500 or so meetings of the principal United Nations organizations and specialized agencies based in Geneva; where meetings of interest to UNIDO could not be covered, documentation was obtained and forwarded.

30. The following Permanent Missions in Geneva were newly accredited to UNIDO in Vienna in 1981: Burundi, Ghana and the United Republic of Tanzania; Somalia is expected to be accredited early in 1982. Of the 18 Governments whose Permanent Missions in Geneva are now accredited to UNIDO, six were members of the Industrial Development Board in 1981 and others attended sessions of the Board as observers. The office works very closely with these Missions, providing continuous briefings on matters pertaining to UNIDO; its services are especially in demand during sessions of the Economic and Social Council and the Committee for Programme and Co-ordination.

31. The Head of the office continued to cover the meetings of the subsidiary mechanisms of the Administrative Committee on Co-ordination. As Chairman of the UNIDO task force on preparations for the global Consultation on the training of industrial manpower, he presided over meetings of the task force both in Vienna and Geneva and was in close contact with officials concerned in the International Labour Organisation (ILO) and the United Nations Educational, Scientific and Cultural Organization (UNESCO)—the two specialized agencies associated with UNIDO in this Consultation—and in the host country, the United States of America. The Head also participated in a number of seminars and workshops and attended the thirty-sixth session of the General Assembly at United Nations Headquarters in New York.

FIELD ADVISER AND JUNIOR PROFESSIONAL OFFICER PROGRAMMES

32. The Industrial Development Board at its fifteenth session in May 1981 took note of the report of the UNDP Administrator on sectoral support⁸ which was later discussed by the UNDP Governing Council at its twenty-eighth session in June 1981. The Board invited the Governing Council to maintain the present level of Senior Industrial Development Field Adviser (SIDFA) services and make the utmost effort to increase it.⁹ Consequently, the Governing Council in decision 81/39 approved \$8,311,000 to cover the net costs to UNDP for SIDFA services during the biennium 1982-1983, i.e. a \$1,349,000 increase over the allocation of \$7,962,000 for the biennium 1980-1981.

33. The UNDP Governing Council also requested the UNDP Administrator to pursue consultations with a view to concluding agreements with Governments of countries drawing upon the services of the SIDFAs, so that some part of the total net costs could be financed from national indicative planning figures (IPFs) and/or national sources, in order to achieve to the extent possible a share of one quarter of these costs, taking account of the particular situation of the least developed countries. Furthermore, the Governing Council invited the Secretary-General to make every effort to increase UNIDO's share of the costs of the SIDFA programme.

34. Owing to the rise in the costs of the SIDFA programme, the increased budget was insufficient for the creation of any further posts. Therefore, UNIDO expectations for 1981 were limited to maintaining the number of posts at 47 (44 to be financed by UNDP and 3 from trust funds). At the end of July 1981, UNIDO proposed to UNDP a redistribution of the 47 SIDFA posts in order to make maximum utilization of the available resources.¹⁰

35. In July 1981, the Economic and Social Council, in resolution 1981/75 on industrial development co-operation, paragraph 14, invited the Secretary-General to make every effort to increase the share of UNIDO in the cost of the SIDFA programme, as recommended by the UNDP Governing Council at its twenty-eighth session. For 1982-1983 UNIDO has allocated \$423,100 from its regular budget to cover the SIDFAs' duty travel as part of the operations of the SIDFA programme (based on the original understanding with UNDP, which finances the salary and administrative costs). Also, voluntary contributions have been received from Austria, Finland and Japan for the financing of three

⁸DP-555.

⁹A/36/16, para. 127.

¹⁰At the January 1982 Interagency Consultative Meeting, the UNDP informed UNIDO that after a lengthy study, and in the light of the financial situation, the approved funds as stated above must be reduced to 73.3 per cent in 1982 and 64 per cent in 1983, making a total of only \$7,105,000 available for SIDFAs during the biennium 1982-1983. In addition, only \$560,000 of the expected \$2 million for the biennium have been pledged—by seven Governments—as contribution to the SIDFA programme. Considering these facts, the UNDP Administrator has decided that for 1983 only 24 SIDFAs will be financed by the UNDP in lieu of 33 posts filled in 1981. In the new distribution of posts, priority will be given to the least developed countries and to those posts for which Governments are contributing. Therefore, a review of the SIDFAs' contracts will take place in mid-1982 to determine those SIDFA posts which are to be retained through 1983 and those which will be discontinued in 1982 in order to reduce the number to the 24 available posts.

additional SIDFA posts. These funds have so far not been utilized pending the completion of negotiations between UNDP and UNIDO on the final allocation and distribution of posts.

36. The actual situation definitely makes it difficult to respond to the requirements of developing countries. Further limitations of funds for the fielding of UNIDO missions for programming purposes or attendance at important international events call for a broader utilization of SIDFA services in these areas. During 1981, 26 SIDFAs attended 84 conferences. The total time spent only on conferences was 142 days, or 5.2 per cent of the total available time of SIDFA services.

37. The graphics in chapter V (B. Implementation by regions) give an indication of the distribution of SIDFA posts by the end of 1981. Forty-four UNDP-financed posts were proposed at the beginning of 1981, with the expectation of filling all of them, before UNDP indicated a freeze on recruitment at 33 posts. Appendix N also provides a list of the duty stations and country coverage of SIDFAs and Junior Professional Officers (JPOs).

38. The JPO programme continued to expand in 1981 thanks to the generous contributions of Belgium, Denmark, Federal Republic of Germany, Finland, Japan, Netherlands, Norway, Sweden and Switzerland, and negotiations are currently under way with the Government of Italy for the provision of JPOs. The JPOs have not only provided valuable assistance to the SIDFAs, but have also been instrumental in maintaining UNIDO's presence in many countries which could not otherwise be considered for coverage due to the limited number of SIDFAs.

39. During 1981, 35 JPOs were recruited, of which three were from developing countries. A special word of thanks is due to the Governments of the Netherlands and Norway who provided the posts for these candidates. Negotiations will continue with donor countries to provide additional posts for candidates from developing countries. Two JPO training courses and two mid-assignment reviews were conducted in 1981 with participation from representatives of donor countries. By the end of 1981 the total number of JPOs in the field was 50.

40. Further improvements were made in the interaction of communications between the field and the Secretariat through the reporting system of SIDFAs and JPOs. An analysis was undertaken in order to further systematize information included in the field reports with a view to taking advantage of the computer system available at UNIDO and, through computerization, improve the management and monitoring of the SIDFAs' and JPOs' reports. Follow-up actions at Headquarters and provisions of feedback to the field would be enhanced and retrieval and elaboration of the information facilitated. During 1981 some 300 reports were received, analysed and circulated, covering almost all of the countries to which UNIDO provides assistance.

41. The First Regional SIDFA Meeting for Latin America took place in Brasilia (Brazil), from 9 to 15 September 1981. A thorough analysis of the overall situation of UNIDO's operations in Latin America was carefully studied and important recommendations were drawn up to improve UNIDO's programmes, aiming at reinforcement of the Organization's role in the process of industrialization of that region.

INTER-AGENCY PROGRAMME CO-ORDINATION¹¹

42. The co-operation and co-ordination of programmes and activities among the various agencies and organizations of the United Nations family take place at a number of different levels, from policy-making bodies and the executive heads of secretariats down to the experts working on joint projects in the field. The succeeding paragraphs describe briefly the co-ordinating mechanisms and activities undertaken in conjunction with other United Nations agencies and bodies. Activities with the UNDP and the World Bank are covered in detail elsewhere in this *Report*.

43. At each level, UNIDO endeavours to ensure that its programmes are in harmony with those of its sister agencies. In the developing countries, the SIDFAs located in the offices of the UNDP resident representatives are the main instruments for practical co-operation. Quite often they attend co-ordination meetings at the project or programme and policies levels. The regional advisers and the joint industry divisions strive for the same results at the regional level with the regional commissions and the regional offices of the specialized agencies.

44. At the Headquarters level, UNIDO co-ordinates its activities with those of other United Nations bodies and organizations by participating in the Administrative Committee on Co-ordination (ACC) and its sub-organs; attending meetings of other United Nations organs; and participating in regular intersecretariat consultations as provided for in the memoranda of understanding concluded between UNIDO and other United Nations organizations. The latter intersecretariat meetings periodically review or discuss ongoing or planned activities of mutual interest, both at the Headquarters and field levels.

45. During the period under review, two intersecretariat agreements on co-operation were concluded: the first, a strategy paper on the development of medical equipment and laboratory services, with the World Health Organization (WHO), and the second, a memorandum of understanding on the co-operative arrangement on investment follow-up for projects in the industrial sector, with UNDP. The texts are reproduced in appendix B.

46. The UNIDO/WHO Strategy Paper, which came into force on 19 January 1981, identified, *inter alia*, the areas to be considered for joint implementation, as well as the respective areas of competence of each organization, such as the transfer of technology for the production of medical equipment and laboratory reagents for UNIDO and the development of appropriate technology and identification of needs, particularly in support of primary health care and in the field of health laboratory services for WHO. This paper, together with the UNIDO/WHO Strategy Paper on Manufacturing and Control of Pharmaceuticals,¹² provide a sound basis for co-operation between the two organizations in specific fields and are an integral part of the 1976 Memorandum of Understanding between WHO and UNIDO.¹³

¹¹A comprehensive report on UNIDO co-ordination activities for the period October 1980 to October 1981 was submitted to the Permanent Committee at its sixteenth session in document ID/B/C.3/110. The present section briefly summarizes the events recounted in that document and reports on recent developments up to the end of the year under review.

¹²ID/B/240, appendix A.

¹³ID/B/180, appendix A.

47. The Memorandum of Understanding between UNIDO and UNDP, concluded in May 1981, was formulated in order to improve further the linkage between pre-investment and investment as regards UNDP-assisted, UNIDO-executed technical co-operation projects, making them eligible for possible financing by development and financial institutions or for foreign participation.

48. In accordance with existing bilateral and multilateral arrangements for co-operation, a number of meetings were organized in 1981 to discuss joint activities and to eliminate duplication. These included:

UNIDO/WHO Intersecretariat Co-ordination Committee (Vienna, 25-27 February)

Fifth and sixth meetings of the FAO/UNIDO Joint Technical Working Group on Food and Agricultural Products Conservation and Processing Industries (Rome, 23-24 April; Vienna, 9-10 December)

Fourteenth session of the UNESCO/UNIDO Intersecretariat Committee on Co-operation (Vienna, 3-4 September)

Thirtieth session of the ILO/UNIDO Joint Working Party (Geneva, 5-6 October)

Second meeting of the Joint UNIDO/UNEP Committee on Co-operation (Paris, 29-30 October)

Seventh ITC/UNIDO liaison meeting (Geneva, 29-30 October)

49. The outcome of the intersecretariat meetings and contacts is reflected in UNIDO collaboration with other United Nations agencies and organizations in the joint preparation and execution of various programmes and projects.¹⁴

50. At the invitation of the Food and Agriculture Organization of the United Nations (FAO), UNIDO also participated in the International Meat Development Scheme and the International Scheme for Co-ordination of Dairy Development. ILO and UNIDO are working together in the preparation of a series of technical memoranda to provide small-scale producers in developing countries with detailed technical and economic information on alternative production technologies which might compete effectively with the capital-intensive technologies of developed countries. UNIDO also contributed a paper to the International Conference on Hydrology and the Scientific Basis for the Rational Management of Water Resources, convened by UNESCO in Paris, 18-27 August 1981. UNIDO and UNESCO have agreed to collaborate in the International Forum on New Technology of Coal Utilization. UNIDO is collaborating closely with the United Nations Environment Programme (UNEP) within the framework of the UNEP Regional Seas Programme by contributing studies on marine pollutants from industrial sources. The UNEP/UNIDO Workshop on Environmental Aspects of Alumina Production, held in January 1981, considered the preparation of a comprehensive report which could be used by developed and developing countries in the formulation of industrial and environmental strategies and priorities in this field. UNIDO submitted to this Workshop a study on the disposal and utilization of bauxite residues. In co-operation with the United Nations Secretariat, UNEP and the

¹⁴For a list of technical co-operation projects implemented by UNIDO in conjunction with the agencies, see ID/B/C.3/110, annex II.

International Institute for Applied System Analysis, UNIDO was one of the sponsors of the International Symposium on Water Resources Management in Industrial Areas, organized by the Portuguese Water Resources Association and the International Water Resources Association, which took place in Lisbon in September 1981. UNIDO also presented a paper at the symposium. Co-operation between UNIDO and the International Trade Centre UNCTAD/GATT (ITC) is mainly in the field of technical co-operation, where a number of ongoing joint projects are being implemented and various new project proposals are being discussed. The activities of UNIDO have been co-ordinated with the industrial development activities of the regional commissions mainly through the joint industry divisions set up within the commissions, except within the Economic Commission for Europe (ECE); the work programmes of these divisions are prepared and implemented in consultation with UNIDO. This collaboration emphasizes both research activities and operational and promotional activities in such areas as sectoral consultations; development and transfer of technology, including the establishment and operation of centres for technology transfer at the regional and subregional levels; training of industrial manpower; and economic and technical co-operation among developing countries. UNIDO is working with the United Nations Centre on Transnational Corporations in the preparation of a number of industrial studies and research projects, as well as in the processing of information, including data on foreign investment and transfer of technology.

51. In 1981, UNIDO, together with other United Nations organizations, participated in the activities related to international years and follow-up events as laid down by the General Assembly. Close co-operation between UNIDO and other United Nations bodies and organizations was also reflected in UNIDO representation at United Nations meetings of direct relevance to UNIDO activities. During the period under review some 200 meetings were attended. In particular, UNIDO contributed to the preparatory work for the United Nations Conference on New and Renewable Sources of Energy, held in Nairobi, August 1981, and participated in the preparatory technical panel meetings, expert group meetings and final Synthesis Group Meeting. The *Ad Hoc* Expert Group Meeting on Industrial Issues, Including Utilization of Energy in Transportation and Allied Sectors, was held in Vienna, January 1981, with support services provided by UNIDO. Other contributions to the preparatory work for the Conference included a background paper for the industrial issues meeting and the comprehensive report requested by the Preparatory Committee at its second session. UNIDO also co-operated with the United Nations Conference on Trade and Development (UNCTAD) in the preparation for and participation in the United Nations Conference on the Least Developed Countries, held in Paris, September 1981. In addition, UNIDO participated in the tenth session of the Third United Nations Conference on the Law of the Sea, convened in Geneva from 29 June to 31 July 1981.

52. Various United Nations organizations have been associated with selected priority areas in the UNIDO work programme, notably the System of Consultations. Thus, ILO, FAO, UNCTAD and ITC have been contributing to the Consultations on the Leather and Leather Products Industry and are members of the preparatory groups formed for the purpose—for example, the Panel on Leather and Leather Products Industry, the fifth session of which was

held in Vienna from 25 to 27 November 1981. In the fertilizer industry sector, co-ordination activities were related to the follow-up of the conclusions and recommendations of the Third (1980) Consultation on the Fertilizer Industry, to which FAO and the United Nations Centre on Transnational Corporations made valuable contributions. The UNIDO/FAO/World Bank Working Group on Fertilizers met in June 1981 to develop a uniform methodology for estimating the optimum level of fertilizer consumption in the developing countries in 1990 and 2000. For the Second (1981) Consultation on the Petrochemical Industry, UNCTAD, the Economic Commission for Western Asia (ECWA) and the United Nations Centre on Transnational Corporations contributed substantively to the papers submitted. For the First (1981) Consultation on the Food Processing Industry, FAO, UNCTAD and ITC made valuable contributions to the studies submitted.

53. The General Assembly, in its resolution 35/66B of 5 December 1980, declared the 1980s as the Industrial Development Decade for Africa and entrusted to UNIDO, in co-operation with ECA and OAU, the task of formulating and implementing an integrated programme of action within the framework of the Lagos Plan of Action to assist countries and subregional and regional organizations in Africa. UNIDO has also contacted other organizations and bodies within the United Nations system to solicit their co-operation in this endeavour.

PUBLIC INFORMATION

54. In fulfilling its mandate, which is to inform Member States, the mass media, educational and non-governmental organizations, as well as business, industrial institutions and the general public at large, on the activities of UNIDO, the Public Information Section has continued to collect, process and disseminate relevant information on the role of UNIDO in accelerating the industrialization of developing countries and its contribution to the establishment of a new international economic order.

55. Full information services are also provided for other United Nations units and bodies in the Vienna International Centre (VIC). In 1981, the Section's mandate to serve as the United Nations Information Service for Austria was expanded to include provision of the same services to the Federal Republic of Germany.

56. Major UNIDO meetings covered by the Section in 1981 included the Industrial Development Board and its Permanent Committee and consultation meetings on the petrochemical, food processing and capital goods industries. Among the United Nations meetings covered were the regular sessions of the Commission on Narcotic Drugs, the Commission for Social Development and the United Nations Commission on International Trade Law, the Advisory Committees for the International Youth Year, the World Assembly on Aging and the International Year of Disabled Persons, as well as the World Symposium of Experts.

57. In all, 268 press releases were produced in English, most of them also translated into French, for world-wide distribution and 343 were produced in German for distribution in Austria and the Federal Republic of Germany.

58. In addition to the production of routine hand-outs and feature stories, emphasis was laid on the contributions made by UNIDO to the United Nations Conference on New and Renewable Sources of Energy, held in Nairobi (August 1981) and to the United Nations Conference on the Least Developed Countries, held in Paris (September 1981). In November 1981, the fifteenth anniversary of UNIDO provided an appropriate occasion for promoting public awareness of the important accomplishments of the Organization since its establishment.

59. Basic information leaflets on UNIDO were brought up to date and produced in four languages. A revised and updated version of *UNIDO—Global Organization for International Industrial Co-operation* is being finalized. Nine booklets in the series "UNIDO for Industrialization" have been rewritten and several others are in preparation. Other publications produced in 1981 included a booklet on the International Year of Disabled Persons and German versions of *United Nations Today—1981* and the report of the Secretary-General on the work of the Organization for 1981.¹⁵

60. To meet the increasing demand for specific information material and to diversify the distribution of press releases to selected target audiences, the computerization of mailing lists was initiated in 1981 to allow expansion from the present 2,000 to some 30,000 possible recipients. By tailoring each mailing to people interested in particular subjects, this system should substantially improve the overall impact of information activities, without necessarily adding to mailing costs, and should help to increase substantially the cost-effectiveness of press operations.

61. In order to maintain and strengthen contacts with international news agencies, newspapers and television and radio stations, 53 new foreign correspondents and representatives of local media were permanently accredited in 1981, bringing the total number of journalists enjoying close working relations with UNIDO and the United Nations units in the VIC up to 163.

62. In 1981, more than 50 radio and television interviews were held with representatives to United Nations or UNIDO meetings and top officials of both organizations, and distributed to stations in both developed and developing countries. Increasing use was made of electronic television in the production of induction and training courses for Headquarters and field personnel.

63. Close co-operation with the British Broadcasting Corporation (BBC), the Deutsche Welle and the Österreichischer Rundfunk (ORF) short-wave services and their frequent transmissions to Africa, the Far East and Latin America has led to the broadcasting of many in-depth interviews on the problems of industrialization for developing countries or on items relating to the work of other United Nations units in the VIC.

¹⁵A/36/1.

64. Photographs of UNIDO field activities and meetings were distributed to United Nations information centres all over the world and also directly to international and national media, including technical journals. Several special exhibits were arranged in the VIC including one commemorating the fifteenth anniversary of UNIDO, and one on the International Year of Disabled Persons.

65. A basic film is being made on UNIDO, financed jointly by the Organization and the Department of Public Information at United Nations Headquarters; the filming is taking place in Africa, Latin America and Austria. It is hoped that post-production work, which is being carried out at United Nations Headquarters, will be completed by the spring of 1982.

66. During the period under review, there was a marked increase in the number of educational and information programmes, briefings, lectures and seminars arranged by the Section. Forty-five in-depth information programmes were organized, covering the activities of UNIDO, the United Nations in general and the United Nations units in the VIC, with about 900 participants from some 30 countries, including parliamentarians, university students, and representatives from business and management circles. In addition, some 200 briefings were held for the more than 5,000 students who visited the VIC.

67. Contacts have been made in Vienna with representatives of over 150 non-governmental organizations accredited to the United Nations. The Section participated in briefings for non-governmental organizations, distributed information material and strengthened its links with local organizations by participating in their meetings, organizing lecture programmes etc.

68. In 1981, almost 1,200 written inquiries on the work of UNIDO and other organizations located in the VIC were handled. They included requests for general information on the work done by UNIDO, as well as requests for detailed facts on specific activities for use in publications and research studies. There was also a mounting number of telephone inquiries and personal visits to the Section's reference library.

69. The Section is also responsible for organizing the Visitors Service in the VIC. In its second year of operation, this Service provided guided tours for some 48,000 visitors in 1981, and facilitated the arrangements for receiving high-level visitors to the Centre. In addition to giving technical information on the building, the tours feature exhibits on the work of the United Nations and its units in the VIC, film shows, a multi-media presentation and briefings. A pamphlet on the guided tours operation has been published in four languages.

70. In order to maintain and strengthen co-operation and co-ordination with its counterparts in the United Nations system, the Section participated actively, whenever appropriate and financially feasible, in meetings of the Joint United Nations Information Committee (JUNIC) and its working groups, particularly those dealing with development information, the periodical *Development Forum*, and the *World Newspaper Supplement on Development Issues*. UNIDO has also offered to host the ninth regular session of JUNIC in spring 1982 in Vienna.

Chapter VIII

GENERAL ADMINISTRATION

STAFFING

1. The UNIDO Personnel Service continued to carry out its tasks within its terms of reference, which include the recruitment and management not only of UNIDO Secretariat staff but also of most of the staff employed by the other United Nations units located in the Vienna International Centre (VIC).
2. The Personnel Service continued its efforts to implement the various resolutions on administrative matters adopted by the General Assembly during the last few years. As far as the recruitment of nationals coming from unrepresented or under-represented Member States was concerned, the modest progress registered during 1979 was maintained. As pointed out by the Joint Inspection Unit (JIU) in its report to the General Assembly at its thirty-sixth session,¹ the proportion of appointments granted to these nationals in UNIDO rose during the two-year period 1 July 1978-30 June 1980 from 15.1 per cent to 25 per cent, while a corresponding reduction (from 32.1 per cent to 25 per cent) was achieved in the number of appointments granted to nationals of over-represented Member States. JIU commented that UNIDO was one of the very few entities of the United Nations that had progressed so far towards meeting the target of 40 per cent set by the General Assembly in its resolutions 33/143 and 35/210. Nevertheless, the Secretariat continued to encounter considerable difficulties in finding candidates from unrepresented and under-represented countries who possessed the specialized qualifications required to contribute to the technical activities of UNIDO. Problems were also experienced in the recruitment of female Professional staff at all levels as described in paragraphs 13 and 14 below.
3. The relationship between fixed-term and permanent appointments was also the subject of comment by JIU, which noted that 49.7 per cent of UNIDO staff members had held fixed-term appointments on 30 June 1980, compared with 38.2 per cent for the United Nations Secretariat as a whole.
4. General Assembly resolution 35/210 also provided for a continuation of the policy of reserving 30 per cent of all vacant P-1 and P-2 posts for successful candidates in the competitive examination for promotion of General Service staff members to the Professional category. In addition, it was decided that the remaining P-1/P-2 posts should be reserved for recruitment by way of

¹JIU/REP/81/10.

competitive examination for candidates from unrepresented and under-represented countries. Pending completion of the examination process, recruitment for current vacancies at the P-1 and P-2 levels has been frozen.

5. The composition of the staff of the UNIDO Secretariat up to 31 December 1981, according to category and sex, and with comparable figures for 1979 and 1980, is given in table 1 below.

TABLE 1. COMPOSITION OF UNIDO SECRETARIAT^a

Category	As at 31 December 1979		As at 31 December 1980		As at 31 December 1981	
	Male	Female	Male	Female	Male	Female
P-5 and above	124	1	131	2	129	2
P-1 to P-4	220	49	214	61	224	64
Field Service	1	—	1	—	1	—
General Service	145	512	161	547	168	601
Manual Worker	79	4	95	5	105	7
Subtotal	569	566	602	615	627	674
TOTAL	1 135		1 217		1 301	

^aFigures include interregional and special technical advisers attached to UNIDO Headquarters; they do not include short-term staff or Senior Industrial Development Field Advisers (SIDFAs). The position as at 31 December 1981 was: 5 interregional advisers and 13 special technical advisers. The figures also include staff members filling posts under Budget Sections 27 to 29 and under temporary assistance.

Recruitment

6. On 31 December 1981, 474 Professional and higher-level posts were authorized for UNIDO, of which 359 were financed under the regular budget, 98 from overhead funds, 7 by the World Bank and 10 under the provisions of Budget Sections 27-29 (allocated for services being provided by UNIDO to the United Nations units in Vienna and for the maintenance of the VIC). In addition, 5 interregional advisers were being financed from the regular programme of technical co-operation, 4 Professionals were charged to special temporary assistance for United Nations conferences and 1 to UNIDO's general temporary assistance. Twenty-two new Professional posts were approved or regularized on 1 January 1981 (12 from UNIDO regular budget and 10 from Budget Sections 27-29) and 2 posts from overhead funds were approved during 1981. There were 63 vacant posts, which were under various stages of recruitment, compared with 51 in 1980. Seven P-2 posts had been set aside for successful candidates in the competitive examination and for candidates from unrepresented and under-represented countries, and 6 were language posts under recruitment by United Nations Headquarters.

7. During 1981, 135 appointments for UNIDO were made in the Professional and higher categories, compared with 167 in 1980. Of these, 28 were new appointments of one year or more, including 5 transfers and 1 assignment from other United Nations organizations and 2 special technical advisers; 20 were fixed-term appointments of less than one year, expected to be converted to fixed-term appointments of one year or more; 20 were fixed-term appointments similarly converted; 13 were pending processing by the appointment and promotion bodies; and 54 were short-term and fixed-term appointments which

were not expected to be converted to any other type of appointment. In the same period, the appointment of one staff member who had been serving under the 200 Series of the Staff Rules was converted to the 100 Series. During the year, 57 members at the Professional and higher levels left the Organization, compared with 46 in 1980.

8. During the year, 145 fixed-term appointments for UNIDO were made in the General Service and Manual Worker categories and 48 staff members were transferred from the United Nations units or reassigned within UNIDO. In 1980, the total of appointments, transfers and reassignments was 151. Altogether 85 staff members in these categories left the Organization (1980: 79) of whom 6 were either transferred or were assigned to other United Nations units, 3 were transferred to the International Atomic Energy Agency (IAEA) and 3 were promoted to the Professional category, 1 of whom was transferred to the Economic and Social Commission for Asia and the Pacific (ESCAP) and 1 to United Nations Headquarters.

9. The UNIDO Personnel Service was also responsible for the recruitment of General Service and Manual Worker staff for all the United Nations units in the VIC, as well as for the recruitment of Professional staff and consultants for many of these units.²

10. In 1981, 5 Professionals (1980: 9) were recruited for the United Nations units under fixed-term contracts and 18 cases were finalized as against 22 in 1980. In the same period, 14 staff members in this category left the United Nations units. During the same period 73 General Service and Manual Worker staff members (1980: 57) were recruited under fixed-term contracts (including 6 transfers from UNIDO, 1 from the IAEA and 1 from the United Nations Office at Geneva). In addition, 7 Professionals (1980: 20) were recruited under short-term contracts, 4 extensions were processed and 74 short-term contracts (1980: 111) were issued to General Service and Manual Worker staff (all short-term contracts are included in the figures of table 2 below).

11. Recruitment of short-term staff for meetings was again not confined to the needs of UNIDO but also covered the requirements of the United Nations units at Vienna, United Nations Headquarters and other intergovernmental organizations. Thus, for meetings held by these bodies, the Personnel Service issued 1,364 contracts, compared with 1,024 in 1980. In addition, during the same period, 506 short-term contracts were issued for Secretariat staff (see also paras. 7 and 10 above). A breakdown of the short-term contracts issued during the period under review is given in table 2 below.

TABLE 2. SHORT-TERM CONTRACTS ISSUED 1 JANUARY TO 31 DECEMBER 1981

	<i>Conference staff</i>			<i>Total</i>
	<i>Translators/interpreters (Professional)</i>	<i>General Service and Manual Worker</i>	<i>Other staff</i>	
UNIDO	434	508	421	1 363
United Nations	153	169	85	407
Others	81	19	—	100
TOTAL	668	696	506	1 870

²ID/B/260, chap. VII, para. 11.

12. For UNIDO, including the World Bank/UNIDO Co-operative Programme, a total of 468 consultants' and individual contractors' contracts were issued for the provision of outside expertise and professional services in the Secretariat. In addition, 85 contracts were processed on behalf of the United Nations Scientific Committee on the Effects of Atomic Radiation and the United Nations units. The total number of consultants' contracts from all sources of funds processed during the period under review was, therefore, 553, compared with 397 in 1980.

Employment of women

13. At the end of the year there were 66 female Professional staff members representing 15.7 per cent of the total Professional staff (1980: 63, representing 15 per cent of the total). This very modest increase is not commensurate with the efforts that are continually being made to locate women candidates qualified to fill vacancies requiring a high degree of specialization. The under-representation of women at the Professional level in the UNIDO Secretariat is mainly due to the great turnover of staff, which has adversely affected the number of female Professional staff on board in recent years. Although 10 were appointed during the year, and 1 was promoted to the Professional category through the system of competitive examinations, 8 female staff members left the Secretariat.

14. There was an improvement in the rate of applications received from qualified women candidates, which in 1981 rose to 18 per cent of the total number of applications (1980: 13 per cent). This increase reflects the Secretariat's efforts to encourage female candidates to apply directly as well as through country representatives. However, 40 per cent of the female applicants were nationals of over-represented countries; a mere 13 per cent were from developing countries which were not over-represented.

15. Out of 45 Professionals promoted during the year, 11 (24 per cent) were women. Women accounted for 40 per cent of the promotions to the P-2 level, 46 per cent of those to the P-3 level and 27 per cent of those to the P-4 level. They also continued to be well represented on administrative and advisory bodies in the Organization.

Personnel management

16. The Personnel Service is responsible for the administration of all staff of UNIDO (including project personnel and locally recruited field staff) and of the United Nations units located in Vienna—as of 31 December 1981, a total staff of 2,438 compared with 2,295 on 31 December 1980 (an increase of 6 per cent). The number of Secretariat staff, including those holding monthly short-term appointments, rose from 1,314 (1980) to 1,356 (1981) (an increase of 3.2 per cent);³ the number of staff members working in the United Nations units

³The increase in the number of staff was mainly the result of recruitment of additional General Service and Manual Worker support staff for conferences held in Vienna and the conversion of short-term appointments to fixed-term appointments.

increased from 299 to 328 over the period (9.7 per cent). The figures for project personnel were 539 in 1980 compared with 574 in 1981 (an increase of 7.4 per cent); locally recruited field staff increased by 25.9 per cent, from 143 in 1980 to 180 in 1981. Although the administrative workload became proportionately heavier, staff resources for personnel administration hardly increased in the period under review.

17. Following discussions with the Office of Personnel Services at United Nations Headquarters and the United Nations units located in the VIC, a formula was adopted to grant the units representation on the joint staff/management bodies of UNIDO.⁴ These bodies play a valuable role in representing the interests of the staff by enabling members of the Secretariat to participate in the formulation of personnel management policies, as well as in the appointment and promotion of staff up to and including the P-4 level.

18. In past years, additional authority in personnel matters has been delegated to the Executive Director by the Secretary-General. On 7 May 1981, the Under-Secretary-General for Administration and Management, on behalf of the Secretary-General, authorized the Executive Director to prepare and circulate vacancy announcements, to assign staff members under certain conditions to any of the offices or activities of UNIDO and to re-employ or reinstate former staff members. The Industrial Development Board at its fifteenth session took note of the current degree of autonomy in personnel management.⁵ The Executive Director continued his dialogue with the Secretary-General in order to further increase the autonomy of UNIDO in administrative matters, in keeping with the relevant policies and regulations of the United Nations, as part of the preparations for the conversion of UNIDO into a specialized agency. In August 1981, the Executive Director approached the Secretary-General with a request to reconsider certain proposals that had been made in October 1979⁶ concerning the delegation of additional authority to UNIDO. Since this matter is still under consideration, any further developments will accordingly be reported to the Board.

19. During the year under review, the Personnel Service continued to implement the personnel policy reforms adopted by the General Assembly, such as the classification of posts for the Professional, General Service and Manual Worker categories of staff and improvement of career development by means of training and the administration of competitive examinations for the promotion of General Service staff to the Professional category. In addition, innovations were introduced in the placement of staff, including the distribution of a list of vacant posts to all Professionals in the Secretariat and the establishment of a roster of staff members interested in reassignment. Personnel Service also participated in the inter-agency co-ordination of personnel policies and practices within the framework of the Consultative Committee on Administrative Questions (CCAQ) and the International Civil Service Commission (ICSC).

⁴The following joint bodies are established at UNIDO: Joint Advisory Committee, Appointment and Promotion Committee, Appointment and Promotion Panel, Joint Appeals Board, Joint Disciplinary Committee, Panel to Investigate Allegations of Discriminatory Treatment, Joint Committee on Staff Training and Career Development, UNIDO Staff Assistance Committee, Staff Welfare Board.

⁵A/36/16, para. 212.

⁶ID/B/C.3/90, para. 3.

20. The Personnel Service is responsible for implementing the job classification scheme that has been operating in the United Nations Secretariat during the last few years. Although the majority of Professional posts in UNIDO were classified during a survey conducted by the Office of Personnel Services at United Nations Headquarters in 1978 and 1979, new standards developed by ICSC for classifying Professional posts were introduced on 1 January 1981. Since that date, it has been necessary to submit job descriptions to the Office of Personnel Services for classification of all new and vacant posts before transfer or recruitment action can be initiated. The first phase of a new survey of all UNIDO Professional and higher-level posts (up to and including level D-2) began in September 1981, requiring new job descriptions to be classified in accordance with the ICSC standards. Implementation of the classification scheme for UNIDO General Service and Manual Workers in Vienna⁷ continued according to schedule; at the end of 1981 the Personnel Service had classified approximately 350 of the 660 posts included in the scheme. Following completion of the classification during mid-1982, the scheme will be implemented in the United Nations units.

21. The staff training programme continued to expand. A total of 440 staff members attended 13 different courses, compared with 195 participants in four courses in 1980. The number of staff members in the Professional category participating in training courses increased from 17 in 1980 to 75 in 1981. There were 75 participants in courses designed to improve management and supervisory skills. In addition, a limited number of staff members, particularly those concerned with the operation of word-processing equipment, took part in courses conducted by the VIC Computer Service. The Electronic Data Processing Section of UNIDO trained staff working with computer terminals. By the end of October 1981, external study projects for 31 staff members had been approved. These included technical training courses for staff of the Buildings Management Section to increase the in-house capacity for maintenance of technical equipment and installations at the VIC. A training needs survey was conducted, with the assistance of specialists from the International Centre for Advanced Technical and Vocational Training of the International Labour Office. It is planned to use the results of this survey to develop a medium-term and long-range programme designed to meet specific training needs. Most UNIDO courses are open to staff of the United Nations units and of the United Nations Relief and Works Agency for Palestine Refugees in the Near East (UNRWA). Since the UNIDO language training programme in September 1981 became a VIC common service managed by UNIDO, an account of the development of the programme is given later in the chapter (see para. 51 below).

22. An understanding was reached with the Austrian authorities to extend the UNIDO supplementary agreement regulating participation in the Austrian social security system to members of the United Nations units in Vienna. However, the formalities required for ratifying the agreement will not be completed until 1982. The Austrian authorities reserved the right to reopen discussions on the UNIDO and IAEA agreements after the Austrian Parliament has taken certain decisions on its social security programme.

⁷ID/B/260, chap. VII, para. 22

PROJECT PERSONNEL

23. The Project Personnel Recruitment Section (PPRS) accounted for some 47 per cent of the total technical co-operation expenditures of UNIDO in 1981. 946 experts were recruited (1980: 926) and 549 experts were extended in their posts; total work-months amounted to 6,708 (1980: 6,560 work-months; 1979: 6,161 work-months).

24. The average duration of appointment extensions in 1981 was 5.38 months, while that of new appointments fell to 4.03 months. This follows the trend towards shorter-term appointments seen in previous years and illustrated by the figures for the past 10 years shown below (the 1980 figure is higher owing to the recruitment of 70 intermediate-term experts in that year for a large-scale cement industry project).⁸

1972	1973	1974	1975	1976	1977	1978	1979	1980	1981
6.45	6.22	5.62	5.31	5.31	4.61	4.59	4.27	4.45	4.03

25. The tendency to shorter appointments is due, in part, to the growing demand for scarce and expensive high-level consultants whose recruitment presents a number of problems, such as location of skills, levels of remuneration etc. Owing to the additional workload imposed by such recruitment, PPRS accounted for the bulk of overtime funds used by the Division of Industrial Operations.

26. The type of high-level expertise in demand is mainly found in specific institutions, corporations and enterprises in industrialized countries. Although UNIDO draws upon such sources of recruitment to a great extent, it must be borne in mind that certain rules and directives of the United Nations do not provide for the flexibility necessary in such a context. PPRS often has to compete with commercial consulting services and bilateral technical assistance organizations to secure the services of individuals who are often not attracted by the fees and fringe benefits of the United Nations system and who are rarely available at the specific time and for the required duration.

27. During the year under review, PPRS continued, as far as possible, to adapt existing procedures and introduce innovations in order to permit a more flexible and rationalized response to the changing pattern of demand. Despite these efforts the average time required from the approval of a post to the fielding of an expert (lead time) was still 4.88 months, which is not yet satisfactory. It is hoped that the lead time of 3.7 months in respect of experts who reported in December 1981 can be taken as an encouraging sign for future progress in PPRS performance.

28. One of the Section's innovations was the expansion of computer-assisted recruitment planning and monitoring, based on the two terminals installed in 1980.⁹ During 1981, there were continued efforts to expand the use

⁸*Ibid.*, para. 48.

⁹*Ibid.*, para. 42.

of statistics and reports generated by the new data-base, which was developed to form an effective management tool not only for PPRS but also for other Sections and Branches of UNIDO. The staff of the Planning and Monitoring of Recruitment Unit were trained in terminal operation and in basic programming, so that PPRS will very soon be independent in the programming of its statistics and reports. In addition, recruitment and substantive officers receive a fortnightly computer run on the status of project recruitment. Efforts are now concentrated on developing a new computerized system for the roster of experts, into which experts, fellowships, purchase and contracts, etc. could be integrated in order to provide a comprehensive tool for the planning and monitoring of technical co-operation activities. During 1981, PPRS published the "UNIDO Project Personnel Recruitment Section Manual", which will assist staff members at Headquarters and in the field, as well as UNDP and national recruitment services, to co-operate efficiently with PPRS by acquainting them fully with the rules and procedures.

29. To assist in the speedy recruitment of suitable experts in 1981, PPRS made increasing use of reimbursable loan agreements under which experts are made available to UNIDO without severing contractual links with their permanent employers.¹⁰ Discussions continued to be held with institutions, enterprises and government offices in industrialized and developing countries in order to promote the concept of reimbursable loan agreements, and national recruitment services provided much assistance in this respect. It is expected that such a method will be more widely applied, since in the current critical labour market situation, experts are reluctant to abandon a secure position to serve in United Nations projects which not only provide little or no career possibilities but also diminish experts' chances of professional re-integration in their home countries.

30. PPRS continued to be hampered by unpredictable delays in expert approval by the receiving Governments with the result that in too many cases experts became unavailable, at least for the date of implementation originally anticipated. In keeping with the "trouble-shooting" purpose of the Special Industrial Services (SIS) programme, serious efforts continued to be made by the Secretariat to simplify the recruitment of short-term experts under this programme. In 1981 for the first time, a number of short-term SIS experts were selected and appointed without the usual government clearance procedures. The new approach was in principle confined to urgent missions, for which UNIDO pre-selected a candidate of proven competence and suitability who could be available at short notice. Such a course of action drastically reduced recruitment time and, even more important, delivered experts according to schedule. The encouraging results obtained suggest that with suitable care, such a method could continue to be used for future recruitment of SIS experts. Even with regard to projects other than SIS, attempts have been made to persuade more Governments to accept an arrangement which was successfully tested in a large-scale UNIDO project in Latin America. On behalf of the Government, the national counterpart director and the UNIDO project manager were endowed with the authority to select short-term consultants from among those proposed by UNIDO.

¹⁰*Ibid.*, para. 43.

Sources of candidates

31. Appendix F, table 1 shows the number of candidates recruited from a given country during the year 1981; there is noticeable progress towards a more balanced involvement of the three groups of countries in technical co-operation activities. In this respect, special attention was given to updating the roster of experts with the addition of new experts, particularly from developing countries (1981: 37 per cent of the roster; 1980: 33 per cent). The result of the exercise so far is reflected in table 3 below which shows the picture as of 31 December 1981.¹¹

TABLE 3. DISTRIBUTION OF EXPERTS BY GROUPS OF COUNTRIES

	Number of experts					Percentage of appointments
	UNIDO roster ^a	Percentage of roster	Submitted to Government	Selected by Government ^b	Appointed	
Developing countries ^c	4 180	41.7	628	370	254	26.9
Group B ^d	4 984	49.8	984	764	554	58.6
Group D ^e	851	8.5	203	149	138	14.5
TOTAL	10 015	100.0	1 815	1 283	946	100.0

^aExcluding 10 stateless.

^bIncluding government nominees.

^cGroups A and C plus Albania, Cyprus, Greece, Malta, Portugal, Romania and Turkey.

^dExcluding Cyprus, Greece, Malta, Portugal and Turkey.

^eExcluding Albania and Romania.

Recruitment from Group D countries

32. The national recruitment services of the Group D countries are the source of candidates from these countries for the UNIDO roster as well as for individual posts, and in most cases also serve as the liaison offices for contractual arrangements with selected candidates. During 1981, PPRS received several visits from representatives of these services; the resulting closer working relationship is expected to lead to an improved statistical trend for Group D in the near future. There were remarkable cases where a prompt response from national recruitment services enabled UNIDO to deliver experts for some extremely urgent assignments. The relatively high quota of Polish experts fielded in 1981 again resulted from the ongoing large-scale cement industry project in the Libyan Arab Jamahiriya (chap. V, para. 260) staffed by experts on loan from "POLSERVICE".¹²

Recruitment from developing countries

33. The results of UNIDO's efforts towards increased participation of nationals from developing countries in technical assistance projects were still somewhat disappointing. One of the reasons is that few Governments of these countries have so far succeeded in setting up effective national services to

¹¹*Ibid.*, para. 47.

¹²*Ibid.*, para. 48.

channel available human resources into the United Nations system. It is hoped that further UNIDO staff missions to developing countries in 1982 will result in some improvement.

34. It cannot be ignored that UNIDO's efforts to field more experts from developing countries were often neutralized by the attitude of some developing countries themselves who, by and large, seemed to give preference to candidates from Group B and D countries.

PURCHASE AND CONTRACT SERVICE

35. The implementation of the equipment and subcontracting components of UNIDO technical co-operation projects is handled by Purchase and Contract Service (PAC). As in previous years, PAC was responsible in 1981 for the purchasing of equipment and the provision of subcontractual services to the entire Organization as well as to some of the United Nations units and common services in the VIC.

36. During the year under review, implementation of the two components, equipment and contracts, in the technical co-operation field totalled \$35.0 million; for equipment \$19.3 million (1980: \$18.0 million) and for contracts \$15.7 million (1980: \$9.3 million). A total of \$6.0 million for technical co-operation work was carried forward into 1982 and 1983. PAC was responsible for the delivery of approximately 40 per cent of the total UNIDO implementation for technical co-operation activities in 1981 (1980: 36 per cent).

37. Although inflation continued to influence the value of delivery expressed in United States dollars, the effect of the inflationary trend was compensated by the strengthening of the dollar on the international exchange markets during the first nine months of 1981. Therefore the dollar increase in the delivery to technical co-operation projects accounted for by PAC should also be considered a net increase. The delivery of technical assistance increased also in terms of the number of purchase orders for equipment issued and the number of contracts awarded. During 1981, they totalled 1,578 (1979: 1,170; 1980: 1,300) representing an increase of 35 per cent over 1979 and 21 per cent over 1980.

38. The implementation of projects in the agro-industries, metallurgical, engineering and chemical sectors continued to account for the majority of equipment purchases in 1981. Almost 81 per cent of the total delivery under the equipment component, and 90 per cent of the total delivery under the contracts component, was accounted for by these sectors.

39. Efforts to increase developing countries' participation in the supply of equipment and services were intensified in 1981, with the result that 39 contracts with a total value of \$8.9 million—as compared to 18 in 1980 with a value of \$850,000—were signed with contractors from developing countries.

This represents 48 per cent of the value of all contracts signed for technical co-operation during 1981 and an increase of 947 per cent in value over that of 1980.¹³

40. With regard to equipment, the efforts to involve developing countries continued to meet with less success. The number of purchase orders placed with vendors in developing countries rose to 61 in 1981 (1980: 20) and the total value of these orders reached \$1.21 million (1980: \$0.65 million).

41. In addition to procurement for technical co-operation projects, PAC provided equipment and contracts services for the activities of the Division for Industrial Studies and the Division of Policy Co-ordination, amounting to \$346,500. Additional work, totalling \$4.3 million for the purchase of equipment and supplies and \$4.4 million for contracts, was performed for other United Nations units in Vienna, for the operation and maintenance of UNIDO Headquarters and for VIC common services.

CONFERENCE SERVICES

42. The year under review saw a considerable increase in the activities of the Conference Service of UNIDO, particularly as a result of the continuation of the arrangement initiated in 1979, whereby the Service, in addition to its own workload, (a) covers all other meetings and conferences of the United Nations taking place in Vienna, and (b) provides translation, editing, printing and world-wide documents distribution services for the United Nations units based in the VIC. The extent of the increase in services provided for both UNIDO and the United Nations in 1981 is illustrated by table 4 below:

TABLE 4. TRANSLATION AND INTERPRETATION SERVICES PROVIDED BY CONFERENCE SERVICE IN 1980 AND 1981
(By number of pages translated and interpreter days)

Organization served	1980	1981	Increase (percentage)
<i>A. Translation (number of pages translated)</i>			
UNIDO	21 033	24 165	15
United Nations ^a	9 691	15 558	61
TOTAL	30 724	39 723	29
<i>B. Interpretation (interpreter days)</i>			
UNIDO	1 650	1 912	16
United Nations ^a	1 283	2 227	74
TOTAL	2 933	4 139	41

^aIncludes United Nations units in the VIC and United Nations meetings and conferences held in Vienna.

¹³*Ibid.*, para. 38.

43. As regards meetings held in the VIC in 1981, a total of 894 half-day sessions were serviced (UNIDO: 437; non-UNIDO: 457). In monetary terms, a total of approximately \$10 million was implemented in 1981 (UNIDO: \$6 million; non-UNIDO: \$4 million).

44. In order to cope with the steadily increasing workload, Conference Service has been relying more and more on temporary assistance, particularly for handling the demands of the United Nations units based in the VIC. However, in view of the increasing needs for conference services of the various UNIDO programmes, such as the System of Consultations, the regular staff resources of the Conference Service may eventually have to be strengthened.

COMMON SERVICES

45. 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 responsible for Buildings Management, Catering and Language Training as common services for the whole of the VIC. Certain UNIDO general services and conference services are also at the disposal of the United Nations units based in the VIC.

46. The Memorandum made provision for a review of the agreement to take place not later than three years following the implementation of the common services arrangements, which were established in the second half of 1979. During the review, which should take place during 1982, it will be important to take into account the forthcoming change of status of UNIDO to a specialized agency. Moreover, experience gained so far indicates that the whole question of managerial responsibility for the various common services needs to be discussed in detail with a view to developing a better and more efficient system.

47. With regard to Buildings Management, maintenance and operation of the principal installations for ventilation, air-conditioning and heating in the VIC were performed by an outside contractor. The international organizations explored various ways of reducing operating costs, and decided to retain a consultant to study the cost-effectiveness and management implications of using in-house staff to perform some or all of the services provided under this contract. The consultant concluded that if Buildings Management Section were to be augmented by 23 additional staff in certain technical disciplines, the Section could, in addition to other maintenance and operation duties, assume the responsibilities hitherto carried out by the present contractor. This would result in significant savings to the organizations. At the same time, the contract was thoroughly reviewed and 10 European-based firms were invited to submit bids for performing, fully or partially, the services in question.

48. The consultant's recommendations and the bids tendered by outside contractors were analysed in detail by the international organizations. In the

light of the considerable cost of contract work and the fact that many of the skills required to carry out the maintenance and operation of the VIC's principal technical installations were already available amongst the staff of Buildings Management Section, it was decided that it would be more economical to perform the activities presently carried out under contract as an in-house service. During the last quarter of 1981 action was taken to recruit the additional technical skills required in order to take over the maintenance and operation of the VIC ventilation, air-conditioning and heating installations from the present contractor with effect from 1 January 1982.

49. Other contractual services are also being reviewed to ascertain whether the augmented staff to Buildings Management Section might be able to perform them, fully or partially, at a more economical rate than outside contractors. Significant savings in the operation and maintenance budget for the biennium 1982-1983 are expected in the amount of three to four million Austrian Schillings per year.

50. Catering Services worked satisfactorily during the year under review. As inflation was higher than in previous years, the operation was expected to balance out with only a very small surplus at the end of 1981. Wage increases and increasing prices of raw materials led to price adjustments as of 1 May 1981; for 1982, cost increases of about 6 to 8 per cent for wages and raw materials can be expected, which may in turn necessitate a further upward adjustment of sales prices.

51. In August 1981, an agreement was concluded between UNIDO and the IAEA which established the VIC language training programme as a common service managed by UNIDO and co-financed with the IAEA. As of the autumn semester 1981, the programme provided language training in Arabic, Chinese, English, French, German, Russian and Spanish for the staff of all organizations located in the VIC. In September 1981, 842 staff members were enrolled in the regular programme and 111 persons in the dependants' programme. The Language Training Unit administered the United Nations language proficiency examinations in the official languages and developed and administered the German language proficiency examination. At the request of United Nations Headquarters, it also administered competitive examinations for translators and editors.

STATISTICAL ANNEX

This annex provides an overall view, in financial terms, of the Headquarters and field activities of UNIDO. Data for 1981 are based on the second run of the accounts for that year, available mid-January 1982. These data have been used in order to meet printing deadlines for the Report. As has been the custom for the past few years, an updated statistical supplement will be prepared shortly before the Permanent Committee meets. However, indications are that the revised figures will not differ greatly from those given here.

LIST OF TABLES

	<i>Page</i>
1. Expenditures, 1977 to 1982	188
2. Technical co-operation programmes: project budget approvals and expenditures, 1972 to 1982	189
3A. Technical co-operation activities: projects approved in 1981, by source of funds	192
3B. Technical co-operation activities: value of projects as at 31 December 1981, by source of funds	193
4. Expenditures on technical co-operation activities in 1980 and 1981, by source of funds and project component	194
5. Technical co-operation activities: project expenditures, 1977 to 1982, by programme and programme component	195
6. Expenditure on technical co-operation activities, by source of funds and programme component, 1981	196
7. Expenditures on technical co-operation activities, by geographical area, 1976 to 1982	198
8. Technical co-operation activities: project expenditure in 1981	199
9. Expenditure of regular budget and overhead funds in 1981, by programme component and object of expenditure	200

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TABLE 1. EXPENDITURES, 1977 TO 1982
(In millions of US dollars)

	Actual					Estimated
	1977	1978	1979	1980	1981	1982
Technical co-operation programmes	43.9	55.1	70.5	76.3	88.5	92.5
Regular programme	2.2	2.2	3.8	3.5	3.5	4.0
UNDP/IPF and cash counterpart	28.9	38.4	46.4	52.0	64.0	63.0
UNDP/SIS	3.5	3.6	4.7	3.9	1.6	3.5
UNDP/Programme reserve and special measures	1.6	0.4	0.5	1.3	1.5	1.5
United Nations Interim Fund for Science and Technology for Development	—	—	—	—	1.7	3.0
SIS Trust Fund	0.1	0.1	0.1	0.1	0.1	0.1
Trust funds	2.9	3.1	4.2	4.1	4.8	6.4 ^a
UNIDF	4.7	6.5	9.7	10.6	10.4	10.0
Non-UNIDO funds	—	0.8	1.1	0.8	0.9	1.0
Headquarters	29.4	35.9	43.9	47.0	45.2	49.0
Regular budget	24.1	29.6	34.5	36.6	35.9	36.5
Overheads	5.3	7.3	9.4	10.4	9.3	12.5
Total expenditure	73.3	92.0	114.4	123.3	133.7	141.5
Technical co-operation programmes as percentage of total expenditure	59.9%	59.9%	61.6%	61.8%	66.2%	65.4%

^aFigures are tentative only since contributions to trust funds are made on an *ad hoc* basis and cannot be accurately estimated.

TABLE 2. TECHNICAL CO-OPERATION PROGRAMMES: PROJECT BUDGET APPROVALS AND EXPENDITURES, 1972 TO 1982

(In millions of US dollars)

	<i>Actual</i>						<i>Estimated</i>
	<i>1972-1976</i>	<i>1977</i>	<i>1978</i>	<i>1979</i>	<i>1980</i>	<i>1981</i>	<i>1982</i>
A. All sources of funds							
1. Residual value of projects brought forward	38.0	73.4	83.6	112.5	119.3	137.2	137.1
2. Value of project budgets approved in the year (net)	177.2	54.1	84.0	77.3	94.3	88.4	110.5
3. Total of approved projects under implementation	215.2	127.5	167.6	189.8	213.6	225.6	247.6
4. Expenditures in the year	141.8	43.9	55.1	70.5	76.4	88.5	92.5
5. Residual value of approved projects carried forward	73.4	83.6	112.5	119.3	137.2	137.1	155.1
B. Regular programme^a							
1. Residual value of projects brought forward	—	—	—	0.1	—	1.4	—
2. Value of project budgets approved in the year (net)	8.7	2.2	2.3	3.7	4.9	2.1	5.0
3. Total of approved projects under implementation	8.7	2.2	2.3	3.8	4.9	3.5	5.0
4. Expenditures in the year	8.7	2.2	2.2	3.8	3.5	3.5	4.0
5. Residual value of approved projects carried forward	—	—	0.1	—	1.4	—	1.0
C. UNDP/IPF and cash counterpart							
1. Residual value of projects brought forward	29.7	59.8	67.9	87.3	95.0	110.7	106.0
2. Value of project budgets approved in the year (net)	128.8	37.0	57.8	54.1	67.7	59.3	72.5
3. Total of approved projects under implementation	158.5	96.8	125.7	141.4	162.7	170.0	178.5
4. Expenditures in the year	98.7	28.9	38.4	46.4	52.0	64.0	63.0
5. Residual value of approved projects carried forward	59.8	67.9	87.3	95.0	110.7	106.0	115.5

TABLE 2 (continued)

	Actual						Estimated
	1972-1976	1977	1978	1979	1980	1981	1982
D. UNDP/SIS^b							
1. Residual value of projects brought forward	5.4	5.9	6.1	5.6	5.9	3.2	2.8
2. Value of project budgets approved in the year (net)	14.8	3.7	3.1	5.0	1.2	1.2	4.5
3. Total of approved projects under implementation	20.2	9.6	9.2	10.6	7.1	4.4	7.3
4. Expenditures in the year	14.3	3.5	3.6	4.7	3.9	1.6	3.5
5. Residual value of approved projects carried forward	5.9	6.1	5.6	5.9	3.2	2.8	3.8
E. UNDP/Programme reserve and special measures							
1. Residual value of projects brought forward	—	1.7	0.2	0.6	1.1	1.5	0.9
2. Value of project budgets approved in the year (net)	4.8	0.1	0.8	1.0	1.7	0.9	1.5
3. Total of approved projects under implementation	4.8	1.8	1.0	1.6	2.8	2.4	2.4
4. Expenditures in the year	3.1	1.6	0.4	0.5	1.3	1.5	1.5
5. Residual value of approved projects carried forward	1.7	0.2	0.6	1.1	1.5	0.9	0.9
F. United Nations Interim Fund for Science and Technology for Development							
1. Residual value of projects brought forward	—	—	—	—	—	—	4.7
2. Value of project budgets approved in the year (net)	—	—	—	—	—	6.4	4.0
3. Total of approved projects under implementation	—	—	—	—	—	6.4	8.7
4. Expenditures in the year	—	—	—	—	—	1.7	3.0
5. Residual value of approved projects carried forward	—	—	—	—	—	4.7	5.7
G. SIS Trust Fund^c							
1. Residual value of projects brought forward	0.5	0.1	0.1	0.1	0.1	0.1	—
2. Value of project budgets approved in the year (net)	0.9	0.1	0.1	0.1	0.1	—	0.1
3. Total of approved projects under implementation	1.4	0.2	0.2	0.2	0.2	0.1	0.1
4. Expenditures in the year	1.3	0.1	0.1	0.1	0.1	0.1	0.1
5. Residual value of approved projects carried forward	0.1	0.1	0.1	0.1	0.1	—	—

<i>H. Trust funds</i>							
1. Residual value of projects brought forward	—	1.3	3.3	6.6	6.6	6.9	5.9
2. Value of project budgets approved in the year (net)	6.2	4.9	6.4	4.2	4.4	3.8	7.9
3. Total of approved projects under implementation	6.2	6.2	9.7	10.8	11.0	10.7	13.8
4. Expenditures in the year	4.9	2.9	3.1	4.2	4.1	4.8	6.4
5. Residual value of approved projects carried forward	1.3	3.3	6.6	6.6	6.9	5.9	7.4

<i>I. UNIDF^d</i>							
1. Residual value of projects brought forward	2.4	4.6	4.9	11.0	8.6	11.0	15.0
2. Value of project budgets approved in the year (net)	13.0	5.0	12.6	7.3	13.0	14.4	14.0
3. Total of approved projects under implementation	15.4	9.6	17.5	18.3	21.6	25.4	29.0
4. Expenditures in the year	10.8	4.7	6.5	9.7	10.6	10.4	10.0
5. Residual value of approved projects carried forward	4.6	4.9	11.0	8.6	11.0	15.0	19.0

<i>J. Non-UNIDO funds</i>							
1. Residual value of projects brought forward	—	—	1.1	1.2	2.0	2.4	1.8
2. Value of project budgets approved in the year (net)	—	1.1	0.9	1.9	1.3	0.3	1.0
3. Total of approved projects under implementation	—	1.1	2.0	3.1	3.3	2.7	2.8
4. Expenditures in the year	—	—	0.8	1.1	0.9	0.9	1.0
5. Residual value of approved projects carried forward	—	1.1	1.2	2.0	2.4	1.8	1.8

^aExcludes the value of projects approved but not implemented within the year (prior to 1978) or the biennium (after 1977), as appropriate.

^bIncludes SIS Trust Funds prior to 1973.

^cIncluded under UNDP/SIS prior to 1973.

^dIncludes UNIDO General Trust Fund.

TABLE 3A. TECHNICAL CO-OPERATION ACTIVITIES: PROJECTS APPROVED IN 1981, 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)	
Regular programme	136	2 608	19	49	260	5	2 868
UNDP/IPF and cash counterpart	144	38 573	270	507	20 379	40	59 252
UNDP/SIS	71	1 836	26	316	(602)	(2)	1 234
UNDP/Programme reserve and special measures	3	357	119	13	528	41	885
United Nations Interim Fund for Science and Technology for Development	8	6 359	795	—	—	—	6 359
SIS Trust Fund	1	4	4	23	(2)	—	2
Trust funds	31	1 809	58	72	1 964	27	3 773
UNIDF	285	18 718	66	376	(4 360)	(12)	14 358
Non-UNIDO funds	8	334	42	14	5	—	339
TOTAL	687	70 898	103	1 370	18 172	13	89 070

TABLE 3B. TECHNICAL CO-OPERATION ACTIVITIES: VALUE OF PROJECTS AS AT 31 DECEMBER 1981, BY SOURCE OF FUNDS

<i>Source of funds</i>	<i>Number of projects</i>	<i>Total value of projects (\$C '000)</i>	<i>Average value of projects (\$000)</i>
Regular programme	340	7 834	23
UNDP/IPF and cash counterpart	759	347 672	458
UNDP/SIS	414	12 696	31
UNDP/Programme reserve and special measures	21	5 600	267
United Nations Interim Fund for Science and Technology for Development	8	6 359	795
SIS Trust Fund	29	141	5
Trust funds	139	22 537	162
UNIDF	627	48 350	77
Non-UNIDO funds	41	5 700	139
TOTAL	2 378	456 889	192

TABLE 4. EXPENDITURES ON TECHNICAL CO-OPERATION ACTIVITIES IN 1980 AND 1981,
BY SOURCE OF FUNDS AND PROJECT COMPONENT

Source of funds	Project personnel		Subcontracts	Fellowships and training	Equipment	Miscellaneous expenses	Total
	Number of experts' man-months	\$000					
1980—Actual							
Regular programme	195	1 630	189	1 452	37	154	3 462
UNDP/IPF and cash counterpart	4 150	25 622	4 727	4 889	15 926	925	52 089
UNDP/SIS	504	2 603	720	93	410	71	3 897
UNDP/Programme reserve and special measures	85	449	581	170	50	13	1 263
SIS Trust Fund	6	53	6	—	—	4	63
Trust funds	1 199	3 130	919	40	28	19	4 136
UNIDF ^a	225	2 154	2 045	4 559	1 589	244	10 591
Non-UNIDO funds	196	654	122	12	(12)	3	779
TOTAL	6 560	36 295	9 309	11 215	18 028	1 433	76 280
1981—Actual							
Regular programme	209	2 007	153	1 056	147	95	3 458
UNDP/IPF and cash counterpart	4 462	30 185	12 120	4 519	15 945	1 229	63 998
UNDP/SIS	143	989	281	94	187	17	1 568
UNDP/Programme reserve and special measures	96	623	625	176	77	36	1 537
United Nations Interim Fund for Science and Technology for Development	30	273	15	41	1 399	9	1 737
SIS Trust Fund	—	11	—	—	—	—	11
Trust funds	1 342	4 476	166	129	61	15	4 847
UNIDF ^a	306	2 615	2 313	3 831	1 455	177	10 391
Non-UNIDO funds	120	828	—	59	16	2	905
TOTAL	6 708	42 007	15 673	9 905	19 287	1 580	88 452

^aIncludes UNIDO General Trust Fund.

TABLE 5. TECHNICAL CO-OPERATION ACTIVITIES: PROJECT EXPENDITURES, 1977 TO 1982
BY PROGRAMME AND PROGRAMME COMPONENT

(In thousands of US dollars)

Programme/Programme component	Actual					Estimated
	1977	1978	1979	1980	1981	1982
Division of Policy Co-ordination	304	435	1 082	1 233	498	1 000
Division of Industrial Operations						
Programme formulation and direction	780	417	473	538	702	800
Industrial planning	3 605	4 487	4 976	4 013	4 267	4 800
Institutional infrastructure	6 116	7 706	9 752	11 295	12 693	13 500
Factory establishment and management	2 104	2 535	2 695	3 508	4 539	5 200
Training	4 646	4 928	6 721	6 765	6 230	8 200
Feasibility studies	2 022	2 057	2 358	3 525	4 311	5 200
Agro-industries	6 391	7 434	8 485	9 611	8 329	10 000
Metallurgical industries	4 498	8 829	9 053	6 286	8 210	7 600
Engineering industries	5 742	5 823	7 143	10 095	14 322	14 000
Chemical industries	5 859	8 472	15 126	16 522	21 283	19 000
Investment co-operative programme	431	641	1 396	1 609	2 004	2 000
Division for Industrial Studies	1 279	1 344	1 174	1 196	1 013	1 200
Division of Conference Services, Public Information and External Relations	70	—	29	62	17	—
Unspecified	39	59	51	22	34	—
TOTAL	43 886	55 167	70 514	76 280	88 452	92 500

TABLE 6. EXPENDITURE ON TECHNICAL CO-OPERATION ACTIVITIES, BY SOURCE OF FUNDS AND PROGRAMME COMPONENT, 1981
(In thousands of US dollars)

Programme/Programme component	Regular programme	UNDP/IPF and cash counterpart	UNDP/Programme reserve and special measures	SIS	United Nations Interim Fund for Science and Technology	SIS Trust Fund	Trust funds	UNIDF	Non-UNIDO funds	Total
Policy co-ordination										
Programme development and evaluation	10	15	—	—	—	—	—	—	—	25
Negotiations	123	(110)	—	—	—	—	—	58	—	71
Field reports monitoring	—	—	—	—	—	—	40	—	—	40
Least developed countries	12	20	—	—	—	—	—	—	—	32
Economic co-operation among developing countries	265	—	1	—	—	—	—	64	—	330
Subtotal	410	(75)	1	—	—	—	40	122	—	498
Industrial operations										
Investment co-operative programme	74	345	221	—	—	—	125	1 239	—	2 004
Industrial planning	29	3 442	—	82	—	—	302	(1)	413	4 267
Institutional infrastructure	43	11 545	54	41	—	—	785	303	122	12 693
Factory establishment and management	107	3 722	179	171	—	—	121	144	95	4 539
Training	1 150	1 567	—	75	—	—	96	3 342	—	6 230
Feasibility studies	71	3 599	—	79	—	—	472	11	79	4 311
Agro-industries	59	5 263	298	237	—	—	140	2 211	121	8 329
Metallurgical industries	80	6 131	306	294	929	—	50	420	—	8 210
Engineering industries	157	13 292	96	245	—	—	19	513	—	14 322
Chemical industries	358	15 057	379	323	808	8	2 531	1 761	58	21 283
Programme formulation and direction	481	221	—	—	—	—	—	—	—	702
Subtotal	2 609	63 984	1 533	1 547	1 737	8	4 641	9 943	888	86 890

Industrial studies										
Global and conceptual studies	—	—	—	—	—	—	—	40	—	40
Regional and country studies	—	—	—	—	—	—	119	14	—	133
Sectoral studies	—	—	—	2	—	—	—	—	—	2
Development and transfer of technology	(24)	76	3	19	—	3	47	229	8	361
Industrial information	—	—	—	—	—	—	—	31	—	31
Programme formulation and direction	446	—	—	—	—	—	—	—	—	446
Subtotal	422	76	3	21	—	3	166	314	8	1 013
Conference services and public information	17	—	—	—	—	—	—	—	—	17
Unspecified	—	13	—	—	—	—	—	12	9	34
TOTAL	3 458	63 998	1 537	1 568	1 737	11	4 847	10 391	905	88 452

TABLE 7. EXPENDITURES ON TECHNICAL CO-OPERATION ACTIVITIES, BY GEOGRAPHICAL AREA, 1976 TO 1982

(In thousands of US dollars)

Area	Actual			Area	Actual			Estimated
	1976	1977	1978		1979	1980	1981	1982
Africa				Africa				
Country projects	12 809	11 432	15 128	Country projects	14 977	18 504	25 965	
Regional projects	746	783	1 040	Regional projects	1 372	1 469	1 589	
Subtotal	13 555	12 215	16 168	Subtotal	16 349	19 973	27 554	31 400
The Americas				The Americas				
Country projects	6 195	4 764	5 890	Country projects	9 716	8 782	9 435	
Regional projects	484	777	728	Regional projects	445	920	855	
Subtotal	6 679	5 541	6 618	Subtotal	10 161	9 702	10 290	8 000
Arab States^a				Arab States^a				
				Country projects	9 453	9 315	11 207	
				Regional projects	346	405	421	
				Subtotal	9 799	9 720	11 628	11 300
Asia and the Pacific				Asia and the Pacific				
Country projects	9 091	13 555	17 554	Country projects	18 288	22 097	27 168	
Regional projects	335	459	553	Regional projects	1 583	1 131	1 539	
Subtotal	9 426	14 014	18 107	Subtotal	19 871	23 228	28 707	30 700
Europe and Western Asia				Europe				
Country projects	5 672	6 648	8 511	Country projects	6 761	5 804	3 526	
Regional projects	371	325	15	Regional projects	22	16	46	
Subtotal	6 043	6 973	8 526	Subtotal	6 783	5 820	3 572	4 900
Global and interregional projects	4 274	5 143	5 748	Global and interregional projects	7 551	7 837	6 701	6 200
TOTAL	39 977	43 886	55 167	TOTAL	70 514	76 280	88 452	92 500

^aInclude: Listed under Africa prior to 1979—Algeria, Egypt, Libyan Arab Jamahiriya, Morocco, Sudan and Tunisia; Listed under Europe and Western Asia prior to 1979—Bahrain, Democratic Yemen, Iraq, Jordan, Kuwait, Lebanon, Oman, Qatar, Saudi Arabia, Syrian Arab Republic, United Arab Emirates and Yemen.

TABLE 8. TECHNICAL CO-OPERATION ACTIVITIES: PROJECT EXPENDITURE IN 1981
(In thousands of US dollars)

	<i>Africa</i>	<i>The Americas</i>	<i>Arab States</i>	<i>Asia and the Pacific</i>	<i>Europe</i>	<i>Global and interregional</i>	<i>Total</i>
<i>A. By source of funds and geographical area</i>							
Regular programme	869	309	314	477	112	1 377	3 458
UNDP/IPF and cash counterpart	21 694	7 950	7 250	24 040	3 019	45	63 998
UNDP/SIS	558	391	104	176	339	—	1 568
UNDP/Programme reserve and special measures	667	74	(2)	786	—	12	1 537
United Nations Interim Fund for Science and Technology for Development	500	921	—	316	—	—	1 737
SIS Trust Fund	5	—	—	6	—	—	11
Trust funds	469	184	3 573	420	40	161	4 847
UNIDF	2 199	453	389	2 188	55	5 107	10 391
Non-UNIDO funds	593	8	—	298	7	(1)	905
TOTAL	27 554	10 290	11 628	28 707	3 572	6 701	88 452
<i>B. By project component and geographical area</i>							
Project personnel	14 471	6 653	9 074	8 198	1 407	2 204	42 007
Subcontracts	4 284	1 203	739	8 237	722	488	15 673
Fellowships and training	1 746	408	604	2 935	552	3 660	9 905
Equipment	6 349	1 829	1 053	9 019	826	211	19 287
Miscellaneous	704	197	158	318	65	138	1 580
TOTAL	27 554	10 290	11 628	28 707	3 572	6 701	88 452

<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	2 059	—	—	10	2 069
Personnel service	1 722	—	—	388	2 110
General services	1 632	—	—	—	1 632
Programme direction	1 114	—	—	723	1 837
Subtotal	6 527	—	—	1 121	7 648
TOTAL	38 403	2 275	421	4 088	45 187

^aIncludes UNIDO representation in Geneva.

^bIncludes Technical Assistance Recruitment Service in Geneva and New York.

Appendices

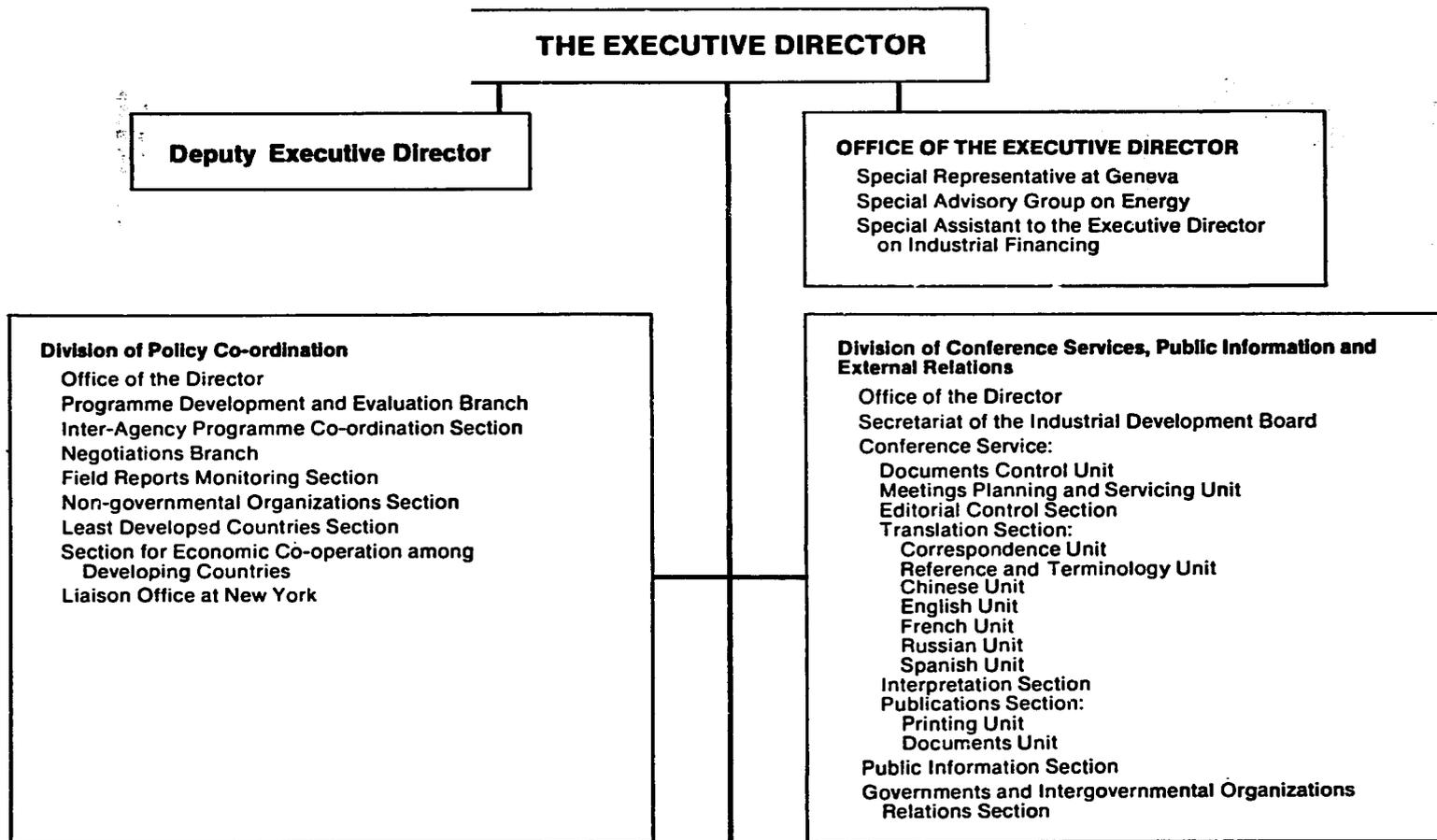
CONTENTS

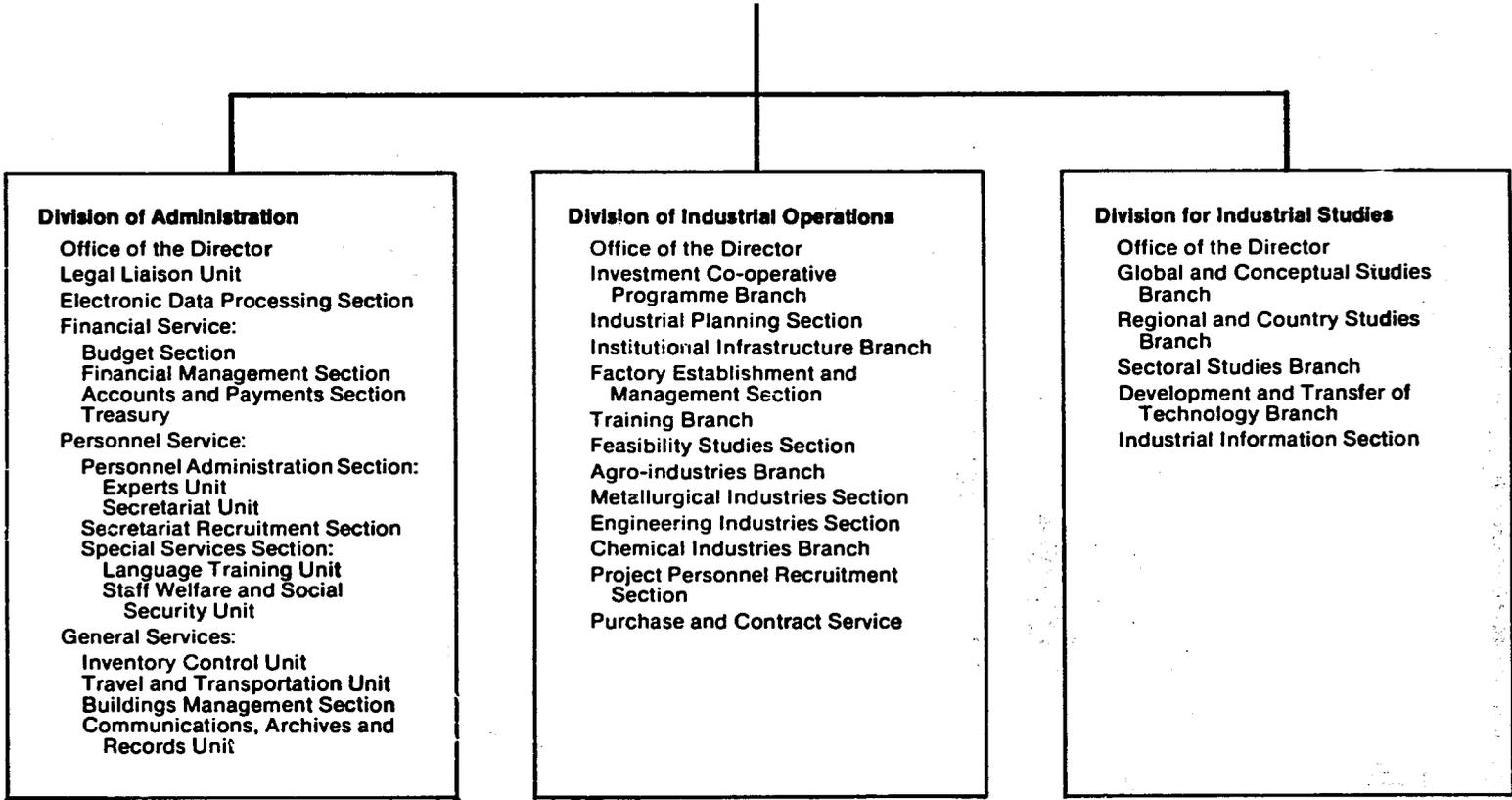
	<i>Page</i>
A. UNIDO organization chart	204
B. Agreements signed in 1981 between UNIDO and other organs within the United Nations system	206
C. List of studies undertaken by the Division for Industrial Studies	209
D. UNIDO investment promotion projects promoted by the Investment Promotion Services in 1981	218
E. World Bank loans related to missions carried out by the World Bank/UNIDO Co-operative Programme or in which the World Bank/UNIDO Co-operative Programme participated	222
F. Geographical distribution of experts	224
G. Distribution of staff in the Professional and higher category	225
H. Expert group meetings, symposia, seminars, workshops, courses and other meetings of a non-training character held during 1981	231
I. Selected list of studies and reports under preparation or completed in 1981	238
J. Printed publications in 1981	239
K. Group training and fellowships in 1981	241
L. Comparison of 1980-1981 regular programme as approved by the Industrial Development Board and as delivered	246
M. UNIDO involvement in country programming	246
N. Distribution of posts of Senior Industrial Development Field Advisers (SIDFAs) and Junior Professional Officers (JPOs) in 1981	248
O. UNIDO technical assistance to the least developed countries, 1 January to 31 December 1981	252
P. United Nations Industrial Development Fund (UNIDF)	258
Q. UNIDO General Trust Fund	263

Previous Page Blank

APPENDIX A
UNIDO organization chart

(As of 20 November 1981)





APPENDIX B

Agreements signed in 1981 between UNIDO and other organs within the United Nations system^a

CONTENTS

	<i>Page</i>
<i>Specialized agencies</i>	
World Health Organization	206
<i>Other United Nations bodies</i>	
United Nations Development Programme	208

UNIDO/WHO STRATEGY PAPER ON THE DEVELOPMENT OF MEDICAL EQUIPMENT AND LABORATORY SERVICES

1. Following the recommendation of a previous UNIDO/WHO meeting in Vienna that a strategy paper should be prepared by both organizations on biomedical equipment and laboratory reagents, representatives of UNIDO and WHO met in Vienna from 21 to 22 February 1980 to formulate such a paper with the aim of implementing their objective "Health for all by the year 2000", and of mobilizing the industrial capacity of developing countries and increasing their self-reliance. Medical equipment and laboratory reagents are essential in the provision of appropriate health care to the population.

It was recognized that the constitutional mandates of both organizations were closely related, and reference was made to the Lima Declaration and Plan of Action on Industrial Development and Co-operation of March 1975, the Declaration of Alma Ata of September 1978, and the United Nations Conference on Science and Technology for Development held in Vienna in August 1979.

^aFor agreements signed before 1981 which are still current, see previous Annual Reports:

	<i>Symbol</i>	<i>Page</i>
<i>Regional commissions</i>		
Economic Commission for Africa	ID/B/180	222
Economic Commission for Europe	ID/B/180	224
Economic Commission for Latin America	ID/B/200	158
Economic Commission for Western Asia	ID/B/200	160
	and ID/B/220	146
Economic and Social Commission for Asia and the Pacific	ID/B/180	228
<i>Other United Nations bodies</i>		
United Nations Environment Programme	ID/B/180	230
United Nations Disaster Relief Co-ordinator	ID/B/220	147
<i>Specialized agencies</i>		
International Labour Organisation	ID/B/180	232
Food and Agriculture Organization of the United Nations	ID/B/180	236
United Nations Educational, Scientific and Cultural Organization	ID/B/240	154
World Health Organization	ID/B/180	251
	and ID/B/240	157
Inter-governmental Maritime Consultative Organization	ID/B/220	150
* * *		
International Trade Centre UNCTAD/GATT	ID/B/180	252

This strategy paper will define closer co-operation between both organizations, as was called for in the Memorandum of Understanding signed by the Director-General of WHO and the Executive Director of UNIDO on 31 August 1976.

2. In this context, WHO would focus on the identification of health needs as well as on the definition of health policies related to the improvement of health services in the development of technical specifications, leading to standardization of equipment and materials and promoting research and training activities. UNIDO would focus on industrial development (local production, training, maintenance and repair) which would provide countries with the appropriate medical equipment and laboratory reagents in order to improve their health services.

3. These activities would be carried out jointly and co-ordinated by a "technical committee", to be established to exchange experience and information and plan the implementation and evaluation of joint activities; this committee would meet at least twice a year.

4. The activities to be considered for joint planning and implementation between the two organizations would start with the development of health technologies, particularly the maintenance and repair as well as the relevant training aspects of radiological, laboratory and surgical equipment. It was also agreed that the above activities between both organizations should be carried out in the context of TCDC whenever possible. At the same time, co-operation between developing and developed countries for the transfer of technology in the areas stated above should be encouraged. The following areas were considered for joint and immediate implementation:

(a) The development and production of standard kits of surgical instruments to be made available to developing countries;

(b) Production of simple basic reagents for essential tests in health laboratories, including those needed for quality control;

(c) Design, production and assembly of appropriate medical equipment, including surgical, laboratory and radiological equipment;

(d) Design and production of cold chain elements for proper storage and transport of biological substances;

(e) Planning and organization of maintenance and repair facilities, as well as training of manpower at national and regional levels;

(f) Design and production of medical aids for the handicapped.

5. In order to develop these activities it is suggested that surveys be carried out to identify the actual needs for reagents and medical equipment at different levels of the health care systems and to evaluate the existing equipment and machinery and the industrial capacity of the countries concerned for their local production.

6. It was clarified that the area of particular competence of UNIDO would be the transfer of technology for the production of medical equipment and laboratory reagents. WHO's specific area of competence would be the development of appropriate technology and identification of needs, particularly in support of primary health care and in the field of health laboratory services, to include quality control of tests, reagents and equipment. Both organizations would engage jointly in the training of manpower to improve their skills in these activities.

7. For the purpose of this common endeavour, the following areas of action appeared particularly important:

(a) *Technical co-operation*: The technical co-operation programmes of each organization should be interrelated and closely co-ordinated; this would call for consultation at policy and technical levels, both with regard to planning and implementation, and wherever appropriate for joint operational activities.

(b) *Co-operation in the field*: Both organizations will ensure that their field staff and field experts, including the UNIDO Senior Industrial Development Field Advisers, the WHO Regional Offices, as well as the WHO Programme Co-ordinators, would be fully aware of the policies and programmes being developed jointly.

(c) *Organization of promotional and informative meetings*: In order to facilitate the implementation of joint projects, promotional and informative consultations and meetings between the interested countries, UNIDO and WHO would be organized.

8. Both organizations will identify a focal point for implementation of the above activities.

9. As stated in paragraph 3.1 of the Memorandum of Understanding between UNIDO and WHO this strategy paper becomes an integral part of the Memorandum of Understanding.

(signed) Dr. Abd-El Rahman Khane
Executive Director
United Nations Industrial
Development Organization

(signed) Dr. Halfdan Mahler
Director-General
World Health Organization

19 January 1981

**MEMORANDUM OF UNDERSTANDING ON THE CO-OPERATIVE
ARRANGEMENT ON INVESTMENT FOLLOW-UP FOR PROJECTS
IN THE INDUSTRIAL SECTOR BETWEEN THE UNITED
NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION AND THE
UNITED NATIONS DEVELOPMENT PROGRAMME**

1. The United Nations Industrial Development Organization (UNIDO) and the United Nations Development Programme (UNDP) have been co-operating over the years on an *ad hoc* basis in stimulating investment follow-up for investment-oriented projects financed under UNDP technical assistance executed by UNIDO. In view of the high priority attached to the development of industry as stipulated in the Lima and New Delhi Declarations and Plans of Action it is expected that more emphasis would be placed on industrial investment projects in the forthcoming Third Country Programming Cycle by host Governments. In order to further improve the linkages between pre-investment and investment as regards UNDP-assisted UNIDO-executed technical assistance projects, UNIDO and UNDP have worked out a co-operative arrangement as described below.

2. UNIDO will update the review of completed UNDP-funded technical assistance projects which have not so far attracted investment and identify those projects which appear to have investment potential, with a view to determining the additional input required in order to make them eligible for possible financing by development and financial institutions, or for foreign participation. UNIDO will also examine the on-going and pipeline technical assistance projects to ensure that those with investment potential comprise the necessary pre-investment components.

3. UNIDO and UNDP will agree on a list of projects, after approval by host Governments, that shall include completed, on-going and new projects executed by UNIDO in the sectors under its mandate. Any change in the list of projects selected for re-orientation under the co-operative arrangement will require the concurrence of all parties concerned.

4. UNIDO will ensure the necessary multidisciplinary and multisectoral approach which is needed to upgrade pre-investment studies in order to make them attractive to sources of funding.

5. Efforts will be made to ensure that potential investors are associated with on-going projects at an early stage. The association of potential investors with new projects at the time they are conceived is extremely important in order to enhance their bankability. Subject to the concurrence of host Governments, and where necessary of local participants, UNIDO and UNDP shall co-operate in the attainment of this objective and will exchange information on investment sources.

6. UNDP and UNIDO will keep each other, as well as host Governments, informed of any expressions of interest on the part of any external potential participants and sources of finance, and shall obtain the agreement of host Governments to all actions aiming to secure specific follow-up investment.

7. (a) Any per diem and travel costs incurred by UNIDO staff or consultants for field missions in connection with the review of on-going technical assistance projects will be charged to project budgets in consultation with Resident Representatives, subject to Governments' approval. This shall also apply to salaries of consultants.

(b) In respect of completed technical assistance projects, salaries of consultants and travel costs and per diem of both UNIDO staff and consultants needed for this undertaking shall be charged, in consultation with the Resident Representative and the Government, to country IPFs

through new project budgets; Governments' approval would be obtained prior to any commitment of input of resources by UNIDO. In those cases where IPF funds are not available for financing the above-mentioned costs, such costs shall be funded by UNDP subject to UNDP's budgetary limitations for such activities and as mutually agreed to by the two organizations.

(c) Funds to meet expenses for new UNDP-assisted investment-oriented technical assistance projects meriting interest from potential external and domestic investors will be provided in the project budget.

8. UNDP and UNIDO will hold periodic meetings to discuss the progress made on the technical assistance projects selected for re-orientation and to identify projects for future work programmes.

9. UNIDO and UNDP shall jointly carry out annual evaluation; the first such evaluation shall be carried out one year after the date of this Co-operative Arrangement. On the basis of such an evaluation, a decision shall be made on any amendment needed as well as on further measures if necessary to strengthen this Co-operative Arrangement.

(signed) Dr. Abd-El Rahman Khane
Executive Director
on behalf of UNIDO

25 May 1981

(signed) Bradford Morse
Administrator
on behalf of UNDP

7 April 1981

APPENDIX C

List of studies undertaken by the Division for Industrial Studies^a

Global and Conceptual Studies

Industrial redeployment and structural adjustment (ongoing)

The purpose of this project is to keep under continuous surveillance the industrial restructuring process and the changing international division of labour, and to examine prospects of, and obstacles to, redeployment.

Output in 1981:

The following studies were completed:

Structural imbalances in developed countries: their implications for industrial development and restructuring (UNIDO/IS.198)

Intra-firm trade and international industrial restructuring (UNIDO/IS.251)

Structural changes in industry (ID/266)

Industrial redeployment in the Latin American context (SP/CL/VII.O/DI No. 5)

Hacia una política de redespiegue industrial en América Latina, a note by UNIDO, September 1981

The following studies were under preparation:

Structural changes in the industry of the CSSR and prospects of international division of labour with the developing countries

Structural changes in manufacturing industries in the European CMEA area

^aThis list of studies prepared by the Division for Industrial Studies is submitted to the Industrial Development Board in accordance with the request put forward by the Advisory Committee on Administrative and Budgetary Questions in document A/31/8, Add.7, para. 14.

Structural changes in Polish industry with reference to the economic co-operation of developing countries

Structural changes in the industry of the USSR and prospects of the division of labour with developing countries

Technical changes innovation policy and third world industrialization strategies

Textile and clothing industry in the international industrial restructuring process

Least developed countries in the international industrial redeployment process

The leather and leather products industry in the Federal Republic of Germany with special reference to the footwear industry

The leather and leather products industry in Sweden with special reference to the footwear industry

The leather and leather products industry in Italy with special reference to leather tanning and footwear production

A series of papers submitted to the Symposium on Industrial Restructuring and Co-operation: the case of country regions, Skellefteå, Sweden, 1-5 June 1981

The implications of offshore processing and other changes in the pattern of world trade for industrialization in developing countries

Export-processing zones and industrialization

Cost: \$261,000 (in 1980-1981)

Analysis of future industrial development (ongoing)^b

This project is concerned with the development of scenarios of world industrialization, using model systems such as the UNIDO World Industry Co-operation Model, the LIDO model, and the UNITAD model. Associated data, methodological and analytical work is carried out.

Output in 1981:

Studies were undertaken of the International Development Strategy for the Third United Nations Development Decade using the UNITAD model, and a large data-base on alternative technology choices for this model was prepared. Computer software for the graphical presentation of the models was developed and a pilot study of a computer package for national modelling was carried out using developing country data.

An input-output data-base was established and preparations for the publication of such data were made. Initial analyses of long-term development strategies for centrally planned economies in Asia were undertaken in co-operation with the Institute for Industrial Economics, Chinese Academy of Social Sciences. Furthermore, a flexible system for generating future alternatives for international trade patterns was established.

The analysis and long-term projection of inter-industry structures: technology characteristics of regional models in the UNITAD project (UNIDO/IS.223)

1980 report on the UNITAD system (UNIDO/IS.224)

The UNITAD model: main methodological features (UNIDO/IS.227)

Report of the Expert Group Meeting to review the UNITAD model (UNIDO/IS.249)

The following studies were under preparation:

A summary of the UNIDO model system

A report on the input-output data-base

Collected input-output tables (sales publication)

Methodologies for the study of international trade patterns

A user's guide to a generalized software package for constructing models of national economies

A study on the application of the package to a developing country

Technology choices for the UNITAD and expanded LIDO models

Cost: \$261,000 (in 1980-1981)

^bCf. World Industry Co-operation Model (ID/B/260, pp. 200-201).

Special global studies

These are special studies of a topical nature on various priority issues and problems arising from the industrialization of developing countries. Priority issues may change from year to year; the focus this year was on energy problems and development strategies for the least developed countries.

Output in 1981:

A strategy of industrial development for the small resource-poor least developed countries

The impact of high energy costs on the industrialization of developing countries

An overview of China's industrial progress since 1949 (UNIDO/IS.258)

A conceptual model for industrial energy demand in developing countries

Investment requirements for developing energy industries (with special reference to the power industry) in developing countries

Cost: \$71,000 (in 1980-1981)

Industry and Development (ongoing)

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 Declaration and Plan of Action.

Output in 1981:

Issue No. 6 was completed for publication in January 1982.

Cost: No consultant costs involved in 1980-1981

Integration of women in development

The Third General Conference of UNIDO, in resolution ID/CONF.4/RES.1, paragraph 10 (a), invited the Executive Director to undertake urgently studies on selected industries such as electronics, food processing, pharmaceutical and textile industries and their impact on women.

Output in 1981:

Effective integration of women in the development of food processing industries: pilot country studies in Thailand and Sierra Leone

Effective integration of women in the development of textile industries: pilot country studies in Colombia, Indonesia and United Republic of Tanzania

Cost: \$18,000 (in 1981)

Monitoring of progress towards accelerating industrialization in developing countries (ongoing)

The third round of the monitoring exercise, carried out pursuant to Industrial Development Board resolution 52 (XIV), paragraph 3 (d), was launched in September 1981 with questionnaires being circulated to Governments and international organizations. The analysis of replies is scheduled to begin in January 1982.

Cost: No consultant costs involved

Regional and Country Studies

Industrial statistics (ongoing)

Output in 1981:

(a) Work on this project continued during the period under review. The existing data-base was maintained and extended with particular emphasis given to ensuring consistency and reliability. Efforts were made to expand collaboration with statistical units in other United Nations bodies.

Cost: \$51,000 (in 1980-1981)

(b) *A statistical review of the world industrial situation 1980 (UNIDO/IS.214)*: The publication was issued in accordance with a request made during the Permanent Committee at its fourteenth session. The next issue of this review, which provides the latest available data on the world industrial situation, will include a special section on the least developed countries.

Cost: No consultant costs involved

(c) *Dynamic changes in comparative advantage*: A statistical analysis of 130 industries in over 40 countries, showing the changes in revealed comparative advantage that took place during the 1970s. The study was completed in October 1981 and will be published in 1982.

Cost: No consultant costs involved

(d) *Handbook of industrial statistics*: Preparations were made for the publication in 1982 of the handbook which will comprise a statistical analysis of important structural trends in 70 developing and developed countries, including changes in the pattern of apparent consumption for specific commodities, long-term patterns of growth in all industrial branches, the changing composition of output in the manufacturing sector and the export performance of key industries.

Cost: No consultant costs involved

(e) *Data-base user's manual*: This guide, which will appear in 1982, will describe methodologies used in making estimations and in adjusting the country data to achieve international comparability. The manual will also contain an inventory, both quantitative and qualitative, of the current status of the data-base.

Cost: No consultant costs involved

Industrial Development Survey (ongoing)

Output in 1981:

(a) The eighth issue of the *Industrial Development Survey: World Industry in 1980 (ID/269)*, was published in September 1981. In documenting the key changes in world industry since the 1960s, extensive data from national and international sources were presented in this publication, the central theme of which was the analysis of processing the restructuring of world industry. Changes in revealed comparative advantage were measured in over 130 specifically defined industries and for a large number of developed and developing countries. Case studies of specific industrial branches (chemicals, iron and steel, engineering goods and food processing) indicated differences in the nature of restructuring, as well as in the implications for investment, product development and trade. Other related subjects included energy requirements in the manufacturing sector and the pattern of energy-induced change in technology processes, as well as the role of the transnational enterprise as an agent for industrial restructuring.

Cost: \$21,000 (in 1980-1981)

(b) A study entitled "The developing countries' prospects for trade in manufactures in the 1980s: export performance and import requirements" (UNIDO/IS.241), provided the methodological background to an analysis of the export performance of the developing countries.

Cost: No consultant costs involved

Country surveys and studies (ongoing)

Output in 1981:

(a) Industrial development profiles or briefs containing analyses or statistical reviews of growth, present status and future prospects of industrialization, designed as a support to operational activities, were completed for: Afghanistan (UNIDO/IS.267), Bahrain (UNIDO/IS.235), Barbados (UNIDO/IS.238), Central African Republic, Chad, Congo (UNIDO/IS.200), Cuba (UNIDO/IS.265), Democratic People's Republic

of Korea, Ghana (UNIDO/IS.255), Haiti (UNIDO/IS.237), Kuwait (UNIDO/IS.247), Liberia (UNIDO/IS.244), Malawi (UNIDO/IS.264), Mongolia, Nepal (UNIDO/IS.220), Niger, Paraguay (UNIDO/IS.240), Rwanda (UNIDO/IS.268), Senegal, Sudan (UNIDO/IS.215), and Upper Volta.

Cost: No consultant costs involved in 1980-1981

(b) In-depth studies of the resources and infrastructural base for industrial development in seven African least developed countries—Botswana, Burundi, Gambia, Lesotho, Mali, Somalia and the United Republic of Tanzania—were prepared in co-operation with national institutions or consultants.

Cost: \$56,500 (in 1980-1981)

(c) A paper, entitled "The poor fall behind: an assessment of industry in the least developed countries" (UNIDO/IS.239), which assessed industrial development in the least developed countries in the 1970s, their prospects for the 1980s and possible remedial actions, was prepared for submission to the United Nations Conference on the Least Developed Countries, Paris, September 1981.

Cost: \$3,000 (in 1981)

(d) A series of studies, comprising four surveys of the domestic financing of manufacturing enterprises in developing countries commenced in 1980, was completed in 1981 (Latin America in UNIDO/IS.252, Africa in UNIDO/IS.256 and India in UNIDO/IS.266).

Cost: \$28,500 (in 1980-1981)

Regional and subregional studies and analyses (ongoing)

Output in 1981:

(a) Studies were conducted on regional co-operation in the field of industry covering the Association of South-East Asian Nations (ASEAN) and the Andean Group of countries, and work continued on analysing the experience of two other groupings of the Kagera River Basin and the Economic Community of the Great Lakes Countries.

Cost: \$71,000 (in 1980-1981)

(b) A study was completed on the Central American integration scheme, with particular emphasis on industrial development.

Cost: \$5,000 (in 1981)

(c) Industrialization in the Arab world, options and strategies for the year 2000, was the theme of a study completed in 1981.

Cost: No consultant costs involved

(d) As part of preparations for the first Regional Consultation on agricultural machinery in Africa, studies of the agricultural machinery industry in 15 African countries, including five least developed countries (Burundi, Ethiopia, Mali, Sudan and the United Republic of Tanzania) were undertaken in co-operation with the Sectoral Studies Branch.

Cost: \$33,000 (in 1980-1981)

Studies related to the Industrial Development Decade for Africa (ongoing)

Output in 1981:

In co-operation with the UNIDO/ECA Joint Industry Division studies were undertaken of the metallurgical, engineering and chemical industries in the African region.

Cost: No consultant costs involved

Role of the public sector (ongoing)

In pursuance of the recommendations of the Expert Group Meeting on the Role of the Public Sector in the Industrialization of the Developing Countries held in 1979, the research programme was intensified in 1981.

The following studies were issued in connection with the Expert Group Meeting on the Changing Role and Function of the Public Industrial Sector in Development, Vienna, October 1981:

- Public industrial enterprises in developing countries—an issue paper (ID/WG.343/1)
- Organizational framework, institutional relationships and management of public industrial enterprises (ID/WG.343/2)
- Conflicting paradigms: the evaluation of public industrial enterprises as agents of national development (ID/WG.343/3)
- The role and function of the public sector in industrial development in the European centrally planned economies (ID/WG.343/5)
- Structural changes in the Austrian public industrial sector (ID/WG.343/6)
- The role of the public sector in the industrialization of African developing countries (ID/WG.343/7)
- A survey of the comparative roles of private and public industrial enterprises—a case study of Pakistan (ID/WG.343/8)
- Bharat Heavy Electricals Limited (BHEL)—a case study (ID/WG.343/9)
- Comparative study of impact of public and private manufacturing sectors in selected developing countries (ID/WG.343/10)
- The public manufacturing enterprise in the developed market economies (ID/WG.343/11)
- Public enterprise and industrialization in ESCAP countries (ID/WG.343/12)
- Changing role and function of the public industrial sector in developing countries—a comparative survey (ID/WG.343/13). This study was partly based upon information collected through questionnaire surveys undertaken in 15 developing countries.

Cost: \$54,000 (in 1980-1981)

Sectoral Studies

Industrial branch studies (ongoing)

The studies are designed to contribute to the formulation of viable development policies in various industrial sectors in developing countries, to the identification of ways and means for promoting international co-operation, and to the orientation of UNIDO technical assistance programmes.

<i>Output:</i>	<i>Funds obligated (in \$US)</i>	
	<i>1980</i>	<i>1981</i>
<i>(a) Completed in 1980</i>		
First draft of the world-wide study on the capital goods industry	120 000	—
Assessment of the pharmaceutical industry, 1978-2000 (UNIDO/ICIS.146)	24 000	—
Picture for 1985 of the world iron and steel industry (contribution to the preparation of 1990 scenarios) (UNIDO/ICIS.161)	81 000	—
Supplement to the second world-wide study on the fertilizer industry: 1975-2000 (UNIDO/ICIS.81/Add.1)	15 500	—
<i>(b) Completed in 1981</i>		
1990 scenarios for the iron and steel industry: Part I, "The Dossiers" (UNIDO/IS.213) and Part II, "Proposals for the scenarios" (UNIDO/IS.213/Add.1)	—	46 000
Second world-wide study on the petrochemical industry: process of restructuring (ID/WG.336/3 and Add.1)	15 000	—

	<i>Funds obligated (in \$US)</i>	
	<i>1980</i>	<i>1981</i>
Comprehensive study on agricultural machinery in Africa	15 000	—
First global study on the food-processing industry (ID/WG.345/3/Rev.1)	50 000	32 000
First global study on the capital goods industry: strategies for development (ID/WG.342/3)	—	65 000
Studies on industrial energy as inputs to world-wide studies	—	12 000
<i>(c) Under preparation in 1981</i>		
Studies related to the fertilizer industry	—	9 500
Third world-wide study on the iron and steel industry	—	5 000
Studies related to the leather and leather products industry	—	5 000
Second world-wide study on the vegetable oils and fats industry	12 000	—
Studies related to the petrochemical industry	—	45 000
Studies related to the agricultural machinery industry	—	33 000
Second world-wide study on the pharmaceutical industry	—	14 000
Studies related to the capital goods industry	—	—
Studies on industrial energy as inputs to the world-wide studies	—	—
Intersectoral industrial typology and strategies	—	—
First world-wide study on the wood and wood products industry	—	—
TOTAL	332 500	266 500
<i>Cost: \$599,000 (in 1980-1981)</i>		

Other Studies

A study on water use and treatment practices and other environmental considerations in the iron and steel industry (UNIDO/IS.263)

Cost: No consultant costs involved

Development and Transfer of Technology

Output in 1981:

Technology exports from developing countries—the cases of Argentina and Portugal (UNIDO/IS.218) (completed)

Cost: \$15,000 (in 1980-1981)

Mini-hydro-power stations—a manual for decision-makers (UNIDO/IS.225) (completed)

The study was distributed for use by Governments in developing countries.

Cost: \$48,000 (in 1980-1981)

Optimization of technologies for the pyrolysis and gasification of agriculture wastes in selected African countries (completed)

The report serves as the basis for preparing a specific project in Africa.

Cost: \$5,000 (in 1980-1981)

Industrial technology in Africa—a preliminary view (UNIDO/IS.222) (completed)

The study aims at assisting the African countries in adopting measures in the field of industrial technology to achieve the goals of the Industrial Development Decade for Africa.

Cost: \$7,000 (in 1980-1981)

Technical co-operation agreement on Hi-Fi record player, cassette mechanism, miniature motor (UNIDO/IS.206) (completed)

Licensing agreement on cans (UNIDO/IS.207) (completed)

Know-how agreement on tiles (UNIDO/IS.208) (completed)

Licensing agreement on air compressors (UNIDO/IS.209) (completed)

Licensing agreement on reagents for medical and laboratory use (UNIDO/IS.210) (completed)

Licensing agreement on high-voltage disconnectors (UNIDO/IS.211) (completed)

Technical co-operation agreement on pneumatic rock drills (UNIDO/IS.212) (completed)

The above studies are examples of licence agreements and serve as reference material for workshops on technology acquisition for developing countries.

Cost: \$5,000 (in 1980-1981)

Technology transfer in the pharmaceutical industry in the Andean region—a case study (completed)

The study was presented to the TIES VI Meeting, Manila, Philippines.

Cost: \$15,000 (in 1980-1981)

Service agreements in the Republic of Korea—a case study (completed)

Cost: \$1,000 (in 1980-1981)

Directory of industrial information services and systems in developing countries (UNIDO/IS.205) (completed)

Report was made for INTIB Networking Purpose to identify information systems and services.

Cost: \$8,125 (in 1980-1981)

Implications of micro-electronics for developing countries—a preliminary overview of issues (UNIDO/IS.246) (completed)

The report will be distributed to Governments and be used for UNIDO activities in assisting developing countries in the field of micro-electronics.

Cost: No consultant costs involved

The establishment of an international centre for genetic engineering and bio-technology (ICGEB) (UNIDO/IS.254) (completed)

This report of a group of experts was prepared after visits to 15 developed and developing countries and a meeting in Vienna. It contains proposals for setting up an international centre to be distributed to Governments as a background paper for further discussion on the establishment and financing of the centre.

Cost: \$86,000

Technologies for investigation and exploitation of seabed resources: the potential for developing countries (UNIDO/IS.257) (completed)

The report will serve as a basis for developing further action needed in this area. It will also be distributed to Governments.

Cost: \$15,000

Genetic engineering: the technology and its implications (UNIDO/IS.260) (completed)

The study describes the state-of-the-art of genetic engineering, in particular, the advances in laboratory techniques; its potential application in industry, agriculture and public house; and the risk of genetic engineering in its various applications.

Cost: \$15,000 (in 1980-1981)

The potential impact of microbiology on developing countries (UNIDO/IS.261) (completed)

The study defines issues of interested developing countries in the field of microbiology with a view to establishing an international centre for genetic engineering.

Cost: \$17,000 (in 1980-1981)

Survey on technology exports from Yugoslavia (ongoing)

The purpose of this study is (a) to survey the present volume, structure and pattern of technology exports from developing countries; (b) to investigate incentives (if any) and circumstances leading to substantial exports in selected developing countries; and (c) to provide inputs into INTIB and the *Development and Transfer of Technology* series, in the form of technology offers from developing countries.

Cost: \$5,500 (in 1980-1981)

Small-scale bio-energy technologies for rural industrial energy needs in developing countries (ongoing)

This study will serve as a basis for the preparation of R+D projects aimed at strengthening programmes initiated by industrial research institutions dealing with energy-related technologies in developing countries.

Cost: \$5,000 (in 1980-1981)

How to start manufacturing industries—technological and investment perspectives (ongoing)

This series of profiles covering a modest range of small- and medium-sized manufacturing units is being undertaken by the Technology Programme and the Investment Co-operative Programme Branch, in close co-operation with other organizations. The activities are designed to provide to project promoters and sponsors in developing countries, at their request, back-up information regarding prospective parties who can provide supplemental resources required for the development of industrial projects, including production know-how, machinery and equipment, marketing, management, preparation of project studies and the like. The series will be distributed for use by Governments and research institutions in developing countries.

Guidelines for establishing television receiver assembly plants (ongoing)

The guidelines are prepared for distribution to Governments in developing countries.

Cost: \$1,500 (in 1980-1981)

Technological perspectives in machine tool industry in the next decade and their implications for developing countries (ongoing)

The report describes the state-of-the-art in the machine tool industry and was distributed for use by Governments in developing countries. It also serves as a basis for UNIDO activities in assisting developing countries in this particular branch of industry and was used as an input to the Consultation on the Capital Goods Industry and the meeting on micro-electronics.

Cost: \$15,000 (in 1980-1981)

APPENDIX D

UNIDO investment promotion projects promoted by the Investment Promotion Services in 1981

Project title	Location	Country of foreign collaboration	Investment cost of project (in millions of US dollars)			Percentage of foreign participation in equity
			Total	Foreign	Local	
Assembly of light trucks	Ivory Coast	Netherlands	13.8			60
Fish processing	Senegal	United Kingdom	5.6	3.6	2.0	—
Glass containers for pharmaceuticals	Egypt	Belgium and other European countries	46.0	36.0	10.0	10-20
Coffee plant	Burundi	Belgium	30.0	27.0	3.0	15
Solid tyre and rubber master batch	Sri Lanka	France and Belgium	3.5	3.0	0.5	60
Extracting and processing of limestone	Senegal	Belgium	4.4	1.76	2.64	40
Quiquina processing	Rwanda	France	5.0	3.8	1.2	51
Brewery and carbonated drinks	Rwanda	Belgium	18.5	15.0	3.5	49
Animal feed mill	Nigeria	Belgium	1.75	1.4	0.35	40
Shea nut	Mali	Belgium, France and Germany, Federal Republic of	7.5			48
Ammonia-urea	Madagascar	Belgium	150.0	104.0	46.0	35
Asbestos cement pipes and roof sheets	Kenya	Belgium	1.2	0.96	0.24	Over 50
Fertilizer mixing plant	Kenya	Netherlands	2.5	1.7	0.8	10
Shipbuilding (small boats)	Indonesia	Netherlands	30.0	25.0	5.0	Nominal
Power distribution transformers	Ecuador	Belgium	4.5	2.8	1.7	Over 50
Underwear knitting	Ivory Coast	Belgium	0.75	0.71	0.04	Over 50
Electric transformers	Ivory Coast	France	1.5	1.2	0.3	Over 50
Steel reinforced concrete pipes	Egypt	France and Netherlands	5.5	3.2	2.3	Not clear
Lead and silver smelting plant	Bolivia	Belgium	170.0	113.0	57.0	Not given

Sugar complex	Benin	Belgium	200.0	194.0	6.0	49
Leather tanning and shoe factory	Bangladesh	Belgium	7.2	4.6	2.6	51
Ceylon synthetic textile mill	Sri Lanka	Belgium and Netherlands	8.0	5.3	2.7	15
Zinc refinery	Thailand	Belgium	104.0	40.0	64.0	37
Non-ferrous tubular casing	Thailand	Belgium	4.0	2.0	2.0	—
Brake and clutch lining	Swaziland	Germany, Federal Republic of	4.8	3.8	1.0	5-35
Toothpaste manufacturing	United Republic of Tanzania	Germany, Federal Republic of	2.8	1.9	0.9	51
Construction of engines and trucks	Tunisia	Germany, Federal Republic of	19.0	15.8	3.2	25
Production of dumpers	Pakistan	Germany, Federal Republic of	5.1	4.6	0.5	—
Farm implement production	Pakistan	Germany, Federal Republic of	3.5	2.8	0.7	—
Tyre retreading	Oman	Germany, Federal Republic of	1.9	0.25	1.65	15
Polyurethane foam products	Nigeria	Germany, Federal Republic of	0.5	0.4	0.1	60
Brewery and soft drink production	Nigeria	Germany, Federal Republic of	6.0	4.2	1.8	40
Colour TV sets	Nigeria	Germany, Federal Republic of	6.0	3.8	2.2	40
Fish processing	Mauritania	Germany, Federal Republic of	69.0	66.0	3.0	—
Tourist project (hotel complex) ^a	Malta	Germany, Federal Republic of	20.0	3.0	17.0	17
Tyre retreading and rubber	Malaysia	Germany, Federal Republic of	2.3	1.2	1.1	51
Production of sanitary ware	Ivory Coast	Germany, Federal Republic of	8.0	7.7	0.3	25
Charcoal	Ghana	Germany, Federal Republic of	2.8	1.6	1.2	20
Plastic articles	Brazil	Germany, Federal Republic of	2.2	1.9	0.3	—
Charcoal	Benin	Germany, Federal Republic of	2.3	2.1	0.2	—
Toothpaste and brushes	Argentina	Germany, Federal Republic of	20.0	16.0	4.0	100
Chicken farm complex	Nigeria	Germany, Federal Republic of	45.0	36.0	9.0	—
Diesel engines, tractors, agricultural equipment	Nigeria	Germany, Federal Republic of	22.0	17.6	4.4	25
Poultry (agro-industry)	Libyan Arab Jamahiriya	Germany, Federal Republic of	120.0	—	—	—
Manufacture of rubber components	Sri Lanka	Germany, Federal Republic of	2.5	2.0	0.5	51
Ceramics	Guinea	Germany, Federal Republic of	7.5	5.25	2.25	20
Oil recycling plant	Ajman (United Arab Emirates)	Germany, Federal Republic of	3.5	2.8	0.7	25
Vaccine production	Iraq	Germany, Federal Republic of	4.6	—	4.6	—
Tourist project No. 2 ^a	Malta	Germany, Federal Republic of	25.0	3.0	22.0	15
Xerox Maroc S.A.	Morocco	United States of America	4.0	—	—	49
Seaweed harvesting	Morocco	United States of America	0.8	—	—	15
Cable TV components assembly	Philippines ^b	United States of America	2.0	—	—	—
Electronics assembly	Philippines ^b	United States of America	0.3	—	—	100

Project title	Location	Country of foreign collaboration	Investment cost of project (in millions of US dollars)			Percentage of foreign participation in equity
			Total	Foreign	Local	
Trawler building	Sri Lanka	United States of America	1.3			100
Sea-food processing	Sri Lanka	United States of America	1.5			
Semi-conductor plant	Sri Lanka ^b	United States of America	23.0	23.0	—	100
Food processing plant	Sri Lanka	United States of America	2.0			
Gem cutting	Sri Lanka ^b	United States of America	0.3	0.3	—	100
Sportswear	Sri Lanka ^b	United States of America	0.3	0.3	—	100
Garment production	Sri Lanka ^b	United States of America	0.2	0.2	—	100
Garment production	Sri Lanka ^b	United States of America	0.4	0.4	—	100
Ready-made garments	Sri Lanka ^b	United States of America	0.4	0.4	—	100
C.I.T.C. industries	Sri Lanka ^b	United States of America	6.3	6.3	—	100
Tomato growing project (agro-industry)	Egypt	United States of America	16.0			
Biscuit factory	Morocco	United States of America	1.2			
Electronic components	Sri Lanka	United States of America	25.0	25.0	—	100
Chemical industry	Mexico	United States of America	3.0	1.5	1.5	50
Frozen food processing	Egypt	United States of America	1.75	0.44	1.31	35
Peanut flakes	India	United States of America	2.5			?
Peanut flakes	Nigeria	United States of America	2.0	0.7	1.3	49
Peanut flakes	Argentina	United States of America	1.8			45
Battery manufacturing	Nigeria	United States of America	5.0	2.5	2.5	35
Vener wafer board	Indonesia	United States of America	27.6	20.7	6.9	45
Agro-industry (potato)	Argentina	United States of America	55.0	22.0	33.0	70
Battery manufacturing	Chile	United States of America	1.6			?
Battery manufacturing	Argentina	United States of America	1.6			?
Battery manufacturing	Malaysia	United States of America	1.6			?
Polyester plant	Pakistan	United States of America	88.0	70.4	17.6	25
Food processing	Nigeria	United States of America	52.0	32.75	19.25	35
Pharmaceutical	Nigeria	United States of America	1.5	1.27	0.23	35
Agro business	Ghana	United States of America	15.0	7.2	7.8	15
Meat and meat products	Turkey	Austria	11.4	2.85	8.55	Minority
Electronic assembly	Mauritius	Austria	Information closely guarded			100
Particle board	Guyana	Austria	8.5	6.25	2.25	12
Book and commercial printing	Nigeria	Austria	0.7	0.7	—	25

Meat processing	Egypt	Austria	20.6			40
Edible flowers	Haiti	Austria	0.03	0.03	—	100
Cassava chips and pellets	Kenya	Switzerland	1.0	0.7	0.3	—
Concrete pumps and sprayers	Ecuador	Switzerland	0.3	0.2	0.1	40
Retreading plant	Togo	Switzerland	0.6	0.4	0.2	25
Industrial foundry	Colombia	Switzerland	8.5	4.9	3.6	—
Mini sugar plant	Sri Lanka	Switzerland	1.0	0.7	0.3	Pay-back agreement
Caustic soda	Colombia	Switzerland	Contribution to project			
Repair shop	Morocco	Switzerland	2.5	2.0	0.5	—
Dry-cell batteries	Mano River Union	Switzerland	2.9	2.1	0.8	30
Tea packaging	Sri Lanka	Switzerland	7.0	5.0	2.0	60
Music movement	Sri Lanka	Switzerland	1.5	1.2	0.3	75
Glass bottles	Burundi	Switzerland	31.54	17.06	14.48	30
Fodder mill	Ghana	Switzerland	0.6	0.5	0.1	10
Forging plant	Malaysia	Norway	2.3	1.5	0.8	15
Fishing fleet	Colombia	Norway				Co-operation in kind

^aThis project, although promoted by Cologne IPS, is not considered an industrial project.

^bFree zone.

APPENDIX E

**World Bank loans related to missions carried out by the World Bank/UNIDO
Co-operative Programme or in which the World Bank/UNIDO Co-operative
Programme participated**

<i>Country</i>	<i>Amount of loan (in millions of US dollars)</i>	<i>Financial year of approval</i>	<i>Type of loan</i>	<i>Date of mission(s)</i>	<i>Inputs provided</i>
Algeria	40.0	1975	Algerian Development Bank loan for construction materials project	Nov. 1973	Identification of industrial sub- sectors for investment
	46.0	1976	Saida Cement Plant	Nov./Dec. 1974 Apr./May 1975 June/July 1975	Technical and economic inputs to appraisal mission
Bangladesh	7.0	1978	Small-scale industries	Dec. 1975-Jan. 1976	Technical inputs in the tanning industry
	75.0	1979	Non-project aid	Mar./Apr. 1978	Review of metalworking industry
Brazil	85.0	1976	Development finance companies (DFC) loan for small-scale industry	Nov./Dec. 1974	Project identification and credit processing appraisal
Colombia	5.5	1975	DFC loan for small-scale industry	Dec. 1973-Feb. 1974	Review of small-scale industry subsector
	15.0	1975	DFC loan for small-scale industry	Oct. 1976	Appraisal of small-scale industry and preparation of technical co-operation programme
	150.0	1980	DFC loan	Three missions in 1979	Review of export policies, survey of agro-industrial firms and review of a free zone
Ecuador	20.0	1981	DFC loan for small-scale industry	Nov./Dec. 1980	Preparation of a technical co-operation component
Egypt	40.0	1975	Tourah Cement Company	June/Aug. 1974	Review of market and technical inputs
	35.0	1975	Non-project loan	June/July 1974	Review of engineering subsector and statistical analyses
	70.0	1977	Non-project loan	Sep./Oct. 1975	Review of three subsectors

Ghana	10.0	1976	DFC loan	Oct./Nov. 1973	Review of four subsectors
Greece	35.0	1977	Agro-industry	July 1976	Identification of agro-industrial components
Indonesia	15.0	1977	DFC loan	Mar./Apr. 1975	Economic review
Ivory Coast	8.0	1976	DFC loan	Oct./Nov. 1973	Industrial sector review
	5.6	1976	DFC loan	Oct./Nov. 1973	Industrial sector review
Kenya	10.0	1978	DFC loan	Mar./Apr. 1976	Review of institutional, managerial and technical aspects
Mexico	100.0	1978	DFC loan	Oct./Nov. 1976	Coverage of capital goods sector
Morocco	45.0	1977	Cement plant	Aug. 1974	Technical expertise
Nigeria	60.0	1978	DFC loan	May/June 1975	Review of government policies, procedures and incentives
Pakistan	30.0	1981	DFC loan	Apr. 1978	Identification and review of small-scale industry
				Mar. 1979	
Peru	60.0	1981	DFC loan	Mar./Apr. 1980	Analysis of financial sector
Republic of Korea	60.0	1975	DFC loan	Oct./Nov. 1974	Review of engineering industry subsector
	80.0	1977	Hyundai heavy machinery	Mar./Apr. 1975	Technical expertise
Romania	38.0	1977	Brasov Bearings Factory	Mar./Apr. 1975	Technical inputs in project preparation
Senegal	3.0	1974	DFC loan	Oct./Nov. 1973	Industrial sector review
Turkey	21.5	1976	Agricultural Bank of Turkey loan	Apr./May 1975	Technical inputs in agro-industry and review of the BanL
	40.0	1981	DFC loan	Nov./Dec. 1979	Review of the financial situation of the DFC
Uruguay	30.0	1981	DFC loan	Nov./Dec. 1979	Review of light industries and engineering industry sector
Yemen	2.3	1974	Industrial development estate	1973	Review of location and physical requirements of an industrial development estate
Yugoslavia	18.5	1974	IMT tractor factory expansion	1973	Technical inputs
Zaire	18.5	1980	DFC loan	Sep./Oct. 1978	Technical inputs in the wood-processing subsector
Zambia	15.0	1981	DFC loan	Dec. 1979-Jan. 1980	Survey of small-scale industry
TOTAL	1 293.9				

APPENDIX F

Geographical distribution of experts

(Listed in descending order)

TABLE 1. 1 JANUARY-31 DECEMBER 1981

<i>Country</i>	<i>Number of appointments</i>	<i>Country</i>	<i>Number of appointments</i>
United Kingdom	116	Australia	7
Poland	88	Norway	7
France	69	Philippines	7
United States of America	69	Bulgaria	6
India	62	Bolivia	5
Germany, Federal Republic of	52	New Zealand	5
Belgium	38	Pakistan	4
Austria	33	Portugal	4
Italy	32	Sudan	4
Hungary	28	Senegal	3
Yugoslavia	26	Turkey	3
Egypt	22	China	2
Argentina	21	German Democratic Republic	2
Sweden	21	Greece	2
Spain	19	Mexico	2
Chile	17	Togo	2
Finland	15	Uruguay	2
Netherlands	15	Algeria	1
Japan	13	Burma	1
USSR	13	Colombia	1
Denmark	12	Haiti	1
Israel	11	Jamaica	1
Brazil	10	Mali	1
Canada	10	Malta	1
Ireland	10	Nepal	1
Switzerland	10	Nicaragua	1
Czechoslovakia	9	Republic of Korea	1
Sri Lanka	9	Venezuela	1
Peru	8	Zaire	1
Romania	8	Zimbabwe	1
		TOTAL	946

TABLE 2. 1971-1981

<i>Country</i>	<i>Number of appointments</i>	<i>Country</i>	<i>Number of appointments</i>
United Kingdom	1 059	Denmark	175
United States of America	694	Argentina	156
France	583	Hungary	153
India	554	Spain	125
Germany, Federal Republic of	444	USSR	117
Poland	360	Canada	115
Sweden	277	Switzerland	112
Belgium	276	Finland	105
Austria	245	Chile	95
Egypt	233	Norway	90
Italy	215	Romania	84
Yugoslavia	200	Japan	82
Netherlands	183	Israel	73

Country	Number of appointments	Country	Number of appointments
Australia	71	Jamaica	6
Czechoslovakia	62	Mauritius	6
Ireland	49	Iran	5
Pakistan	47	Bangladesh	3
Sri Lanka	47	Lebanon	3
Brazil	41	Malaysia	3
New Zealand	38	Benin	2
Philippines	34	Burma	2
Peru	31	Byelorussian SSR	2
Mexico	25	Cuba	2
Bulgaria	23	Guatemala	2
Syrian Arab Republic	19	Indonesia	2
Turkey	17	Jordan	2
Colombia	14	Malta	2
Uruguay	14	Paraguay	2
Tunisia	13	Togo	2
Portugal	12	Viet Nam	2
Stateless	12	Algeria	1
Mali	11	Barbados	1
Bolivia	10	Costa Rica	1
Ecuador	9	Ethiopia	1
German Democratic Republic	9	Ghana	1
Greece	9	Guyana	1
Iraq	9	Madagascar	1
Republic of Korea	9	Nepal	1
China	8	Nicaragua	1
Senegal	8	Niger	1
Haiti	7	Thailand	1
Sudan	7	Zaire	1
Venezuela	7	Zimbabwe	1
El Salvador	6		
		TOTAL	7 544

APPENDIX G

Distribution of staff in the Professional and higher category

TABLE I. 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 1981)

Region/country	Occupied posts subject to geographical distribution	Number	Occupied posts not subject to geographical distribution ^a	Number	Total
Africa					
Algeria	1 USG, 1 D-1	2	—	—	2
Angola	1 P-2	1	—	—	1
Benin	1 P-4	1	—	—	1
Burundi	1 P-4	1	—	—	1
Congo	1 D-2	1	—	—	1
Egypt	1 D-1, 1 P-5, 1 P-3	3	1 L-5, 1 L-4	2	5
Ethiopia	1 D-1, 1 P-4	2	—	—	2
Ghana	1 P-3	1	—	—	1
Guinea	1 P-4, 1 P-3	2	—	—	2
Kenya	1 P-5	1	—	—	1

TABLE 1 (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>Africa (continued)</i>					
Lesotho	1 P-2	1	—	—	1
Liberia	1 P-2	1	—	—	1
Libyan Arab Jamahiriya	2 P-4	2	—	—	2
Madagascar	1 P-4, 2 P-3	3	—	—	3
Mali	1 P-5	1	—	—	1
Mauritania	1 P-5	1	—	—	1
Morocco	1 P-5, 1 P-4	2	—	—	2
Niger	1 P-2	1	—	—	1
Nigeria	1 P-5	1	—	—	1
Rwanda	1 P-2	1	—	—	1
Somalia	1 P-4, 1 P-3	2	—	—	2
Sudan	1 D-1, 1 P-5	2	—	—	2
Togo	1 P-4	1	—	—	1
Tunisia	1 P-5	1	—	—	1
Uganda	1 P-4	1	—	—	1
United Republic of Cameroon	2 P-4, 1 P-3	3	—	—	3
Upper Volta	1 P-2	1	—	—	1
Zaire	1 P-3	1	—	—	1
Zambia	1 P-1	1	—	—	1
	TOTAL	42		2	44
<i>Asia and the Pacific</i>					
Australia	2 P-5, 3 P-3	5	—	—	5
Bangladesh	1 P-4	1	—	—	1
Burma	2 P-4	2	—	—	2
China	1 D-1, 2 P-5, 1 P-3	4	4 P-4 ^b	4	8
India	1 D-2, 1 D-1, 1 P-5, 2 P-4, 1 P-1	6	1 L-7, 2 L-6, 2 L-5	5	11
Japan	1 D-1, 1 P-5, 6 P-4, 2 P-2, 1 P-1	11	—	—	11
Malaysia	1 P-3	1	1 P-3	1	2
Nepal	1 P-4	1	—	—	1
New Zealand	1 P-2	1	—	—	1
Pakistan	1 D-2	1	1 L-5	1	2
Philippines	1 P-5, 1 P-3	2	—	—	2
Sri Lanka	—	—	1 L-7, 2 L-5	3	3
	TOTAL	35		14	49
<i>Eastern Europe</i>					
Bulgaria	2 P-4, 1 P-3	3	—	—	3
Byelorussian SSR	1 P-3	1	—	—	1
Czechoslovakia	1 P-5	1	—	—	1
German Democratic Republic	1 P-5	1	—	—	1
Hungary	3 P-5, 1 P-4, 1 P-3	5	1 L-6	1	6
Poland	2 P-5, 2 P-4, 2 P-3	6	1 L-6, 1 L-5	2	8
Romania	1 P-4	1	—	—	1
Ukrainian SSR	1 P-4	1	—	—	1
USSR	1 D-2, 2 D-1, 2 P-5, 13 P-4, 10 P-3, 1 P-2	29	3 P-4, 4 P-3	7	36
Yugoslavia	2 P-5, 1 P-3, 1 P-2	4	—	—	4
	TOTAL	52		10	62

<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>Europe (Western)</i>					
Austria	2 D-1, 1 P-5, 6 P-4, 4 P-3, 8 P-2	21	3 P-3	3	24
Belgium	2 P-4, 2 P-3, 1 P-2	5	1 P-4	1	6
Denmark	4 P-4	4	—	—	4
Finland	1 P-5, 1 P-4, 2 P-3	4	—	—	4
France	1 ASG, 3 P-5, 2 P-4, 3 P-3, 1 P-2	10	3 P-4, 6 P-3, 1 P-2	10	20
Germany, Federal Republic of	1 D-2, 1 D-1, 7 P-5, 6 P-4, 5 P-3, 2 P-2	22	—	—	22
Greece	2 P-3, 1 P-1	3	—	—	3
Ireland	1 D-1, 1 P-4, 1 P-3, 1 P-2, 1 FS-6	5	1 P-4	1	6
Italy	1 D-1, 2 P-5, 3 P-4, 1 P-3, 3 P-2, 1 P-1	11	—	—	11
Malta	1 P-4	1	—	—	1
Netherlands	1 P-5, 1 P-4, 2 P-3, 1 P-2	5	—	—	5
Norway	1 D-1, 1 P-5, 1 P-3	3	—	—	3
Portugal	1 P-5, 2 P-4, 1 P-3	4	—	—	4
Spain	1 P-5, 1 P-3	2	1 P-5, 5 P-3	6	8
Sweden	2 P-5, 5 P-4	7	2 L-5	2	9
United Kingdom	1 D-2, 1 D-1, 1 P-5, 3 P-4, 1 P-3, 2 P-1 ^d	9	3 P-4, 2 P-3, 2 P-2	7	16
	TOTAL	116		30	146

Latin America

Argentina	1 P-5, 2 P-3	3	1 P-4, 1 P-2	2	5
Bolivia	1 P-5	1	1 P-5	1	2
Brazil	2 P-5, 2 P-2	4	1 L-7	1	5
Chile	1 P-5	1	—	—	1
Colombia	1 P-3	1	1 P-3, 1 P-2	2	3
Costa Rica	2 P-3	2	—	—	2
Cuba	2 P-3, 1 P-2	3	—	—	3
Ecuador	1 P-5, 1 P-3	2	1 P-4	1	3
El Salvador	2 P-5, 1 P-3	3	—	—	3
Guatemala	1 P-3	1	—	—	1
Mexico	1 D-1, 1 P-4	2	—	—	2
Panama	1 P-3	1	—	—	1
Peru	1 P-3	1	—	—	1
	TOTAL	25		7	32

Middle East

Afghanistan	1 P-4	1	—	—	1
Cyprus	1 P-3	1	—	—	1
Iran	1 D-1, 2 P-5, 1 P-4	4	—	—	4
Iraq	1 P-5, 1 P-4, 1 P-3	3	—	—	3
Jordan	1 P-5	1	—	—	1
Lebanon	2 P-5	2	—	—	2
Syrian Arab Republic	2 P-4	2	—	—	2
Turkey	1 P-5, 4 P-3	5	—	—	5
Yemen	1 P-5	1	—	—	1
	TOTAL	20		—	20

TABLE 1 (continued)

Region/country	Occupied posts subject to geographical distribution	Number	Occupied posts not subject to geographical distribution ^a	Number	Total
<i>North America and the Caribbean</i>					
Barbados	1 P-2	1	—	—	1
Canada	2 P-5, 4 P-4, 3 P-3, 4 P-2	13	1 L-6	1	14
Grenada	1 P-4	1	—	—	1
Jamaica	1 P-5	1	—	—	1
Trinidad and Tobago	1 P-5	1	—	—	1
United States	1 D-1, 16 P-5, 12 P-4, 5 P-3, 4 P-2, 1 P-1	39	1 P-5, 3 P-4, 3 P-3, 1 L-2	8	47
	TOTAL	56		9	65
<i>Non-Member States</i>					
Switzerland	1 P-5	1	1 P-4	1	2
	TOTAL	1		1	2
GRAND TOTAL	(95 nationalities)	347	(24 nationalities)	73	420

^aConsists mainly of staff in posts with special language requirements but also includes 13 Special Technical Advisers and 5 Interregional Advisers.

^bIncludes 3 P-4 charged to special temporary assistance funds allocated to UNIDO for servicing United Nations Conferences.

^cIncludes 1 P-4 charged to special temporary assistance funds allocated to UNIDO for servicing United Nations Conferences.

^d1 P-1 charged to temporary assistance.

TABLE 2. DISTRIBUTION OF PROFESSIONAL AND HIGHER CATEGORY STAFF OF UNIDO, INCLUDING STAFF WITH FIXED-TERM CONTRACTS OF LESS THAN ONE YEAR, BROKEN DOWN ACCORDING TO THE LISTS OF STATES ELIGIBLE FOR MEMBERSHIP IN THE INDUSTRIAL DEVELOPMENT BOARD (AS AT 31 DECEMBER 1981)

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 USG, 1 D-1	2	—	—	2
Angola	1 P-2	1	—	—	1
Bangladesh	1 P-4	1	—	—	1
Benin	1 P-4	1	—	—	1
Burma	2 P-4	2	—	—	2
Burundi	1 P-4	1	—	—	1
China	1 D-1, 2 P-5, 1 P-3	4	4 P-4 ^b	4	8
Congo	1 D-2	1	—	—	1
Egypt	1 D-1, 1 P-5, 1 P-3	3	1 L-5, 1 L-4	2	5
Ethiopia	1 D-1, 1 P-4	2	—	—	2
Ghana	1 P-3	1	—	—	1
Guinea	1 P-4, 1 P-3	2	—	—	2
India	1 D-2, 1 D-1, 1 P-5, 2 P-4, 1 P-1	6	1 L-7, 2 L-6, 2 L-5	5	11
Iran	1 D-1, 2 P-5, 1 P-4	4	—	—	4
Iraq	1 P-5, 1 P-4, 1 P-3	3	—	—	3
Jordan	1 P-5	1	—	—	1

Country	Occupied posts subject to geographical distribution	Number	Occupied posts not subject to geographical distribution ^a	Number	Total
<i>Countries included in List A (continued)</i>					
Kenya	1 P-5	1	—	—	1
Lebanon	2 P-5	2	—	—	2
Lesotho	1 P-2	1	—	—	1
Liberia	1 P-2	1	—	—	1
Libyan Arab Jamahiriya	2 P-4	2	—	—	2
Madagascar	1 P-4, 2 P-3	3	—	—	3
Malaysia	1 P-3	1	1 P-3	1	2
Mali	1 P-5	1	—	—	1
Mauritania	1 P-5	1	—	—	1
Morocco	1 P-5, 1 P-4	2	—	—	2
Nepal	1 P-4	1	—	—	1
Niger	1 P-2	1	—	—	1
Nigeria	1 P-5	1	—	—	1
Pakistan	1 D-2	1	1 L-5	1	2
Philippines	1 P-5, 1 P-3	2	—	—	2
Rwanda	1 P-2	1	—	—	1
Somalia	1 P-4, 1 P-3	2	—	—	2
Sri Lanka	—	—	1 L-7, 2 L-5	3	3
Sudan	1 D-1, 1 P-5	2	—	—	2
Syrian Arab Republic	2 P-4	2	—	—	2
Togo	1 P-4	1	—	—	1
Tunisia	1 P-5	1	—	—	1
Uganda	1 P-4	1	—	—	1
United Republic of Cameroon	2 P-4, 1 P-3	3	—	—	3
Upper Volta	1 P-2	1	—	—	1
Yemen	1 P-5	1	—	—	1
Yugoslavia	2 P-5, 1 P-3, 1 P-2	4	—	—	4
Zaire	1 P-3	1	—	—	1
Zambia	1 P-1	1	—	—	1
	TOTAL	78		16	94

<i>Countries included in List B</i>					
Australia	2 P-5, 3 P-3	5	—	—	5
Austria	2 D-1, 1 P-5, 6 P-4, 4 P-3, 8 P-2	21	3 P-3	3	24
Belgium	2 P-4, 2 P-3, 1 P-2	5	1 P-4	1	6
Canada	2 P-5, 4 P-4, 3 P-3, 4 P-2	13	1 L-6	1	14
Cyprus	1 P-3	1	—	—	1
Denmark	4 P-4	4	—	—	4
Finland	1 P-5, 1 P-4, 2 P-3	4	—	—	4
France	1 ASG, 3 P-5, 2 P-4, 3 P-3, 1 P-2	10	3 P-4, 6 P-3, 1 P-2	10	20
Germany, Federal Republic of	1 D-2, 1 D-1, 7 P-5, 6 P-4, 5 P-3, 2 P-2	22	—	—	22
Greece	2 P-3, 1 P-1	3	—	—	3
Ireland	1 D-1, 1 P-4, 1 P-3, 1 P-2, 1 FS-6	5	1 P-4	1	6
Italy	1 D-1, 2 P-5, 3 P-4, 1 P-3, 3 P-2, 1 P-1	11	—	—	11
Japan	1 D-1, 1 P-5, 6 P-4, 2 P-2, 1 P-1	11	—	—	11
Malta	1 P-4	1	—	—	1
Netherlands	1 P-5, 1 P-4, 2 P-3, 1 P-2	5	—	—	5
New Zealand	1 P-2	1	—	—	1
Norway	1 D-1, 1 P-5, 1 P-3	3	—	—	3

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 B (continued)</i>					
Portugal	1 P-5, 2 P-4, 1 P-3	4	—	—	4
Spain	1 P-5, 1 P-3	2	1 P-5, 5 P-3	6	8
Sweden	2 P-5, 5 P-4	7	2 L-5	2	9
Switzerland	1 P-5	1	1 P-4	1	2
Turkey	1 P-5, 4 P-3	5	—	—	5
United Kingdom	1 D-2, 1 D-1, 1 P-5, 3 P-4, 1 P-3, 2 P-1 ^c	9	3 P-4, 2 P-3, 2 P-2	7	16
United States	1 D-1, 16 P-5, 12 P-4, 5 P-3, 4 P-2, 1 P-1	39	1 P-5, 3 P-4, 3 P-3, 1 L-2	8	47
	TOTAL	192		40	232
<i>Countries included in List C</i>					
Argentina	1 P-5, 2 P-3	3	1 P-4, 1 P-2	2	5
Barbados	1 P-2	1	—	—	1
Bolivia	1 P-5	1	1 P-5	1	2
Brazil	2 P-5, 2 P-2	4	1 L-7	1	5
Chile	1 P-5	1	—	—	1
Colombia	1 P-3	1	1 P-3, 1 P-2	2	3
Costa Rica	2 P-3	2	—	—	2
Cuba	2 P-3, 1 P-2	3	—	—	3
Ecuador	1 P-5, 1 P-3	2	1 P-4	1	3
El Salvador	2 P-5, 1 P-3	3	—	—	3
Grenada	1 P-4	1	—	—	1
Guatemala	1 P-3	1	—	—	1
Jamaica	1 P-5	1	—	—	1
Mexico	1 D-1, 1 P-4	2	—	—	2
Panama	1 P-3	1	—	—	1
Peru	1 P-3	1	—	—	1
Trinidad and Tobago	1 P-5	1	—	—	1
	TOTAL	29		7	36
<i>Countries included in List D</i>					
Bulgaria	2 P-4, 1 P-3	3	—	—	3
Byelorussian SSR	1 P-3	1	—	—	1
Czechoslovakia	1 P-5	1	—	—	1
German Democratic Republic	1 P-5	1	—	—	1
Hungary	3 P-5, 1 P-4, 1 P-3	5	1 L-6	1	6
Poland	2 P-5, 2 P-4, 2 P-3	6	1 L-6, 1 L-5	2	8
Romania	1 P-4	1	—	—	1
Ukrainian SSR	1 P-4	1	—	—	1
USSR	1 D-2, 2 D-1, 2 P-5, 13 P-4, 10 P-3, 1 P-2	29	3 P-4, ^d 4 P-3	7	36
	TOTAL	48		10	58
GRAND TOTAL (95 nationalities)		347	(24 nationalities)	73	420

^aConsists mainly of staff in posts with special language requirements but also includes 13 Special Technical Advisers and 5 Interregional Advisers.

^bIncludes 3 P-4 charged to special temporary assistance funds allocated to UNIDO for servicing United Nations Conferences.

^c1 P-1 charged to temporary assistance.

^dIncludes 1 P-4 charged to special temporary assistance funds allocated to UNIDO for servicing United Nations Conferences.

APPENDIX H

Expert group meetings, symposia, seminars, workshops, courses and other meetings of a non-training character held during 1981

<i>Date</i>		<i>Place</i>
<i>Office of the Executive Director</i>		
12-16 January	<i>Ad hoc</i> expert group meeting on industrial issues and utilization in transportation and other allied sectors ^a	Vienna Austria
7-14 May	Permanent Committee of the Industrial Development Board—fifteenth session	Vienna Austria
7, 15-29 May	Industrial Development Board—fifteenth session	Vienna Austria
14 August	Panel on Energy/Industry ^b	Nairobi Kenya
16-21 November	Permanent Committee of the Industrial Development Board—sixteenth session	Vienna Austria
<i>Negotiations</i>		
22-23 January	Expert group meeting on long-term agreements for the marketing of petrochemicals produced in developing countries	Vienna Austria
26-29 January	Expert group meeting on UNIDO model form of agreement for licensing patents and know-how in the petrochemical industry	Vienna Austria
11-13 February	Expert group meeting to prepare for the second consultation on agricultural machinery	Vienna Austria
23 February- 6 March	Expert group meeting on model forms of contract for the construction of a fertilizer plant	Vienna Austria
12-13 March	Second small expert group meeting on scenarios of the iron and steel industry's development	Vienna Austria
23-25 March	Global preparatory meeting for the first consultation on industrial financing	Vienna Austria
23-27 March	First session of the regional consultative forum on the vegetable oils and fats industry for Asia and the Pacific	Jakarta Indonesia
22-24 April	Expert group meeting on the role of co-operatives in the development of the food processing industry in developing countries	Vienna Austria
4-6 May	Follow-up meeting on model contracts for fertilizer plants	Vienna Austria
4-7 May	Expert group meeting on the training of industrial manpower	Vienna Austria
26-27 May	Meeting of the bureau of the third consultation on the fertilizer industry	Vienna Austria

<i>Date</i>		<i>Place</i>
1-12 June	Second meeting of the <i>ad hoc</i> UNCTAD/UNIDO group of experts on trade and trade-related aspects of industrial collaboration arrangements	Vienna Austria
22-26 June	Second consultation on the petrochemical industry	Istanbul Turkey
25-26 June	Third meeting of the UNIDO/FAO/UNCTAD/ITC working group on food processing industries	Vienna Austria
6-7 August	<i>Ad hoc</i> meeting of the bureau of the small expert group on scenarios of the iron and steel industry's development and UNIDO Secretariat	Vienna Austria
14-16 September	Second expert group meeting to prepare for the second consultation on agricultural machinery	Vienna Austria
17-21 September	High-level official meeting with Chinese officials preparatory to the proposed project "International centre for the promotion of agricultural machinery in developing countries (Beijing, China)"	Vienna Austria
21-25 September	First consultation on the capital goods industry	Brussels Belgium
23-25 September	Expert group meeting on the draft checklist for contractual agreements in the footwear sector between enterprises from developed and developing countries	Vienna Austria
5-7 October	<i>Ad hoc</i> expert group meeting in preparation for the first consultation on the wood and wood products industry	Vienna Austria
9-13 November	First consultation on the food processing industry	The Hague Netherlands
23-24 November	First meeting of the industrial working group of the leather and leather products industry panel	Vienna Austria
25-27 November	Fifth session of the leather and leather products industry panel	Vienna Austria
2-3 December	Round table meeting of experts on the pharmaceutical industry	Mohammedia Morocco
3-4 December	Third small expert group meeting on scenarios of the iron and steel industry's development	Vienna Austria
7-8 December	High-level expert group meeting to consider the proposed project "International centre for the promotion of agricultural machinery in developing countries (Beijing, China)"	Vienna Austria
7-11 December	Expert group meeting on the exchange of experiences in the construction and operation of fertilizer plants	Vienna Austria
<i>Field Reports Monitoring</i>		
9-15 September	First regional SIDFA meeting for Latin America	Brasilia Brazil
<i>Non-governmental Organizations</i>		
20-24 April	Meeting on industry-research institute linkage with special reference to instrument design	Sofia Bulgaria
30 November- 2 December	Preparatory meeting to the workshop on design and development of agricultural equipment in Africa	Vienna Austria

<i>Date</i>		<i>Place</i>
<i>Economic Co-operation among Developing Countries</i>		
23-26 March	Solidarity meeting of ministers of industry for co-operation in the industrial development of the Democratic Republic of the Sudan	Khartoum Sudan
5-9 October	Workshop on maintenance and repair of sugar industry equipment	Havana Cuba
15-18 October	Seminar on the role of women in the development of industrial branches traditionally employing female labour	Sofia Bulgaria
1-4 December	Solidarity meeting of ministers of industry for co-operation in the industrial development of the Republic of Upper Volta	Ouagadougou Upper Volta
<i>Global and Conceptual Studies</i>		
6-20 February	Second expert group meeting on trade development alternatives of the developing regions	Budapest Hungary
17-19 June	Review of UNITAD model and of future modelling activities	Vienna Austria
<i>Regional and Country Studies</i>		
5-9 October	Expert group meeting on the changing role and functions of the public sector in development	Vienna Austria
17-19 November	Expert group meeting on the Industrial Development Survey	Vienna Austria
<i>Sectoral Studies</i>		
9-12 June	Joint ECWA/UNIDO expert group meeting on petrochemicals	Vienna Austria
<i>Technology Programme</i>		
4-6 February	Exchange of views with experts on the implications of advances in genetic engineering for developing countries	Vienna Austria
16-21 February	First national seminar on technology transfer, management and development	Georgetown Guyana
4-6 May	National seminar on the development and transfer of technology	Khartoum Sudan
4-8 May	UNIDO/UNDP/ICD workshop on selection of technology for assembly of electronic and electrical products	Utrecht Netherlands
14-17 May	National workshop on technology transfer negotiations	Vimeiru Portugal
10-12 June	Exchange of views with experts on the implications of technological advances in micro-electronics for developing countries	Vienna Austria
10-15 August	National workshop on technology transfer negotiations	Beijing China
17-20 August	National workshop on technology transfer negotiations	Shanghai China
28-29 September	High-level policy meeting of ASEAN on technology transfer regulation	Vienna Austria

<i>Date</i>		<i>Place</i>
19-22 October	Expert group meeting on the implications of technological advances in lighter-than-air systems technology for developing countries	Vienna Austria
2-6 November	Expert group meeting for exchange of experiences on technology services delivery system (TSDS)	Manila Philippines
25-28 November	TIES VI—Technology registries meeting	Manila Philippines
7-10 December	National symposium on industrial research and development	Nairobi Kenya
15-19 December	Potential of genetic engineering on the industrial production of animal vaccines in developing countries	Stockholm Sweden
<i>Investment Co-operative Programme</i>		
20 January	Presentation on industrial development financing ^c	Brussels Belgium
21 January	Sri Lanka country presentation meeting	Zurich Switzerland
27 January	Sri Lanka investors forum	Vienna Austria
17 February	West African investors forum ^d	Brussels Belgium
6 March	Barbados country presentation meeting	Brussels Belgium
9-10 March	Chile country presentation meeting	Cologne; Bonn Germany, Federal Republic of
11-13 March	Chile country presentation meeting	Brussels; Antwerp Belgium
23-24 March	Haiti country presentation meeting	Paris France
26 March	Haiti country presentation meeting	Zurich Switzerland
31 March and 2 April	Haiti country presentation meeting	Brussels Belgium The Hague Netherlands
1-3 April	Haiti country presentation meeting	Cologne; Leverkusen Germany, Federal Republic of
7 April	Haiti country presentation meeting	Vienna Austria
1 April	Expert group meeting on problems facing Japanese foreign direct investment	Tokyo Japan
6-24 April	Orientation programme on industrial investment promotion ^e	New York United States of America
15-16 April	Benin country presentation meeting	Paris France
19 April and 21-23 September	Bangladesh country presentation meeting	Paris France

Date		Place
21 April	Costa Rica country presentation meeting	Tokyo Japan
6-8 May	Rwanda country presentation meeting	Brussels; Antwerp Belgium Rotterdam- Netherlands
13-15 May	Rwanda country presentation meeting	Paris France
18 May	Peru country presentation meeting	St. Gallen; Winterthur Switzerland
18-20 May	Malta country presentation meeting	Ghent Belgium The Hague Netherlands
19 May	Malta country presentation meeting	Cologne Germany, Federal Republic of
27 May	Lesotho country presentation meeting	Vienna Austria
10-18 and 29-30 June	Sri Lanka country presentation meeting	Brussels; Antwerp Belgium
22-26 June	Sri Lanka country presentation meeting	Paris France
1-2 July	Sri Lanka country presentation meeting	The Hague Netherlands
2 July	Sri Lanka country presentation meeting	Tokyo Japan
6-7 July	Sri Lanka country presentation meeting	London United Kingdom
16-17 July	Sri Lanka country presentation meeting	Paris France
29 June-1 July	Symposium on project design and installation of small hydro-power plants	Vienna Austria
28, 30 July and 3 August	Sri Lanka seminar	Tokyo; Nagoya; Osaka Japan
7 September	Somalia country presentation meeting	Brussels Belgium
21 September	Thailand country presentation meeting	Brussels Belgium
22 September	Arab countries day	Ghent Belgium
7 October	Bangladesh country presentation meeting	Zurich Switzerland
8 October	Bangladesh country presentation meeting	Vienna Austria
12 and 14 October	Bangladesh country presentation meeting	Tokyo Japan
15 October	Industry days	Vienna Austria

Date		Place
19 October- 20 November	Orientation programme on industrial investment promotion ^h	New York; Washington; Princeton United States of America
19-22 and 30 October	ASEAN country presentation meeting	Brussels; Antwerp Belgium Other Benelux cities
19-23 October	Investment promotion meeting for Sri Lanka	Colombo Sri Lanka
26-27 October	Meeting on the preparation of the Alexandria investors forum ⁱ	Brussels Belgium
9-12 November	Malta country presentation meeting	Frankfurt; Cologne; Düsseldorf Germany, Federal Republic of
12-13 November	Mauritania country presentation meeting	Cologne Germany, Federal Republic of
14-17 November	Mauritania country presentation meeting	Vienna Austria
18 November	Barbados country presentation meeting	Brussels Belgium
25-28 November	Investment promotion meeting for the Arab Gulf States	Abu Dhabi United Arab Emirates
7 December	Mauritius country presentation meeting	Tokyo Japan
14 December	West African investors forum ^j	Brussels Belgium
<i>Institutional Infrastructure</i>		
20-24 April	Meeting on industry-research institute linkage with special reference to instrument design	Sofia Bulgaria
23 June-2 July	Workshop for the formulation of a comprehensive programme for the identification, promotion and financing of small- and medium-scale industrial enterprises in Alexandria and Behera provinces	Alexandria Egypt
7-12 September	Group meeting on standardization and quality control in the industrialization process of developing countries ^k	Arandjelovac Yugoslavia
<i>Training</i>		
7-10 December	Meeting of experts to identify industrial energy management needs, uses and resource requirements in the developing countries	Stony Brook United States of America
<i>Agro-industries</i>		
25-27 November	Fifth session of the leather and leather products industry panel	Vienna Austria
14-17 December	Expert group meeting on timber stress grading and strength grouping	Vienna Austria

Date		Place
<i>Metallurgical Industries</i>		
20-23 January	UNEP/UNIDO workshop on the environmental aspects of alumina production	Paris France
20-23 July	ASEAN/UNIDO workshop on regional steel standardization	Manila Philippines
27-28 October	Preparatory consultants meeting for the UNEP/UNIDO workshop on the environmental aspects of the direct reduction route to steel-making (planned for April 1982)	Vienna Austria
7-11 December	Workshop on the regional project for co-operative research among metallurgical research and development centres in Asia and the Pacific	Jamshedpur India
<i>Engineering Industries</i>		
29 June-3 July	Symposium on project design and installation of small hydro-power plants	Vienna Austria
<i>Chemical Industries</i>		
21-30 April	Workshop on petroleum processing	Vienna Austria
14-15 May	International symposium: increasing the competitiveness of natural rubber-thermoplastic and powdered forms of natural rubber	Phuket Thailand
18-29 May	Workshop on cement and concrete products	Brisbane Australia
27-31 July	Workshop on carbon fibre composites	Beijing China
21 November-3 December	Workshop on the essential oils industry	Lucknow India
14-18 December	High-level meeting on co-operation among developing countries in the field of cement, lime and related industries ¹	Ankara Turkey
<i>Governments and Intergovernmental Organizations Relations</i>		
15-17 December	Expert group meeting on review of the scope of responsibilities of the National Committees for UNIDO in the light of the New Delhi Declaration and Plan of Action and of present and future programmes/activities of UNIDO	Vienna Austria

^aHeld in preparation for the United Nations Conference on New and Renewable Sources of Energy.

^bHeld in co-operation with the United Nations Conference on New and Renewable Sources of Energy and the United Nations University.

^cOrganized in co-operation with the European Economic Community, the European Investment Bank and the African, Caribbean and Pacific (ACP) countries.

^dOrganized in co-operation with the European Economic Community.

^eCo-sponsored by UNIDO and the Caribbean Development Bank.

^fOrganized in co-operation with the Austrian Government.

^gOrganized in co-operation with the Club de Dakar.

^hCo-sponsored by UNDP and the United States Overseas Private Investment Corporation.

ⁱOrganized in co-operation with the European Economic Community.

^jOrganized in co-operation with the European Economic Community.

^kHeld in co-operation with the Non-governmental Organizations Section.

^lHeld in co-operation with the Section for Economic Co-operation among Developing Countries.

APPENDIX I

Selected list of studies and reports under preparation or completed in 1981^a

OFFICE OF THE EXECUTIVE DIRECTOR

Special Advisory Group on Energy

- Report on energy-related industrial development activities (completed)
- Draft background paper for the United Nations Conference on New and Renewable Sources of Energy—Expert group meeting on industrial issues and utilization in transportation and other allied sectors (completed)

DIVISION OF POLICY CO-ORDINATION

Non-governmental Organizations Section

- Background paper on co-operative movement in Kenya, Nigeria and Ethiopia (ongoing)
- Background paper on co-operative movement in Botswana, Zambia, Zimbabwe, for the Conference on the Economic and Social Potential of Industrial Co-operatives in Developing Countries, Arusha, United Republic of Tanzania, 15-19 February 1982 (ongoing)

Section for Economic Co-operation among Developing Countries

- The role and potential of technical co-operation among developing countries in industrial development (ongoing)

DIVISION OF INDUSTRIAL OPERATIONS

Investment Co-operative Programme Branch

- Creation of an industrial development bank in Mali (completed)

Institutional Infrastructure Branch

- Small industries development programme (completed)
- Institutional mechanisms in the making of an industrial entrepreneur: a perspective (completed)

Training Branch

- Technical co-operation among African countries in human resources utilization and development: training in industry (completed)

^aStudies prepared by the Division for Industrial Studies, which are treated in greater detail, are listed in appendix C.

Metallurgical Industries Section

Foundry activities carried out by Metallurgical Industries Section (completed)

Engineering Industries Section

Study on development and manufacture of drilling rigs and components for oil and water (completed)

APPENDIX J

Printed publications in 1981

<i>Symbol</i>	<i>Title</i>	<i>Language</i>
ID/98	Guidelines for the acquisition of foreign technology in developing countries	C R
ID/108/Rev.1	Furniture and joinery industries for developing countries	F
ID/149	Guidelines for contracting for industrial projects in developing countries	S
ID/194/Add.1	UNIDO guides to information sources No. 27. Information sources on the packaging industry. Addendum	E (F/R/S introduction)
ID/200	Development and transfer of technology series No. 4. Manual in instrumentation and quality control in the textile industry	F
ID/211	Development and transfer of technology series No. 9. Process technologies for nitrogen fertilizers	S
ID/216	The effectiveness of industrial estates in developing countries	F
ID/220	Guidelines for the establishment of industrial estates in developing countries	F
ID/227	Report. First consultation meeting on the petro-chemical industry. Mexico City, 12-16 March 1979	C
ID/232/12	Monographs on appropriate industrial technology No. 12. Construction and building materials	E
ID/232/13	Monographs on appropriate industrial technology No. 13. Appropriate industrial technology for basic industries	E

<i>Symbol</i>	<i>Title</i>	<i>Language</i>
ID/233	Development and transfer of technology series No. 12. Guidelines for evaluation of transfer of technology agreements	S
ID/243	Metalworking industries in developing countries of Africa	F S
ID/247	Technical criteria for the selection of woodworking machines	E
ID/251	Women and industrialization in developing countries	E
ID/257	Development and transfer of technology series No. 14. Case-studies in the acquisition of technology (I)	E
ID/258	Industrial development abstracts. UNIDO industrial information system (INDIS) 09701-10000	E (F/R/S introduction)
ID/259	Report. First consultation on the pharmaceutical industry. Lisbon, Portugal, 1-5 December 1980	C F R S
ID/260	Report. Third consultation on the fertilizer industry. São Paulo, Brazil, 29 September-2 October 1980	C E F R S
ID/261	Industrial processing of natural resources	E
ID/262	Development and transfer of technology series No. 15. Technological self-reliance of the develop- ing countries: towards operational strategies	E
ID/263	Industrial development abstracts. UNIDO industrial information system (INDIS) 10001-10200	E (F/R/S introduction)
ID/264	Safety in production, transportation and storage of fertilizers	E
ID/265	Manual on jigs for the furniture industry	E
ID/266	Structural changes in industry	E S
ID/267	UNIDO guides to information sources No. 38. Information sources on essential oils	E (F/R/S introduction)
ID/268	UNIDO guides to information sources No. 39. Information sources on the flour milling and the bakery products industries	E (F/R/S introduction)
ID/269	World industry in 1980. Regular issue of the biennial industrial development survey	E
ID/272	Industrial development abstracts. UNIDO industrial information system (INDIS) 10201-10500	E (F/R/S introduction)
ID/273	Report. Second consultation on the petrochemical industry. Istanbul, Turkey, 22-26 June 1981	C E F R S
ID/274	Report of the regional seminar on industrial application of microbiology in the pharmaceutical industry. Havana, Cuba, 2-9 July 1979	E
ID/276	Report. First consultation on the capital goods industry. Brussels, Belgium, 21-25 September 1981	C E F R S
ID/277	Industrial development abstracts. UNIDO industrial information system (INDIS) 10501-10700	E (F/R/S introduction)
ID/278	Report. First consultation on the food processing industry. The Hague, Netherlands, 9-13 November 1981	C E F R S
ID/SER.M/4	Industry and development No. 4	F S

APPENDIX K

Group training and fellowships in 1981

TABLE 1. IN-PLANT GROUP TRAINING PROGRAMMES IN 1981

<i>Field of study</i>	<i>Host country</i>	<i>Number of participants^a</i>
Plastics technology	Austria	22
Maintenance—railway	Belgium	11
Maintenance—buses and trucks	Belgium	10
Diesel engines	China	12
Diesel engines	Czechoslovakia	18
Industrial design	Egypt	14
Preventive maintenance	Ethiopia	9
Pharmaceutical industry	France	16
Quality improvement	Japan	12
Management—maintenance systems	Kenya	21
Foundry technology	Poland	15
Petrochemical industry	Romania	13
Quality control	Singapore	24
Facilities planning	Sri Lanka	20
Management—maintenance systems	Sweden	18
Dyes and chemicals	Switzerland	12
Cement industry ^b	Turkey	47
Beet sugar industry	Turkey	11
Small-scale foundry operations	Turkey	12
Iron and steel ^b	USSR	39
Grain-milling and storage	USSR	16
Electric welding ^b	USSR	31
Metalworking industry	USSR	16
Fertilizer industry	USSR	16
Rice processing	USSR	16
Industrial information	USSR	12
Management—industrial goods manufacturing	United Republic of Cameroon	19
	TOTAL	482

^aNumber of female participants in 1981 group training programmes (tables 1 + 2): 111. Number of participants from least developed countries in 1981 group training programmes (tables 1 + 2): 345.

^bTwo programmes were carried out in 1981.

TABLE 2. OTHER GROUP TRAINING PROGRAMMES IN 1981

<i>Field of study</i>	<i>Host country</i>	<i>Number of participants^a</i>
Industrial project preparation, evaluation and financing	Afghanistan	26
Industrial training	Angola	21
Industrial training managers	Austria	16
Fertilizer plant maintenance	Austria	12
Production and application of synthetic fibres	Austria	8
Industrial project preparation, evaluation and financing	Barbados	25
Environmental control	Belgium	25
Wood-based panels and furniture industries	China	43

TABLE 2 (continued)

<i>Field of study</i>	<i>Host country</i>	<i>Number of participants^a</i>
Industrial project preparation, evaluation and financing	China	105
Energy conservation in silicate industries	Czechoslovakia	15
Industrial project preparation, evaluation and financing	Democratic Yemen	32
Furniture and joinery industries	Finland	23
Quality control	France	13
Standardization and control	France	21
Medium and small-scale enterprises	France	24
Financing of development projects	France	16
Industrial planning	German Democratic Republic	26
Printing industry	German Democratic Republic	18
Pesticide formulation	German Democratic Republic	18
Selection of woodworking machinery	Germany, Federal Republic of	44
Industrial project preparation, evaluation and financing	Indonesia	43
Project identification	Italy	23
Public industrial enterprises	Italy	16
Industrial planning	Japan	10
Industrial project preparation, evaluation and financing	Mauritania	28
Management training—public enterprises	Pakistan	21
Industrial project preparation, evaluation and financing	Pakistan	30
Industrial development banking	Philippines	20
Project study preparation	Philippines	17
Training management—industrial enterprises	Portugal	9
Establishment of industrial enterprises	Togo	23
Training management—public enterprises	Yugoslavia	20
	TOTAL	791

^aNumber of female participants in 1981 group training programmes (tables 1 + 2): 111. Number of participants from least developed countries in 1981 group training programmes (tables 1 + 2): 345.

TABLE 3. NUMBER OF FELLOWSHIPS PLACED DURING 1981, BY NATIONALITY

<i>Nationality</i>	<i>Number of fellowships</i>			<i>Total</i>
	<i>UNDP</i>	<i>Regular programme</i>	<i>Other programmes</i>	
Afghanistan	11	—	—	11
Albania	1	—	—	1
Algeria	—	1	—	1
Angola	—	—	5	5
Argentina	17	1	—	18
Bangladesh	46	—	—	46
Barbados	—	1	—	1
Benin	1	1	1	3
Bhutan	10	—	—	10
Bolivia	—	1	1	2
Botswana	—	1	—	1
Brazil	8	—	4	12
Bulgaria	79	—	8	87
Burma	1	—	—	1
Burundi	1	—	—	1
Central African Republic	2	—	—	2

Nationality	Number of fellowships			Total
	UNDP	Regular programme	Other programmes	
Chile	3	—	—	3
China	139	4	3	146
Colombia	—	1	—	1
Congo	2	—	—	2
Cuba	3	—	—	3
Cyprus	2	—	—	2
Czechoslovakia	47	—	—	47
Democratic Yemen	2	9	—	11
Dominica	—	1	—	1
Dominican Republic	4	—	—	4
Ecuador	6	—	—	6
Egypt	90	1	—	91
Ethiopia	39	—	—	39
Fiji	—	1	—	1
Greece	1	—	—	1
Guinea	9	—	—	9
Guyana	1	—	—	1
Haiti	—	2	—	2
Honduras	1	—	—	1
Hong Kong	3	—	—	3
Hungary	33	—	—	33
India	46	3	—	49
Indonesia	14	1	—	15
Iran	—	1	—	1
Iraq	9	—	11	20
Ivory Coast	12	—	—	12
Jamaica	4	—	2	6
Jordan	2	—	—	2
Kenya	16	—	—	16
Lebanon	1	—	—	1
Liberia	3	—	—	3
Libyan Arab Jamahiriya	1	—	—	1
Madagascar	9	2	—	11
Malawi	5	1	—	6
Malaysia	23	—	1	24
Mali	7	—	—	7
Malta	4	—	—	4
Mauritania	—	—	5	5
Mauritius	2	—	—	2
Mexico	6	1	—	7
Mongolia	—	—	5	5
Mozambique	4	3	—	7
Namibia	—	—	5	5
Nepal	5	1	—	6
Nicaragua	—	3	—	3
Niger	6	—	—	6
Nigeria	2	—	1	3
Pakistan	10	—	5	15
Paraguay	—	1	—	1
Peru	11	3	1	15
Philippines	12	1	1	14
Poland	33	—	—	33
Portugal	1	—	—	1
Republic of Korea	10	—	—	10
Romania	7	—	—	7
Saint Kitts	2	—	—	2
Saint Vincent and the Grenadines	1	—	—	1
Senegal	7	—	—	7
Somalia	8	2	—	10

TABLE 3 (continued)

<i>Nationality</i>	<i>Number of fellowships</i>			<i>Total</i>
	<i>UNDP</i>	<i>Regular programme</i>	<i>Other programmes</i>	
Sri Lanka	9	2	—	11
Sudan	10	—	—	10
Suriname	1	—	—	1
Swaziland	3	—	—	3
Syrian Arab Republic	13	3	—	16
Thailand	10	1	3	14
Togo	1	1	—	2
Trinidad and Tobago	6	—	—	6
Tunisia	1	—	—	1
Turkey	29	—	1	30
Uganda	3	1	—	4
United Republic of Cameroon	5	1	1	7
United Republic of Tanzania	20	—	24	44
Upper Volta	7	—	1	8
Uruguay	3	—	—	3
Venezuela	—	1	—	1
Viet Nam	12	—	—	12
Yugoslavia	2	—	—	2
Zaire	14	1	—	15
Zambia	5	—	—	5
TOTAL	999	59	89	1 147

TABLE 4. NUMBER OF FELLOWSHIPS PLACED DURING 1981, BY COUNTRY OF STUDY^a

<i>Country of study</i>	<i>Number of fellowships</i>			<i>Total</i>
	<i>UNDP</i>	<i>Regular programme</i>	<i>Other programmes</i>	
Argentina	2	1	1	4
Australia	11	1	—	12
Austria	134	5	12	151
Belgium	51	4	7	62
Benin	—	1	—	1
Bolivia	2	—	1	3
Botswana	5	—	—	5
Brazil	10	8	—	18
Bulgaria	6	—	—	6
Canada	7	—	—	7
Chile	1	—	—	1
China	—	—	1	1
Costa Rica	4	1	—	5
Cuba	—	3	—	3
Cyprus	7	—	—	7
Czechoslovakia	8	—	—	8
Denmark	19	—	—	19
Dominican Republic	2	—	—	2
Egypt	4	—	24	28
Ethiopia	—	—	4	4
Finland	18	—	—	18
France	153	5	12	170
German Democratic Republic	6	1	—	7

Country of study	Number of fellowships			Total
	UNDP	Regular programme	Other programmes	
Germany, Federal Republic of	260	9	13	282
Greece	2	—	—	2
Guatemala	4	—	—	4
Hong Kong	4	—	—	4
Hungary	17	4	3	24
India	57	—	1	58
Indonesia	5	1	2	8
Ireland	27	1	—	28
Israel	2	—	—	2
Italy	85	10	—	95
Ivory Coast	5	1	—	6
Jamaica	2	—	—	2
Japan	60	—	5	65
Kenya	15	—	1	16
Kuwait	5	—	—	5
Lesotho	4	—	—	4
Luxembourg	2	—	—	2
Malaysia	14	—	—	14
Malta	—	1	—	1
Mauritius	21	2	—	23
Mexico	11	—	1	12
Nepal	1	—	—	1
Netherlands	46	—	—	46
New Zealand	1	—	1	2
Norway	7	—	—	7
Pakistan	—	—	2	2
Papua New Guinea	1	—	—	1
Peru	1	—	—	1
Philippines	24	—	—	24
Poland	38	—	—	38
Portugal	—	—	5	5
Qatar	2	—	—	2
Republic of Korea	16	—	—	16
Romania	4	—	—	4
Saudi Arabia	5	—	—	5
Senegal	11	—	—	11
Singapore	11	—	—	11
Somalia	1	—	—	1
Spain	24	2	—	26
Sri Lanka	3	—	3	6
Swaziland	3	—	—	3
Sweden	46	—	2	48
Switzerland	40	4	6	50
Thailand	8	1	2	11
Togo	6	—	—	6
Turkey	1	—	—	1
USSR	12	—	5	17
United Arab Emirates	5	—	—	5
United Kingdom	216	10	6	232
United Republic of Tanzania	3	—	—	3
United States of America	156	5	9	170
Upper Volta	1	—	—	1
Yugoslavia	13	—	—	13
Zambia	—	—	4	4
TOTAL	1 758	81	133	1 972

^aWhere a fellowship award called for study in more than one country, the award is listed against each country concerned. Thus, the total for this table does not necessarily correspond to that in table 3.

APPENDIX L

Comparison of 1980-1981 regular programme as approved by the Industrial Development Board and as delivered

(In thousands of US dollars)

Component	Approved by the IDB	As delivered		
		1980	1981	Total
<i>Training of developing countries' personnel in various industrial fields</i>				
Individual fellowships	600	346	246	592
Group training programmes	900	660	334	994
Establishment and strengthening of training facilities in developing countries	700	125	594	719
<i>Special activities for the least developed among the developing countries</i>	2 301	1 020	993	2 013
<i>Regional advisory services</i>	850	420	403	823
<i>Short-term advisory services</i>	900	545	518	1 063
<i>Co-operation among developing countries</i>	550	273	350	623
<i>Consultations with Governments</i>	120	73	20	93
TOTAL	6 921	3 462	3 458	6 920

APPENDIX M

UNIDO involvement in country programming

TABLE I. EXPECTED UNIDO SHARE OF COUNTRY PROGRAMMES APPROVED BY
THE UNDP GOVERNING COUNCIL IN JUNE 1981

(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	4	115.0	94.1	9.4	10.0	7	6
Americas	1	20.5	16.4	5.6	33.8	2	11
Arab States	1	56.0	41.8	12.6	30.0	8	18
Asia and the Pacific	6	506.5	403.8	49.5	12.3	19	48
Europe	2	12.0	9.6	2.2	22.9	1	3
TOTAL	14	710.0	565.7	79.3	14.0	37	86

TABLE 2. EXPECTED UNIDO SHARE OF COUNTRY PROGRAMMES APPROVED BY THE UNDP GOVERNING COUNCIL IN JUNE 1981

(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	—	1	203.000	0.3	—	1	—
Industrial Planning	1	—	2 513.300	3.2	—	—	1
Institutional Infrastructure	4	11	10 420.000	13.2	2	8	5
Factory Establishment and Management	2	4	1 848.700	2.3	3	2	1
Training	3	—	2 180.000	2.7	—	2	1
Feasibility Studies	3	3	1 829.950	2.3	2	4	—
Agro-industries	7	15	15 701.000	19.8	2	13	7
Metallurgical Industries	3	4	5 732.900	7.2	—	4	3
Engineering Industries	5	14	14 224.000	17.9	4	9	6
Chemical Industries	12	31	24 620.777	31.1	10	24	9
TOTAL	40	83	79 273.627	100.0	23	67	33

TABLE 3. COMPARISON OF APPROVED COUNTRY PROGRAMMES FOR THE THIRD CYCLE (JUNE 1981) WITH PROGRAMMES OF THE SAME COUNTRIES IN THE SECOND CYCLE (1977-1981)

Geographical region/country	June 1981 (for third cycle)				1977-1981 (second cycle)			
	UNIDO projects				UNIDO projects			
	IPF	Amount programmed (in millions of US\$)	Total value	Percentage share of amount programmed	IPF	Amount programmed (in millions of US\$)	Total value	Percentage share of amount programmed
Africa								
Kenya	52.0	41.6	6.5	15.6	27.5	17.8	3.3	18.3
Mauritius	7.0	5.6	0.09	1.6	5.3	7.6	1.3	17.7
Rwanda	45.0	31.4	2.0	6.5	19.8	17.0	2.6	15.1
Subtotal	104.0	78.6	8.59	10.9	52.6	42.4	7.2	16.9
Americas								
Cuba	20.5	16.4	5.6	33.8	13.5	12.1	2.1	17.4
Subtotal	20.5	16.4	5.6	33.8	13.5	12.1	2.1	17.4
Arab States								
Egypt	56.0	41.8	12.6	30.0	31.5	27.7	9.6	34.8
Subtotal	56.0	41.8	12.6	30.0	31.5	27.7	9.6	34.8
Asia and the Pacific								
Bangladesh	201.0	170.0	8.0	4.6	65.5	45.0	6.1	13.6
Bhutan	36.5	26.1	1.6	6.3	12.3	11.7	2.6	22.5
Maldives	7.0	5.6	—	—	2.5	2.1	—	—
Nepal	98.0	70.9	10.0	14.1	32.5	42.9	1.1	2.7
Philippines	46.0	36.8	4.3	11.7	30.5	26.1	2.3	8.9
Viet Nam	118.0	94.4	25.6	27.1	44.0	49.1	2.6	5.4
Subtotal	506.5	403.8	49.5	12.3	187.3	176.9	14.7	8.3

TABLE 3 (continued)

Geographical region/country	June 1981 (for third cycle)				1977-1981 (second cycle)			
	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\$)			
<i>Europe</i>								
Bulgaria	6.0	4.8	0.9	19.6	7.5	6.8	1.7	25.8
Poland	6.0	4.8	1.3	27.1	7.5	6.7	0.3	4.1
Subtotal	12.0	9.6	2.2	22.9	15.0	13.5	2.0	15.6
TOTAL	699.0	550.2	78.49	14.3	299.9	272.6	35.6	13.0

Note: Excluded from the comparison is the Congo which had no country programme approved during the second cycle.

APPENDIX N

Distribution of posts of Senior Industrial Development Field Advisers (SIDFAs) and Junior Professional Officers (JPOs) in 1981

SIDFAs: Duty stations	Groups of countries covered by each SIDFA	Countries covered by JPOs	JPOs: Donor countries
<i>Africa</i>			
Luanda (Angola)	Angola Sao Tome and Principe	Angola	Sweden
Addis Ababa (Ethiopia) ^a	Ethiopia	Ethiopia	Germany, Federal Republic of
Libreville (Gabon) ^a	Congo Equatorial Guinea Gabon		
Conakry (Guinea)	Cape Verde Guinea Guinea-Bissau	Guinea	Belgium
Nairobi (Kenya)	Kenya	Kenya	Denmark/Germany, Federal Republic of (2) ^b
Antananarivo (Madagascar)	Uganda Comoros Madagascar Mauritius Seychelles	Madagascar	Netherlands ^c
Maputo (Mozambique)	Lesotho Mozambique Swaziland	Mozambique Swaziland	Belgium Belgium

<i>SIDFAs: Duty stations</i>	<i>Groups of countries covered by each SIDFA</i>	<i>Countries covered by JPOs</i>	<i>JPOs: Donor countries</i>
<i>Africa (continued)</i>			
Niamey (Niger)	Benin Niger Togo	Niger	Switzerland
Lagos (Nigeria) ^a	Nigeria	Nigeria	Germany, Federal Republic of
Dakar (Senegal)	Gambia Mali Mauritania Senegal	Mali Mauritania Senegal	Belgium Belgium (2) ^b Belgium
Freetown (Sierra Leone)	Ghana Liberia Sierra Leone	Sierra Leone	Sweden
Yaoundé (United Republic of Cameroon)	Central African Republic Chad United Republic of Cameroon	United Republic of Cameroon	Belgium
Dar es Salaam (United Republic of Tanzania)	Malawi United Republic of Tanzania	United Republic of Tanzania	Sweden
Ouagadougou (Upper Volta) ^a	Ivory Coast Upper Volta	Ivory Coast Upper Volta	Belgium/Germany, Federal Republic of (2) ^b Belgium/Germany, Federal Republic of (2) ^b
Kinshasa (Zaire)	Burundi Rwanda Zaire	Rwanda Zaire	Belgium/Germany, Federal Republic of (2) ^b Netherlands (2) ^b
Lusaka (Zambia)	Botswana Zambia Zimbabwe	Zambia Zimbabwe	Denmark Denmark
<i>The Americas</i>			
Buenos Aires (Argentina)	Argentina Chile Uruguay	Argentina	Belgium
Bridgetown (Barbados)	Antigua and Barbuda Bahamas Barbados Dominica Grenada Guyana Jamaica Saint Lucia Saint Vincent and the Grenadines Suriname Trinidad and Tobago	Barbados Guyana Jamaica Trinidad and Tobago	Japan/Germany, Federal Republic of (2) ^b Belgium Belgium Germany, Federal Republic of
	And a number of territories in the region		

<i>SIDFAs: Duty stations</i>	<i>Groups of countries covered by each SIDFA</i>	<i>Countries covered by JPOs</i>	<i>JPOs: Donor countries</i>
<i>The Americas (continued)</i>			
Brasilia (Brazil)	Brazil Paraguay	Brazil	Belgium
Bogota (Colombia) ^a	Colombia Ecuador	Colombia	Belgium (2) ^b
Tegucigalpa (Honduras)	Belize Costa Rica El Salvador Guatemala Honduras	Costa Rica El Salvador Guatemala Honduras	Japan Belgium Belgium Germany, Federal Republic of (2) ^b
	Nicaragua Panama	Panama	Belgium
Mexico City (Mexico)	Cuba Mexico	Cuba Mexico	Sweden/Norway (2) ^b Belgium/Netherlands (2) ^b
Lima (Peru)	Bolivia Peru	Bolivia Peru	Germany, Federal Republic of Germany, Federal Republic of
Caracas (Venezuela)	Dominican Republic Haiti Venezuela	Dominican Republic Venezuela	Netherlands/Germany, Federal Republic of (2) ^b Netherlands
<i>Arab States</i>			
Cairo (Egypt) ^a	Egypt	Egypt	Denmark
Kuwait (Kuwait) ^a	Iraq Kuwait		
Tripoli (Libyan Arab Jamahiriya) ^a	Libyan Arab Jamahiriya Tunisia	Libyan Arab Jamahiriya Tunisia	Netherlands Belgium
Rabat (Morocco)	Algeria Morocco	Algeria Morocco	Germany, Federal Republic of Belgium
Riyadh (Saudi Arabia) ^a	Bahrain Oman Qatar Saudi Arabia United Arab Emirates		
Khartoum (Sudan) ^a	Sudan		
Damascus (Syrian Arab Republic)	Jordan Lebanon Syrian Arab Republic	Syrian Arab Republic	Netherlands
Sana'a (Yemen) ^a	Democratic Yemen Djibouti Somalia Yemen		
<i>Asia and the Pacific</i>			
Kabul (Afghanistan) ^a	Afghanistan		
Dacca (Bangladesh)	Bangladesh	Bangladesh	Netherlands
Rangoon (Burma) ^a	Burma Viet Nam		

<i>SIDFAs: Duty stations</i>	<i>Groups of countries covered by each SIDFA</i>	<i>Countries covered by JPOs</i>	<i>JPOs: Donor countries</i>
<i>Asia and the Pacific (continued)</i>			
Beijing (China)	China		
Suva (Fiji)	Fiji Kiribati Nauru Papua New Guinea Samoa Solomon Islands Tonga Tuvalu Vanuatu And a number of territories in the region	Samoa	Norway ^c
New Delhi (India)	India		
Jakarta (Indonesia)	Indonesia	Indonesia	Finland
Teheran (Iran) ^a	Iran		
Kuala Lumpur (Malaysia) ^a	Bhutan Democratic People's Republic of Korea Lao People's Democratic Republic Malaysia Nepal	Malaysia Nepal	Netherlands Belgium
Islamabad (Pakistan)	Pakistan	Pakistan	Netherlands
Manila (Philippines)	Philippines	Philippines	Netherlands (2) ^{b, d}
Colombo (Sri Lanka)	Maldives Sri Lanka	Sri Lanka	Netherlands
Bangkok (Thailand)	Thailand Hong Kong	Thailand	Japan (2) ^b
<i>Europe</i>			
Ankara (Turkey)	Turkey	Turkey	Belgium

^aVacant post.

^bTwo consecutive JPOs in the course of 1981.

^cJPO from a developing country.

^dOne JPO from a developing country.

APPENDIX O

UNIDO technical assistance to the least developed countries, 1 January to 31 December 1981

TABLE 1. DELIVERY, BY COUNTRY AND SOURCE OF FUNDS^a
(In US dollars)

Region/country	Regular programme	UNDP/IPF	SIS	UNDP/Special measures	UNDP ^b	Other sources	Total
<i>Africa</i>							
Benin	1 143	197 665	55 608	—	—	25 426 ^c	279 842
Botswana	6 105	96 024	—	—	—	—	102 129
Burundi	—	309 761	34 833	—	—	3 272 ^c	347 866
Cape Verde	16 867	—	2 000	—	—	—	18 867
Central African Republic	91 970	143 510	15 178	—	—	—	250 658
Chad	—	247	—	—	—	—	247
Comoros	—	—	6 959	—	164 844	—	171 803
Ethiopia	—	2 559 334	(850)	—	—	—	2 558 484
Gambia	—	—	70	—	(18 966)	—	(18 896)
Guinea	85 937	2 592 468	—	—	—	—	2 678 405
Lesotho	55 289	58 350	(8 704)	43 471	—	—	148 406
Malawi	30 122	371 604	608	179 027	—	—	581 361
Mali	38 172	325 438	(998)	—	—	—	362 612
Niger	—	758 692	7 183	—	—	—	765 875
Rwanda	43 897	946 095	(2 867)	162 560	—	118 947 ^d	1 268 632
Somalia	—	605 406	19 892	—	42 811	—	668 109
Uganda	—	341 518	2 808	755	—	—	345 081
United Republic of Tanzania	46 761	1 831 539	12 455	181 542	211 948	34 130 ^c	2 318 375
Upper Volta	17 297	436 400	60 075	—	106 478	49 526 ^c	669 776
Subtotal	433 560	11 574 051	204 250	567 355	507 115	231 301	13 517 632

<i>Americas</i>								
Haiti	54 290	228 634	1 188	74 200	—	15 993 ^c	374 305	
Nicaragua ^e	59 320	—	—	—	—	—	59 320	
Subtotal	113 610	228 634	1 188	74 200	—	15 993	433 625	
<i>Arab States</i>								
Democratic Yemen	54 599	310 328	(65)	(2 276)	182 562	—	545 148	
Sudan	19 978	729 390	22 974	—	1 851	—	774 193	
Yemen	67 263	274 257	—	—	(4 115)	—	337 405	
Subtotal	141 840	1 313 975	22 909	(2 276)	180 298	—	1 656 746	
<i>Asia and the Pacific</i>								
Afghanistan	—	143 781	—	—	—	—	143 781	
Bangladesh	37 437	2 492 025	—	506 060	39 845	—	3 075 367	
Bhutan	16 725	33 215	—	—	7 283	—	57 223	
Lao People's Democratic Republic	—	21 503	11 016	—	—	1 162 ^c	33 681	
Maldives	—	—	—	—	—	—	—	
Nepal	31 298	443 755	15 810	279 582	233	—	770 678	
Samoa	9 880	—	372	—	—	—	10 252	
Subtotal	95 340	3 134 279	27 198	785 642	47 361	1 162	4 090 982	
<i>Regional, interregional and global projects especially designed for LDCs</i>	208 601	445 060	—	—	(365 211)	(912) ^f	287 538	
TOT.	992 951	16 695 999	255 545	1 424 921	369 563	247 544	19 986 523	

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

^bExcluding 14 per cent overhead costs.

^cTrust funds.

^dCapital Development Fund.

^eCountry facing special difficulties.

^fAccounts receivable.

TABLE 2. NEW PROJECT APPROVALS, BY COUNTRY AND SOURCE OF FUNDS^a
(In US dollars)

Region/country	Regular programme	UNDP/IPF	SIS	UNDP/Special measures	UNIDF ^b	Other sources	Total
<i>Africa</i>							
Benin	3 100	—	58 900	—	—	40 189 ^c	102 189
Botswana	16 608	—	6 050	—	85 000	—	107 658
Burundi	—	—	33 900	—	—	2 632 ^c	36 532
Cape Verde	22 900	—	17 950	—	—	—	40 850
Central African Republic	67 200	—	19 350	—	—	—	86 550
Chad	—	—	—	—	—	—	—
Comoros	9 450	—	—	—	275 000	—	284 450
Ethiopia	—	—	—	—	529 000	—	529 000
Gambia	—	—	—	—	—	—	—
Guinea	86 500	—	—	—	—	—	86 500
Lesotho	27 500	—	—	—	—	—	—
Malawi	20 350	16 048	—	111 300	85 400	—	224 200
Mali	18 100	19 000	19 650	—	—	—	36 398
Niger	—	210 290	9 150	—	—	—	56 750
Rwanda	17 400	—	—	—	—	—	219 440
Somalia	15 944	—	—	—	47 800	—	17 400
Uganda	—	796 800	2 660	—	—	—	63 744
United Republic of Tanzania	81 206	960 100	—	211 149	467 654	52 679 ^c	799 460
Upper Volta	19 500	39 900	129 900	—	—	37 871 ^c	1 772 788
Subtotal	405 758	2 042 138	297 510	322 449	1 489 854	133 371	4 691 080

Americas

Haiti	47 090	—	—	—	—	42 665 ^c	89 755
Nicaragua ^d	76 300	—	—	—	—	—	76 300
Subtotal	123 390	—	—	—	—	42 665	166 055

Arab States

Democratic Yemen	5 700	244 000	35 700	—	—	—	285 400
Sudan	34 837	—	28 000	—	3 210	36 964 ^c	103 011
Yemen	74 100	—	—	—	—	—	74 100
Subtotal	114 637	244 000	63 700	—	3 210	36 964	462 511

Asia and the Pacific

Afghanistan	—	—	133 100	—	—	—	133 100
Bangladesh	5 770	562 500	—	—	595 500	—	1 163 770
Bhutan	64 500	53 500	30 200	—	—	—	148 200
Lao People's Democratic Republic	—	7 650	—	—	—	—	7 650
Maldives	—	—	—	—	—	—	—
Nepal	9 947	—	35 000	—	104 856	—	149 803
Samoa	—	—	—	—	—	—	—
Subtotal	80 217	623 650	198 300	—	700 356	—	1 602 523

	<u>131 800</u>	<u>499 800</u>	<u>—</u>	<u>—</u>	<u>154 600</u>	<u>16 900^e</u>	<u>803 100</u>
	855 802	3 409 588	559 510	322 449	2 348 020	229 900	7 725 269

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

^bExcluding 14 per cent overhead costs.

^cTrust funds.

^dCountry facing special difficulties.

^eAccounts receivable.

**TABLE 3. TOTAL PROJECT APPROVALS (NEW PROJECTS, PLUS ADDITIONAL ALLOCATIONS TO ONGOING PROJECTS,
MINUS CANCELLATIONS)^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</i>	<i>Total</i>
<i>Africa</i>							
Benin	3 100	47 700	54 055	—	—	32 909 ^c	137 764
Botswana	10 658	71 985	6 050	—	85 000	—	173 693
Burundi	—	231 400	40 929	—	(6 720)	302 ^c	265 911
Cape Verde	22 900	—	17 950	—	—	—	40 850
Central African Republic	67 200	19 063	20 350	—	—	(3 875) ^c	102 738
Chad	—	8 200	(3 786)	—	—	—	4 414
Comoros	9 450	—	(20 921)	—	275 000	—	263 529
Ethiopia	—	125 277	(30 412)	—	528 597	—	623 462
Gambia	—	—	(1 433)	—	64 037	—	62 604
Guinea	75 300	199 938	(1 935)	—	—	—	273 303
Lesotho	65 300	1 739	(22 336)	111 300	85 400	—	241 403
Malawi	22 089	156 451	3 566	172 500	—	—	354 606
Mali	18 100	176 033	19 650	—	36 058	—	249 841
Niger	—	658 245	(8 542)	—	—	—	649 703
Rwanda	32 650	453 238	47	221 948	—	—	707 883
Somalia	15 944	115 303	1 995	2 000	47 800	—	183 042
Uganda	750	795 228	4 537	32 757	—	—	833 272
United Republic of Tanzania	84 706	2 289 223	(42 926)	211 149	506 528	52 679 ^c	3 101 359
Upper Volta	14 635	128 364	116 973	—	104 939	73 489 ^c	438 400
Subtotal	442 782	5 477 387	153 811	751 654	1 726 639	155 504	8 707 777

<i>Americas</i>								
Haiti	62 340	92 815	(3 484)	5 500	(74 000)	42 665 ^c	125 836	
Nicaragua ^d	76 300	—	—	—	—	—	76 300	
Subtotal	138 640	92 815	(3 484)	5 500	(74 000)	42 665	202 136	
<i>Arab States</i>								
Democratic Yemen	5 700	253 161	27 823	—	206	—	286 890	
Sudan	39 837	265 653	20 169	—	37 551	34 212 ^c	397 422	
Yemen	74 100	—	(3 907)	—	—	—	70 193	
Subtotal	119 637	518 814	44 085	—	37 757	34 212	754 505	
<i>Asia and the Pacific</i>								
Afghanistan	—	180 830	78 121	—	—	—	258 951	
Bangladesh	21 445	2 485 870	—	138 435	590 271	—	3 236 021	
Bhutan	66 660	59 441	(5 700)	—	2 200	—	122 601	
Lao People's Democratic Republic	—	8 160	5 693	—	—	—	13 853	
Maldives	—	—	—	—	—	—	—	
Nepal	27 997	688 363	23 174	12 270	104 856	—	856 660	
Samoa	(97)	(136)	(1 634)	—	(5 330)	—	(7 197)	
Subtotal	116 005	3 422 528	99 654	150 705	691 997	—	4 480 889	
<i>Regional, interregional and global projects especially designed for LDCs</i>								
	164 345	499 800	—	—	154 600	16 900 ^e	835 645	
TOTAL	981 409	10 011 344	294 066	907 859	2 536 993	249 281	14 980 952	

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

^bExcluding 14 per cent overhead costs.

^cTrust funds.

^dCountry facing special difficulties.

^eAccounts receivable.

APPENDIX P

United Nations Industrial Development Fund (UNIDF)

TABLE I. UNIDF STATEMENT OF PLEDGES FOR THE PERIOD 1978-1981
AS AT 31 DECEMBER 1981

(In US dollars)

Country	Total pledges for 1978-1981	Pledges for 1982	Collections during 1978-1981	Total unpaid pledges
<i>General contributions</i>				
Afghanistan	3 500	1 500	3 500	1 500
Algeria	281 000	88 000	200 500	168 500
Angola	40 000	—	20 000	20 000
Argentina	179 290	—	104 290	75 000
Austria	64 516	64 516	64 516	64 516
Bahrain	20 000	5 000	20 000	5 000
Bangladesh	10 079	2 000	6 079	6 000
Barbados	5 000	—	5 000	—
Benin	21 429	2 000	21 429	2 000
Bhutan	3 000	1 000	3 000	1 000
Bolivia	3 000	1 000	—	4 000
Botswana	9 514	—	9 514	—
Brazil	60 000	15 000	60 000	15 000
Bulgaria	193 224	88 028	193 224	88 028
Burma	4 000	1 000	3 000	2 000
Burundi	3 000	—	3 000	—
Cape Verde	2 000	—	2 000	—
Chad	7 068	—	—	7 068
Chile	22 000	10 000	22 000	10 000
China	1 286 977	359 017	1 286 977	359 017
Colombia	15 000	5 700	14 738	5 962
Congo	3 767	—	1 818	1 949
Costa Rica	6 000	—	4 520	1 480
Cuba	131 067	30 054	131 067	30 054
Cyprus	4 423	1 124	2 878	2 669
Czechoslovakia	492 460	171 821	492 460	171 821
Democratic Yemen	6 145	3 306	6 145	3 306
Djibouti	2 000	2 000	—	4 000
Dominica	500	—	500	—
Dominican Republic	5 000	—	5 000	—
Ecuador	6 004	—	6 004	—
Egypt	278 214	63 589	278 214	63 589
Fiji	4 400	1 000	4 400	1 000
Gabon	10 329	—	10 329	—
German Democratic Republic	643 269	139 130	643 269	139 130
Ghana	66 904	—	66 904	—
Greece	67 000	25 000	60 000	32 000
Guatemala	15 000	5 000	15 000	5 000
Guinea	2 073	—	2 073	—
Guinea-Bissau	395	—	—	395
Guyana	4 350	1 184	3 417	2 117
Holy See	1 000	59 143	1 000	59 143
Hungary	285 642	—	285 642	—
India	4 012 595	1 000 000	4 002 309	1 010 286
Indonesia	140 000	50 000	140 000	50 000
Iran	130 000	—	—	130 000
Iraq	750 000	338 983	750 000	338 983
Ireland	74 130	—	74 130	—
Ivory Coast	20 011	—	20 011	—

Country	Total pledges for 1978-1981	Pledges for 1982	Collections during 1978-1981	Total unpaid pledges
<i>General contributions (continued)</i>				
Jamaica	16 000	4 000	16 000	4 000
Japan	36 198	—	36 198	—
Jordan	13 551	—	13 551	—
Kenya	21 415	2 724	11 415	12 724
Kuwait	200 000	75 000	200 000	75 000
Lao People's Democratic Republic	4 500	1 500	3 000	3 000
Lesotho	6 000	2 000	6 000	2 000
Libyan Arab Jamahiriya	305 000	—	305 000	—
Luxembourg	34 268	7 733	34 268	7 733
Madagascar	25 935	—	18 868	7 067
Malawi	8 143	2 700	8 143	2 700
Malaysia	40 000	20 000	40 000	20 000
Malta	5 369	1 500	5 369	1 500
Mauritania	1 854	—	1 854	—
Mauritius	5 023	—	5 023	—
Mexico	51 672	14 373	51 214	14 831
Mongolia	9 064	2 222	9 064	2 222
Morocco	49 505	9 736	49 505	9 736
Mozambique	4 000	—	4 000	—
Nepal	2 300	—	2 300	—
Nicaragua	1 000	—	—	1 000
Nigeria	125 000	—	125 000	—
Oman	34 000	12 000	34 000	12 000
Pakistan	161 616	50 505	111 111	101 010
Panama	6 586	1 000	6 586	1 000
Paraguay	24 000	—	6 000	18 000
Peru	45 000	—	45 000	—
Philippines	90 000	22 500	89 100	23 400
Poland	356 426	180 723	345 131	192 018
Portugal	35 353	15 000	35 353	15 000
Qatar	85 000	30 000	85 000	30 000
Republic of Korea	90 000	30 000	90 000	30 000
Romania	124 999	36 364	124 999	36 364
Rwanda	6 400	—	6 400	—
Samoa	300	—	300	—
Saudi Arabia	4 000 000	1 000 000	4 000 000	1 000 000
Senegal	22 000	—	—	22 000
Seychelles	3 714	1 000	3 714	1 000
Sierra Leone	6 000	—	—	6 000
Singapore	4 000	—	4 000	—
Somalia	2 408	2 400	2 341	2 467
Sri Lanka	12 000	3 000	9 000	6 000
Sudan	40 000	15 000	—	55 000
Suriname	2 000	2 000	—	4 000
Swaziland	2 139	1 069	—	3 208
Syrian Arab Republic	17 372	—	17 372	—
Thailand	80 535	23 144	80 535	23 144
Togo	16 154	3 534	12 620	7 068
Trinidad and Tobago	79 701	20 000	79 701	20 000
Tunisia	58 250	25 200	35 250	48 200
Turkey	385 000	123 967	382 385	126 582
Uganda	127	—	—	127
Union of Soviet Socialist Republics	2 955 225	701 262	2 955 225	701 262
United Arab Emirates	65 000	—	65 000	—
United Republic of Cameroon	7 804	4 240	7 804	4 240
United Republic of Tanzania	7 881	2 424	7 881	2 424
Upper Volta	12 930	—	12 930	—
Uruguay	49 432	—	48 602	830

TABLE 1 (continued)

Country	Total pledges for 1978-1981	Pledges for 1982	Collections during 1978-1981	Total unpaid pledges
<i>General contributions (continued)</i>				
Venezuela	82 000	21 000	82 000	21 000
Viet Nam	2 000	1 000	—	3 000
Yemen	53 011	—	2 011	51 000
Yugoslavia	759 625	—	758 572	1 053
Zaire	14 400	—	—	14 400
Zambia	35 389	11 500	21 389	25 500
Zimbabwe	—	5 000	—	5 000
Total general contributions	20 197 849	5 023 415	19 562 941	5 658 323
<i>Special-purpose contributions</i>				
Argentina	32 000	—	22 400	9 600
Austria	1 645 072	670 967	1 806 863	509 176
Belgium	1 928 920	—	1 862 254	66 666
Brazil	100 108	—	100 108	—
China	113 648	—	113 648	—
Czechoslovakia	237 993	—	237 993	—
Denmark	202 684	—	202 684	—
Finland	813 844	—	459 440	354 404
France	1 011 624	796 460	1 011 624	796 460
German Democratic Republic	16 387	—	16 387	—
Germany, Federal Republic of	6 906 008	1 139 449	6 906 008	1 139 449
Hungary	259 576	6 571	259 576	6 571
Italy	4 128 390	1 694 915	4 425 000	1 398 305
Japan	1 949 408	—	1 184 087	765 321
Malta	9 920	—	9 920	—
Mexico	50 707	—	50 707	—
Netherlands	24 792	—	24 792	—
Norway	116 722	—	112 722	4 000
Portugal	5 624	—	5 624	—
Qatar	10 000	—	10 000	—
Sweden	4 402 420	—	4 095 129	307 291
Switzerland	2 283 078	—	2 283 078	—
United Kingdom	2 808 259	—	770 134	2 038 125
Yugoslavia	66 000	—	6 000	60 000
Total special-purpose contributions	29 123 181	4 308 362	25 976 178	7 455 368
TOTAL UNIDF	49 321 033	9 331 777	45 539 119	13 113 691

TABLE 2. STATUS OF RESOURCES OF UNIDF AS AT 31 DECEMBER 1981

(In thousands of US dollars)

	<i>General pledges</i>	<i>Special-purpose pledges</i>	<i>Total</i>
<i>Pledges</i>			
Pledges	25 221	33 431	58 652
Other income	2 392	(284)	2 108
TOTAL INCOME	27 613	33 147	60 760
<i>Approvals^a</i>			
Expenditures	16 115	16 749	32 864
Obligated	2 468	3 712	6 180
Not yet spent/obligated	5 568	8 438	14 006
Reserved for overheads	1 337	1 893	3 230
TOTAL APPROVALS	25 488	30 792	56 280
AVAILABLE FOR FURTHER PROJECTS	2 125	2 355	4 480
<i>Cash position</i>			
Total pledges and other income	27 613	33 147	60 760
Uncollected	5 658	7 455	13 113
Collected	21 955	25 692	47 647
Disbursements	16 115	16 749	32 864
Cash balance	5 840	8 943	14 783
Outstanding obligations	2 468	3 712	6 180
Reserve for overheads	1 337	1 893	3 230
UNCOMMITTED BALANCE	2 035	3 338	5 373

^aApprovals are based on Financial Service's records as at 31 December 1981.

TABLE 3. CUMULATIVE LIST OF PROJECTS APPROVED FOR FINANCING UNDER UNIDF, CLASSIFIED ACCORDING TO THE UNIDF PRIORITY AREA, AS AT 31 DECEMBER 1981^a

UNIDF priority area (1)	Number of projects (2)	Convertible (including overheads) (in US dollars) (3)	Non- convertible US dollar equivalent (4)	Total (in US dollars) (5)	Percentages		
					Targets based on ^b		
					100% (6)	95% (7)	Actual (8)
Special measures for industrial development of the least developed countries	41	3 432 248	1 781 247	5 213 495	9	10.5	9.1
Transfer and adaptation of technology and development of appropriate technology and industrial information	65	6 209 747	229 939	6 439 686	10	11.7	11.2
Economic and technical co-operation among developing countries	39	2 973 871	1 001 118	3 974 989	9	10.5	6.9
Group training and strengthening industrial training institutions in developing countries	168	10 768 040	7 086 457	17 854 497	10	11.7	31.1
Industrial institutional infrastructure	32	1 330 756	648 057	1 978 813	10	11.7	3.5
Industries processing local natural resources including export- oriented industries	49	7 250 931	560 164	7 811 095	12	14.2	13.6
Industries satisfying basic needs, and support to rural industries	32	4 076 080	338 118	4 414 198	8	9.4	7.7
Promotional activities	78	8 807 240	689 613	9 496 853	8	9.4	16.6
Other activities	4	164 917	—	164 917	5	5.9	0.3
TOTAL	508	45 013 830	12 334 713	57 348 543	81	95.0	100.0

^aValues in columns 3-5 reflect approvals as recorded by the UNIDF secretariat.

^bCf. document ID/B/C.3/60, table 2.

APPENDIX Q

UNIDO General Trust Fund

STATUS OF UNPAID PLEDGES AS AT 31 DECEMBER 1981

(In US dollars)

Country	Contributions pledged for 1977 and prior years			Collections in current year	Unpaid pledges					Total balance due
	Unpaid pledges 1 January 1981	Adjustments to pledges	Total due		Prior to 1974	1974	1975	1976	1977	
Bolivia	300	—	300	—	—	—	—	—	300	300
Central African Republic	900	—	900	—	—	—	900	—	—	900
Congo	14 848	(1 664)	13 184	—	7 000	—	—	6 184	—	13 184
Gambia	1 951	(421)	1 530	—	1 530	—	—	—	—	1 530
Guyana	1 569	(236)	1 333	1 333	—	—	—	—	—	—
Iran	65 949	—	65 949	—	—	—	831	118	65 000	65 949
Kenya	7 626	(2 072)	5 554	—	—	—	—	2 777	2 777	5 554
Lebanon	4 857	(1 161)	3 696	—	—	—	3 696	—	—	3 696
Madagascar	8 969	787	9 756	9 756	—	—	—	—	—	—
Philippines	20 000	—	20 000	20 000	—	—	—	—	—	—
Viet Nam	1 000	—	1 000	—	—	—	1 000	—	—	1 000
Saudi Arabia	20 000	—	20 000	20 000	—	—	—	—	—	—
Sierra Leone	3 000	—	3 000	—	1 000	—	1 000	—	1 000	3 000
Sudan	21 228	—	21 228	—	10 000	—	—	1 228	10 000	21 228
Syrian Arab Republic	192	3	195	195	—	—	—	—	—	—
Uganda	1 000	—	1 000	—	—	—	—	—	1 000	1 000
Yemen	4 000	—	4 000	—	—	1 000	1 000	1 000	1 000	4 000
Zaire	36 400	—	36 400	—	10 000	—	12 000	—	14 400	36 400
TOTAL	213 739	(4 764)	209 025	51 284	29 530	1 000	20 427	11 307	95 477	157 741