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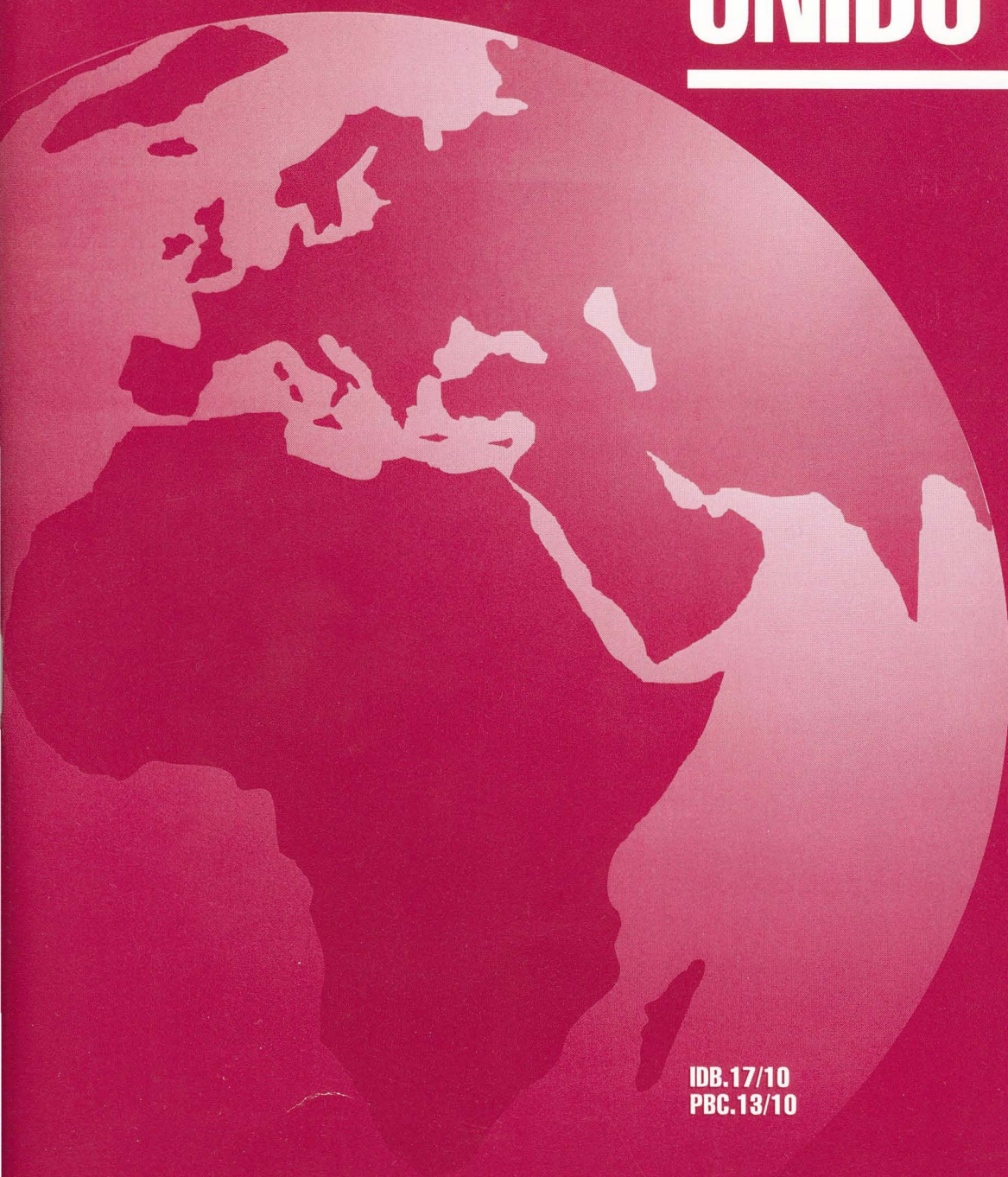
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# Annual Report



## UNIDO 1996



IDB.17/10  
PBC.13/10



# Annual Report



## **UNIDO 1996**

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**Industrial Development Board  
Seventeenth session, 1997**

**Programme and Budget Committee  
Thirteenth session, 1997**

IDB.17/10  
PBC.13/10

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## MESSAGE FROM THE DIRECTOR-GENERAL

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*In the comprehensive reform of UNIDO, 1996 was the third year. It was the year in which significant staff reductions—certainly the most painful part of the reform process—were implemented. It was also a year that saw the ultimate benefits of our reforms reflected in a remarkable rise in the demand for new UNIDO programmes and projects.*

*I have always maintained that the expertise of our staff is the most valuable resource of UNIDO. It was with great personal regret therefore, that early in the year I had to undertake a staff reduction programme of large magnitude. This was not anticipated at the beginning of our reforms when our clear goal was to generate a "reform dividend" that would lead to the strengthening of substantive programmes through redeployment of staff. However, shortfalls in our assessed contributions—caused primarily by the continued non-payment and announced withdrawal of the USA—necessitated a budget reduction and, subsequently, a reduction in staff strength. UNIDO lost a great number of long-serving dedicated colleagues whom I sincerely thank for having devoted their professional careers to the cause of development.*

*At the same time, our unprecedented reforms clearly bore fruit in 1996. The year saw an overwhelming response to the new services UNIDO now offers to the developing countries and countries with economies in transition. The effective demand for our new programmes, as measured in the value of project approvals, rose by an impressive 35 per cent compared with the previous year. We have reinforced our focus on Africa and the least developed countries and have been successful in diversifying considerably our sources of funds.*

*As a further result of the reforms, we have brought down our administrative and operational support costs in technical cooperation delivery, from 22 per cent in the biennium 1992-1993 to only 14.5 per cent now—the lowest among all comparable United Nations agencies measured. Likewise, staff productivity in terms of per capita delivery has increased dramatically.*

*The continued relevance of UNIDO was reaffirmed during the year in many fora, most notably in the General Assembly of the United Nations. In its resolution 51/170, adopted in December 1996, the General Assembly stressed the important role of UNIDO in enhancing international cooperation in the field of industrial development and welcomed the "major programme of reform and restructuring process undertaken by UNIDO." The same resolution called upon UNIDO "to continue carrying out its central coordinating role in the field of industrial development in the overall context of existing coordinating mechanisms in the United Nations system."*

*Notwithstanding this forceful confirmation of our mandate, it is fair to say that some Member States of UNIDO maintained a more critical attitude towards the Organization. This led, at the end of the year, to the launching of an intense consultation process on the future of UNIDO. I welcome this development. I have always emphasized that UNIDO—like all United Nations organizations—is what its Member States want it to be. The political and financial support from our constituency is the basis from which we operate. Therefore, I find it most encouraging that Member States engage in constructive and indeed highly substantive discussions on the priority programmes they want us to develop and implement in the future.*

I expect important guidance for our future work from these ongoing deliberations. As part of this process, Denmark launched at the end of 1996 an assessment of UNIDO by an independent team of development experts. At the time of writing this message, the final report of the assessment team had just been issued: It confirms the relevance of UNIDO as a specialized United Nations agency, the high competence of our staff, and our unique role in promoting industrial development.

I am confident that in the course of 1997 Member States will successfully conclude their consultations on the future of UNIDO and that we will emerge from this process with a clear mandate to continue our critically important work.



Mauricio de Maria y Campos

## CHAPTER I

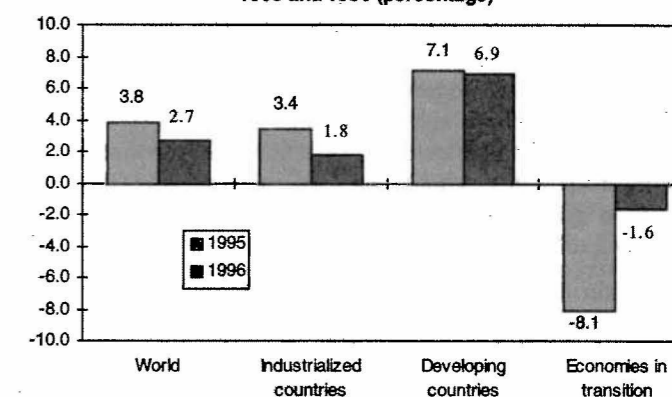
### GLOBAL AND REGIONAL INDUSTRIAL DEVELOPMENT TRENDS: ISSUES AND PROSPECTS FOR DEVELOPING COUNTRIES

1. World economic activity continued to expand in 1996, with industrialized countries and developing countries recording aggregate gains in output. World gross domestic product (GDP) grew at 2.9 per cent during the year, compared with 2.5 per cent in 1995. Growth was supported by higher domestic demand, against a backdrop of lower growth in world trade. In many regions of the world, improved economic conditions helped to boost consumer and business confidence, resulting in higher domestic consumption and investment demand. Investment demand was spurred further by spill-over effects from a sharp rise in foreign direct investment (FDI) inflows in 1995, during which world FDI inflows grew by 40 per cent to an unprecedented \$315 billion. On the other hand, GDP growth was hindered by prolonged inventory adjustment and slower growth in world merchandise trade. The growth of merchandise trade fell (in volume terms) from 9 per cent in 1995 to about 5.5 per cent due mainly to sluggish import demand from industrialized countries.

2. Despite the higher GDP growth, world manufacturing activity continued to slow in 1996, while growth in the volume of trade in manufactures dropped sharply from 9 per cent in 1995 to 4.2 per cent. Manufacturing value added (MVA) grew at 2.7 per cent in 1996 compared with 3.8 per cent a year earlier (figure 1). The slower growth was largely due to a sharp drop in manufacturing activity and demand for manufactured goods in industrialized countries, which was only partly offset by stronger growth in developing countries and continued recovery in economies in transition.

3. In industrialized countries, MVA growth fell considerably in 1996 for the second consecutive year, to 1.8 per cent from 4.0 and 3.4 per cent in 1994 and 1995 respectively. This occurred despite a small improvement in GDP growth and a sharp increase in FDI inflows during the previous year. In these countries, GDP grew at 2.5 per cent compared with 2.1 per cent a year earlier.

Figure 1. Growth of world manufacturing value added, 1995 and 1996 (percentage)



FDI inflows, however, rose an impressive 53 per cent in 1995, increasing the share of world FDI flows accounted for by the industrialized countries to 65 per cent from 59 per cent in 1994. The share of world MVA attributable to industrialized countries dropped to 76.6 per cent, from 77.5 per cent in 1995.

4. In the United States, annual MVA growth fell to 2.3 per cent, from 3.5 per cent in 1995. This was due to weaker growth in domestic and foreign demand for manufactured goods. High levels of household debt dampened consumer spending while exports of capital goods showed a downward trend during the year. Western Europe, which accounted for about a third of world MVA, recorded considerably lower MVA growth, at only 0.4 per cent compared with 3.4 per cent in 1995. The region continued a strict fiscal policy as many countries attempted to meet the Maastricht targets for economic and monetary union (EMU). Slower economic and manufacturing growth led to higher unemployment rates in many countries, notably France and Germany. In Japan, MVA grew at 3.9 per cent, compared with 3.4 per cent in 1995. Exports were the main source of growth, stimulated by a more than 30 per cent depreciation of the Japanese yen against the United



States dollar since its peak in 1995. Public works expenditure increased after the announcement of an expansionary fiscal package in 1995. Housing investment was stimulated by relaxed credit conditions.

5. Developing countries continued to outpace industrialized countries in both GDP and MVA growth during the year, and their share of world MVA increased to 20.6 per cent from 19.7 per cent in 1995. Their MVA grew at 6.9 per cent in 1996 compared with 7.1 per cent in 1995, although growth remained uneven. However, the growth gap among developing regions was narrower compared with that in the previous year due to improved performance in Africa and in Latin America and the Caribbean, and slower growth in Asia. Growth in the former regions was spurred by recovery in major economies and continuing economic reforms, while performance in Asia was dampened by lower export growth, particularly in the electronics sector, as well as by past deflationary macroeconomic policy.

6. In economies in transition, GDP growth continued to be uneven. Central and Eastern Europe registered lower growth while the Russian Federation was still deep in recession. Many countries in the region have, however, continued to make progress in reducing inflation. FDI inflows in the region continued to surge during the year, fuelled by rapid processes of privatization and economic liberalization. As a whole, the GDP of economies in transition continued to shrink (-2.6 per cent in 1996 compared with -3.0 per cent a year earlier).

7. Within the region, manufacturing activity regained some ground, recording MVA growth of -1.6 per cent compared with -8.1 per cent in 1995. Central and Eastern Europe succeeded in sustaining growth, while decline continued in the countries of the former Soviet Union. Export performance was hindered by slower external demand, particularly from neighbouring industrialized countries. In 1994 for example, Eastern Europe exported more than 50 per cent of its manufactured goods to Western Europe. Growth in the Russian Federation remained weak, with domestic investment falling by 17 per cent during the first nine months of the year. Light industries continued to face mounting competition from imports, registering a sharp drop in production while consumer spending continued to be weak.

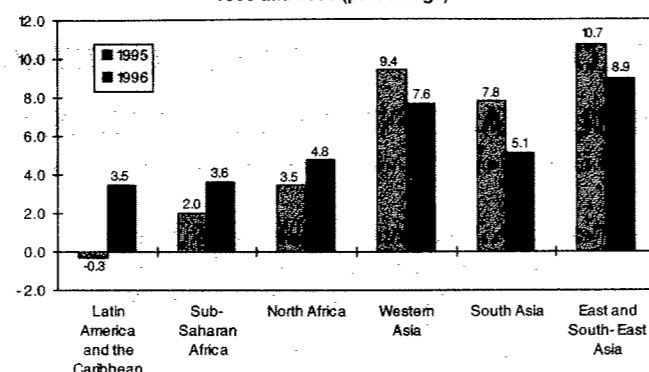
### Regional trends

8. Manufacturing performance in developing countries was affected by slower world trade, which had an adverse impact on export-oriented economies, particularly in East and South-East Asia. At the same time, lower FDI inflows to developing economies during 1995 did not bode well for investment growth in 1996. Developing countries accounted for 32.7 per cent of total world inflows, down from 38.6 per cent in 1994. The adverse impact on growth was partly offset by stronger domestic demand, led by high levels of investment in infrastructure projects.

### Latin America and the Caribbean

9. Recovering from the recession of the previous year, MVA in Latin America and the Caribbean grew at 3.5 per cent in 1996 (figure 2). This is attributable to strong recovery in major regional economies, notably Argentina and Mexico, where market confidence was restored by continuing economic reform efforts, and higher exports boosted growth. The region accounted for about a quarter of developing countries' MVA in 1995.

Figure 2. Subregional growth of manufacturing value added, 1995 and 1996 (percentage)



10. In Mexico, MVA grew at 5.6 per cent, compared with a fall of 4.6 per cent in 1995. Total export earnings during the first nine months of 1996 were 19 per cent higher than for the same period a year earlier. Domestic demand recovered as consumer and investor confidence was restored by continuing adjustment efforts in the wake of the financial crisis in early 1995. Also in Argentina, manufacturing performance improved and MVA growth rose from -7.6 per cent in 1995 to 3.2 per cent in 1996. Gross fixed investment recovered significantly towards the second half of the year, while total exports rose by 10 per cent during the first nine months. Better performance in agriculture also helped to boost growth, particularly for related industries such as tractor manufacturing and agro-chemicals.

11. In Brazil, tight monetary policies introduced in mid-1995 have lowered economic growth to a more sustainable level. In line with lower GDP growth, MVA growth slowed to 2.8 per cent compared with 3.0 per cent in 1995, above all due to a considerable slow-down in the production of capital goods. However, FDI inflows remained strong, fuelled by privatization and a surge in joint-venture agreements with multinational automobile manufacturers. In Chile, both GDP and MVA growth moderated from 8.5 and 6.1 per cent in 1995 to 4.7 and 3.3 per cent respectively in 1996. Domestic consumption declined considerably, although gross fixed investment remained strong, while FDI inflows grew sharply during the first nine months of the year at 35.3 per cent.

12. Against a backdrop of rapid globalization, Latin America and the Caribbean faces the challenge of

sustaining and enhancing economic growth and international competitiveness. This entails continuing economic reform and liberalization efforts, raising saving and investment rates, upgrading technological capabilities, restructuring industries and developing human capital. The saving and investment rates of the region, both below 20 per cent of GDP, were considerably lower than those for East and South-East Asia. FDI inflows in the region, which grew at only 5 per cent in 1995 (compared with 30 per cent in 1994) and which accounted for about 27 per cent of total inflows in developing countries, were also much lower than for East and South-East Asia.

13. Unlike countries in East and South-East Asia, industries in the region are still dominated by labour-intensive and resource-based manufacturing. In terms of MVA, the top three manufacturing industries in 1995 were food manufacturing, chemical products and petroleum refineries, which have a combined MVA share of about 32.5 per cent. Transport equipment was the fourth largest industry, accounting for 7.6 per cent of total MVA, while skill-intensive industries such as electrical and non-electrical machinery accounted for 5.6 and 4.9 per cent respectively.

### Sub-Saharan Africa

14. In 1996, sub-Saharan Africa as a whole continued to register encouraging manufacturing performance, spurred by continuing macroeconomic reforms and privatization programmes. MVA grew stronger (its third consecutive year) at 3.6 per cent, led by recovery of major economies from the recession in the previous year. MVA growth outpaced that of GDP, which slowed to 2.5 per cent from 3.3 per cent in 1995. A number of the larger economies recorded higher growth while many LDCs registered lower growth compared with the previous year. In Cameroon, Nigeria and Zimbabwe, MVA growth was higher at 5.0, 0.8 and 4.9 per cent respectively in 1996, compared with -1.0, -6.2 and 1.5 per cent in 1995. The three countries accounted for more than a quarter of the subregion's MVA share. On the other hand, about 20 of the 33 LDCs in the region recorded lower MVA growth compared with 1995.

15. The main challenge facing the subregion is to raise and sustain real per capita growth in incomes. This is made more difficult by population growth, which averaged 2.5 to 3.0 per cent *per annum* from 1980 to 1995. Pervasive poverty has led to low consumer demand, and saving and investment rates, hindering growth and productivity.

16. The subregion continued to be marginalized from the trend towards economic globalization, as reflected by its small share in world FDI inflows and weak manufactured exports. In 1995, the subregion accounted for only 2.9 per cent of total FDI inflows to developing countries and only 0.9 per cent of total global inflows. Such inflows have also been erratic, falling by 3 per cent in 1995 compared with a sharp growth of 65 per cent in

1994. At the same time, political uncertainties, and constraints in infrastructure and human resources development, have all hindered the growth of FDI inflows.

17. In terms of exports, sub-Saharan Africa is still highly dependent on agriculture. The subregion accounted for less than 2.5 per cent of world trade in manufacturers in 1994. Less than 10 per cent of total exports are manufactured goods. Moreover, its manufacturing base is not only small (accounting for less than 0.4 per cent of world MVA in 1995), but continues to be based narrowly on the primary processing of local agricultural and mineral commodities, which have low income elasticities in international markets. In 1995, labour-intensive food, beverage, tobacco and textile industries accounted for slightly more than 40 per cent of the subregion's MVA, while skill-intensive transport equipment, electrical and non-electrical machinery accounted for a combined share of less than 8 per cent.

18. A priority of the subregion is to accelerate manufacturing activity and build a diversified and efficient manufacturing base. This quest for manufacturing growth must be closely linked to agriculture to exploit initial comparative advantages in a relatively short time. Eventually, the subregion will have to face the challenge of broadening and deepening its manufacturing base and expand into skill-intensive industries producing goods with higher income elasticities. This process will require upgrading technological capabilities and developing human capital. The participation of foreign investors and the domestic private sector would help to quicken the process.

### North Africa and Western Asia

19. In North Africa, MVA growth rose to 4.8 per cent from 3.5 per cent in 1995. GDP growth increased in 1996 to 3.7 per cent compared with 1.7 per cent in 1995. Algeria, Egypt and Morocco, with a combined share of subregional MVA of close to 75 per cent, recorded higher MVA growth of 2.3, 4.0 and 5.0 per cent respectively, compared with 1.4, 3.6 and -0.5 per cent in 1995. These countries have all made progress in achieving macroeconomic stability and liberalizing external trade.

20. In Western Asia, MVA growth slowed to 7.5 per cent from 9.4 per cent in 1995. Strong MVA growth in the Islamic Republic of Iran was offset by lower growth in many other countries in the subregion. MVA in the Islamic Republic of Iran grew by 6.7 per cent, compared with 4.0 per cent in 1995, led by higher production in petroleum-related industries. Higher demand for petrochemical exports also strengthened growth. In Turkey, MVA growth fell to 9.4 per cent from 13.9 per cent in 1995, while MVA growth in Saudi Arabia remained stable at 5.4 per cent.

21. Manufacturing activities in North Africa and Western Asia, which are concentrated in oil and oil-

related sectors, have stayed at relatively low levels over the past decade. Investment has largely been driven by the public sector with limited, albeit growing, private sector participation. FDI inflows into the subregion accounted for less than 5 per cent of total inflows to developing countries in 1995. The growth of these inflows continued to contract, at -5.7 per cent in 1995 compared with -6.5 per cent in 1994. The subregion faces the key challenges of raising FDI inflows and diversifying its manufacturing base. Enhanced long-term growth will require sustained economic reforms, together with increased saving and investment rates and greater participation of the private sector.

#### *South Asia*

22. MVA growth in South Asia slowed to 5.1 per cent in 1996, down from 7.8 per cent in 1995, in line with slower GDP growth. India, which accounts for close to 80 per cent of the region's MVA, recorded MVA growth of 5.5 per cent, compared with 8.0 per cent in 1995. Growth of total exports slowed significantly during the year while tighter monetary conditions also reduced output. High interest rates, lower demand and high inflation had a negative effect on corporate profits during the year. Growth in Pakistan and Sri Lanka also fell to 3.7 and 5.3 per cent from 4.4 and 7.8 per cent respectively in 1995.

23. The subregion has benefited considerably from economic deregulation and liberalization in recent years. It has been able to exploit its comparative advantage in labour-intensive industries, and competitive pricing (rather than quality) has enhanced performance in international markets. The subregion's MVA and exports are still dominated by low value-added products such as textiles. As liberalization continues and tariff rates fall, domestic industries face mounting competitive pressure from imports. The subregion faces the challenge of enhancing its industrial competitiveness through a more diversified and efficient industrial structure. In addition to an appropriate policy context, this requires constant upgrading of technological capabilities and human capital, greater private sector participation and development of an efficient physical infrastructure.

#### *East and South-East Asia*

24. East and South-East Asia, including China, continued to record the highest rate of MVA growth in the world. MVA growth, however, slipped to 8.9 per cent in 1996, from 10.7 per cent in 1995. Stronger domestic demand helped to partly offset the sharp fall in the region's export growth. In China, despite tight monetary policies, MVA growth remained strong at 11 per cent, compared with 12.2 per cent in 1995. However, monetary policy did help to curb inflationary pressures significantly and effect price stability, paving the way for more sustainable growth. Total exports slowed

significantly, falling by about 3 per cent during the first nine months, while private consumption and FDI remained buoyant.

25. Growth was also lower in Asian newly industrializing economies, with the exception of Hong Kong. Singapore, the Republic of Korea and Taiwan Province of China were adversely hit by the global exports slow-down, particularly in the electronics sector, and their MVA growth fell sharply in 1996 to 5.8, 6.9 and 3.0 per cent from 10.3, 12.0 and 4.0 per cent respectively in 1995. Electronics account for a large percentage of export revenues in these economies. In Singapore, electronics account for about 40 per cent of manufacturing output and more than 60 per cent of non-oil exports. During 1996, world demand for semiconductors plummeted, owing to overproduction in the previous year.

26. Among the ASEAN countries, MVA growth remained strong in Indonesia and Malaysia and moderate in Thailand. These countries registered MVA growth of 13.8, 13.7 and 7.9 per cent in 1996 compared with 13.7, 13.6 and 10.1 per cent respectively in 1995. Buoyant domestic demand, particularly from infrastructure investments, helped to support growth as exports moderated. The Philippines turned in better MVA growth of 5.1 per cent (compared to 4.8 per cent in 1995) fuelled by higher foreign investment and improved manufactured exports.

27. East and South-East Asia comprise a diverse group of economies at varying stages of economic development. On the one hand, it contains about one-fifth of the world's LDCs, and on the other hand, some of its rapidly industrializing countries have attained a level of per capita income similar to that of industrialized countries. Growth fundamentals in the latter countries remain strong despite occasional cyclical slow-downs (such as the slump in electronics exports experienced in 1996). High levels of domestic demand and expanding intra-regional trade have both helped to support growth. However, these countries face increasing competition in international markets from many developing countries, notably from other ASEAN countries and China. The challenge for the rapidly industrializing countries is to maintain their market position by increasing productivity, and ascending production ladders, against a backdrop of rising costs.

28. China and the ASEAN countries face another set of challenges. Concerns over current account deficits and economic overheating have arisen in many of these countries in recent years. Measures have been taken to restrain domestic demand and to remove capacity constraints by investing in infrastructure projects. There is also a need for these countries to enhance their international competitiveness by investing in upgraded technological capabilities and human capital.

## CHAPTER II

### UNIDO REFORM: 1996

1. Following a comprehensive report on the UNIDO reform to the sixth session of the General Conference in December 1995, the Director-General was requested to continue to implement the reform process, including a new organizational structure and a coherent application of the identified priorities by further focusing the activities of the Organization. The Industrial Development Board, during its fifteenth session in May 1996 and in its sixteenth session in November 1996, requested the Director-General to continue efforts to implement and conclude the reform process, whereby the Board in both sessions requested action in specific areas, as reported below.

#### **New organizational and staff structure**

2. Based on the results and recommendations of the UNIDO reform process and in accordance with the merger of Major Programmes as contained in the approved programme and budgets, 1996-1997 and related contingency plans, a new organizational structure of UNIDO took effect on 1 March 1996.

3. A new Policy Coordination Office was established within General Management to consolidate critical planning and oversight functions. This new office effectively links the Organization's strategic planning and thematic priority setting with the development, approval and evaluation of its substantive programmes and projects. It oversees the entire process of managing UNIDO services (project cycle management), including in particular the promotion of cross-organizational teamwork and consolidated reporting on the Organization's services to Member States. The neutrality of both quality assurance and evaluation has been reinforced by their organizational delinking from any programme development or implementation considerations.

4. The former Country Strategy and Programme Development Division and the former Mobilization and Management of Financial Resources Division were merged into a single Country Programmes and Funds Mobilization Division, thus ensuring that the programming and the funds mobilization functions are discharged as integrated and simultaneous activities.

5. The Industrial Information Section was redeployed to the Investment and Technology Promotion Division, resulting in enhanced synergy effects of these closely interlinked programmes. The Operational Support Services Division was merged with the Division of Administration and an overall significant streamlining of administrative and support functions ensured the safeguarding of UNIDO's basic delivery capacity for substantive services.

#### **New programme initiatives - enhancing UNIDO's relevance**

##### *High-impact programmes*

6. Five such programmes, which reflect the focus on the Organization's new thematic priorities and respond to expressed priority demands of Member States, were developed in 1995 and implementation began in 1996. Specifically, these programmes concern: (a) integrated advisory services for industrial policy formulation and competitiveness strategies; (b) quality control in food processing in sub-Saharan Africa; (c) global abatement of mercury pollution in gold-mining; (d) development of entrepreneurship for women; and (e) promotion of competitive and innovative small and medium enterprises. For all five high-impact programmes, full funding has been obtained from donors.



**Alliance for Africa's Industrialization**

7. The Alliance represents UNIDO's special effort complementary to the Secretary-General's United Nations System-wide Special Initiative on Africa that was formally launched in March 1996 and that calls upon United Nations agencies to work collectively for the enhancement of African development. Details of all relevant features of this special new initiative are provided in chapter V.B of this report.

**Private sector involvement**

8. The growing importance of the private sector as the main agent of industrial development had been identified at the beginning of the reform process as one of the strongest trends to which a renewed UNIDO would have to respond. The Organization has thus endeavoured to ensure not only that its services ultimately benefit the private sector—which applies to the great majority of technical cooperation projects—but also to involve private sector entities, above all private sector institutions and associations, more directly as project counterparts.

9. This increasing involvement has significantly broadened the range of UNIDO counterparts and has led to direct interaction with industry and industrial associations. As a result, the services demanded from UNIDO have become more specific and sophisticated: up-to-date expertise is needed to advise, for instance, on competitive and clean technologies and on quality management. As a consequence, UNIDO staff has to be highly specialized and must command direct industry-level experience so as to be able to compete in a market-driven environment calling for rapid responses. As is evident from the activities described in the various chapters of this report, private sector involvement is noticeable throughout the various technical cooperation programmes of UNIDO, e.g. in enterprise development and restructuring, industrial policy and strategy advice, small and medium industries promotion, environment-related activities, investment promotion and technology transfer.

10. Based on discussions and recommendations emanating from the open round table of industrialists during the sixth session of the UNIDO General Conference in December 1995, UNIDO has further developed two complementary approaches aimed at extending and strengthening its links with the private sector in an advisory capacity, i.e. the establishment of international and national business advisory councils (see chapter IV.G of this report).

**Other specific programme initiatives**

11. In the course of the year, the Organization not only further refined and enhanced its activities addressing the thematic programme priorities, but specifically reformulated its strategies and programmes for the least

developed countries (chapter V.G). In recognition of UNIDO programmes and achievements in response to the growing need for South-South cooperation, the Organization was invited to participate in the substantive preparation of the Group of 77 South-South Conference on Trade, Finance and Investment, and also participated in the Conference itself in Costa Rica in January 1997 (see chapter III.C).

**Global forum role**

12. The global forum role, responding to the increasingly globalized and interdependent world economic environment, provides an opportunity for UNIDO to take the lead in the international dialogue and exchange of experience on industrial development issues. Within this global forum role, UNIDO also carries out industry-related normative activities designed to enhance economic and social welfare at both national and global levels.

13. Work began early in the year on the conceptualization of "normative activities", drawing on technical competence and knowledge in fields in which UNIDO is a leader as reflected in the Organization's established credibility and recognition as an impartial and neutral international force. As a first step in this direction, efforts concentrated on enhancing the application and dissemination of in-house knowledge, expertise and databases, i.e. increased dissemination and aggregation of industrial statistics; extension of the activities on metrology, standards and quality control from a national to an international level as well on formulating a UNIDO industrial development index as an analytical instrument to monitor country-level achievements.

**Inter-agency coordination**

14. An essential dimension of the UNIDO reform process relates to the division of labour and responsibilities among the various entities and funding organizations of the United Nations system, and specifically to the required definition of programme focus and clear-cut delineation of areas of expertise. UNIDO therefore in early 1996 began a coordination initiative on industrial development in the United Nations system, exploring the cooperation potential with selected agencies.

15. As a further step in this direction, the Director-General of UNIDO and the Secretary-General of the United Nations Conference on Trade and Development intensified efforts relating to cooperation and coordination between the two organizations based on existing mandates and core competencies. A joint communiqué was signed in April 1996 covering regular consultations and supporting the improvement of working relations at all relevant levels; cooperation in science and technology, investment promotion and enterprise development, especially for small and medium

enterprises; and the improvement of coordination across the board to use resources more effectively and efficiently, particularly for the interrelated issues of information, investment and technology promotion.

16. A memorandum of understanding between UNIDO and the Inter-American Development Bank was signed in February 1996, establishing a model agreement for services to be provided by UNIDO in respect of technical cooperation projects financed by Bank loans. This model agreement is the first of its kind between UNIDO and an international development financing institution. Similar agreements are expected to be concluded with other such institutions.

**Management of UNIDO services**

17. One of the main areas of the UNIDO reform process concerns the streamlining and simplification of the entire UNIDO programme and project cycle, i.e. programming and project development, approval and implementation.

18. Early in 1996, internal concept papers for all seven thematic priorities were developed, clearly outlining for each priority relevance and objectives as well as the focus and component programmes for the biennium, connected with the relevant cross-organizational cooperation arrangements. At the same time, UNIDO undertook to significantly streamline the development process for its services. Two bulletins were issued by the Director-General providing detailed policy guidelines on the development of programmes and projects under the thematic priorities, defining the roles and responsibilities of the various organizational units in this process; redefining the functions, authority, responsibility and accountability of the Programme and Project Review Committee as the approval body for UNIDO programmes and projects; and establishing rules of procedure for discharging its responsibilities.

19. A Director-General's bulletin on principles and procedures for project implementation was under preparation in 1996 for issuance in 1997. It will be based on lessons learned during 1996 pilot operations with regard to the decentralization of certain operational support functions. Delegation of authority and accountability will form the main cornerstones of the new guidelines.

20. The new proactive and focused programming approach—which is expected to lead to a more limited number of larger programmes/projects with higher impact—is complemented by a rigorous screening of *ad hoc* requests for UNIDO services.

**Improvement of supporting processes**

21. A revised recruitment scheme was introduced in 1996 with enhanced delegation of authority to line managers. In the selection process for all vacant posts, high participation by senior staff and supervisors is now ensured from the screening of candidates through interviews to the final selection. A new placement and promotion system was introduced, enhancing the principle of competitiveness in filling vacancies for all categories of staff. Similarly, a new staff performance evaluation system went into effect, underscoring the importance of managerial effectiveness and accountability, while also stressing the link between individual and organizational performance. Training programmes and facilitation guidelines for these new systems supported their implementation by managers and staff.

22. An internal cost accounting system allowing comparison between cost incurred and income earned at the programme level was developed and put into operation. The management information expected to be derived from this system will allow better allocation of operational budget resources in line with proven demand for technical cooperation services earning supporting cost income.

23. Work has continued on the formulation of a new Management Information Service strategy and policies, which are expected to provide the framework for the management of information as an institutional resource and will define the goals to be achieved for the next three to five years as well as the means to achieve such goals. The strategy will include: (a) an overall needs analysis of the support that information technology should provide to business processes as well as to administrative services of UNIDO; (b) an assessment of the current situation; (c) a technical architecture in the form of overall standards of hardware, software, databases and networks; (d) an organizational architecture; and (e) a prioritization based on available human and financial resources.

24. In line with the new management principles, new procedures and administrative guidelines have been developed to simplify administration and give greater autonomy and flexibility to Investment Promotion Service offices. A further decentralization and delegation of authority to UNIDO Country Director offices is envisaged following the proposed introduction of subregional offices. Meanwhile, a new quarterly reporting system for UCDs was introduced, linked to the annual work programme of field offices and establishing uniform reporting requirements.

## CHAPTER III

### TECHNICAL COOPERATION PROGRAMMES OF UNIDO: 1996 ACHIEVEMENTS

1. The present chapter provides a review of UNIDO technical cooperation activities during 1996. In section A, an aggregate statistical analysis provides a broad overview of the direction taken of UNIDO activities, while section B gives a more detailed description of specific activities undertaken by the Organization to address the seven thematic priorities. Through the second section, readers can develop a greater understanding of the actual projects and services provided. A complete list of all newly approved, ongoing and completed projects in 1996 is contained in addendum 2 to the present report. Sections C to E of this chapter provide a summary account of UNIDO activities in areas that cut across all thematic priorities: economic and technical cooperation among developing countries, human resources development, and integration of women in industrial development.

#### A. Aggregate statistical analysis

2. In terms of technical cooperation, 1996 was a year of transition. Total technical cooperation delivery decreased to just under \$91 million from \$108.5 million a year before (see figure 3). However, when excluding the 1995 implementation value of the newly-independent

Figure 3. Technical cooperation delivery and approval, 1990 - 1996

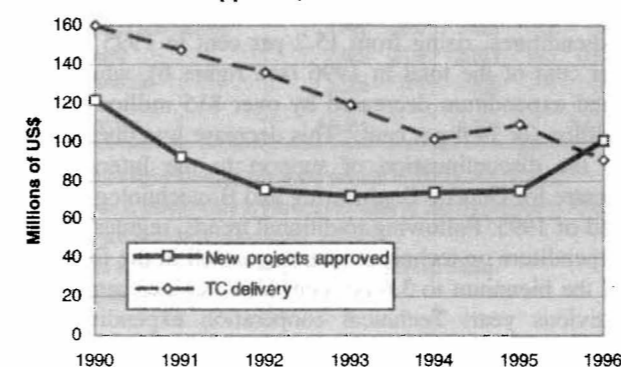
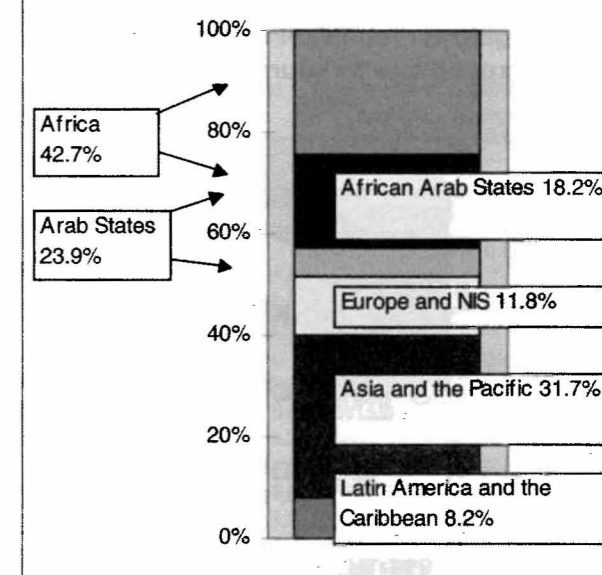


Figure 4. Technical cooperation expenditure by region, 1996  
(excluding global / interregional projects)

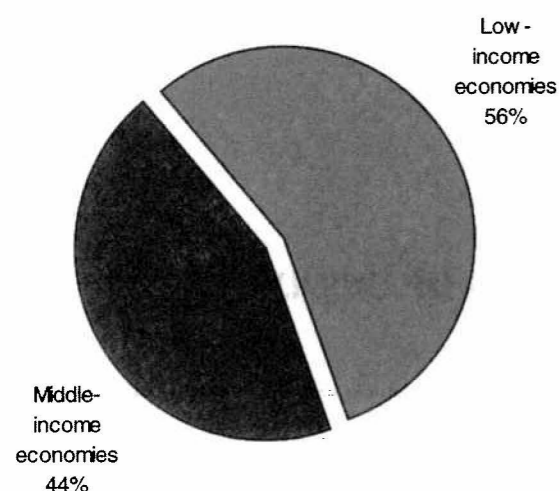


International Centre for Genetic Engineering and Biotechnology and the uneven distribution of regular budget-financed technical cooperation, delivery for 1995 and 1996 was roughly equivalent. Considering the recent large staff reduction and concomitant disruptions in operations, the level of 1996 technical cooperation is a positive reflection on the success of reform.

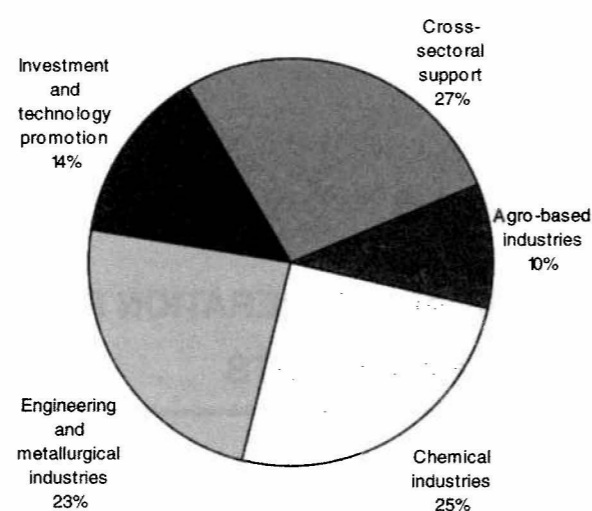
3. A review of the regional breakdown in technical cooperation delivery reveals that the African region continues to be the dominant recipient of UNIDO services (see figure 4). Excluding global and interregional projects, the African share of technical cooperation expenditures in 1996 was some 43 per cent, a slightly higher percentage than one year earlier. The Asia and Pacific region continued to be the second



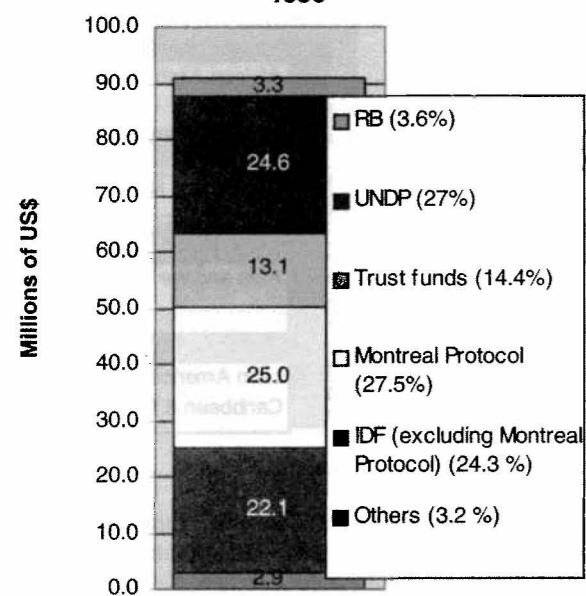
**Figure 5. UNIDO technical cooperation delivery, 1996 by World Bank classification**



**Figure 7. Technical cooperation expenditure by sector, 1996**



**Figure 6. Technical cooperation expenditure by source of funds, 1996**

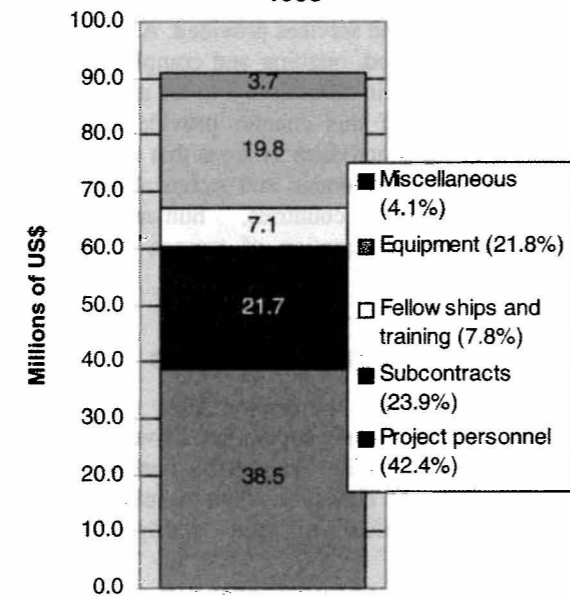


largest recipient region of UNIDO services, with nearly 32 per cent of total technical cooperation expenditures.

4. In accordance with the World Bank classification system, 56 per cent of UNIDO 1996 technical cooperation delivery was provided to low-income economies, (see figure 5), and 44 per cent to middle-income economies.

5. As regards sources of funds, 1996 saw considerable growth in Montreal Protocol-based technical cooperation

**Figure 8. Technical cooperation expenditure by project component, 1996**



expenditures, rising from 15.2 per cent in 1995 to 27.5 per cent of the total in 1996 (see figure 6), while trust fund expenditure decreased by over \$15 million to \$13 million (or 14.4 per cent). This decrease was due largely to the discontinuation of support to the International Centre for Genetic Engineering and Biotechnology at the end of 1995. Following traditional trends, regular budget expenditure on technical cooperation fell in the first year of the biennium to 3.6 per cent from 8.7 per cent in the previous year. Technical cooperation expenditure by sector is shown in figure 7.

6. Considering project components, there was little change in the pattern of the previous year, except for shifts attributable to an increase in equipment as a percentage of technical cooperation expenditures (21.8 per cent from 16.4 per cent in 1995) (see figure 8). The increase is a result in large part to the share of the Montreal Protocol in implementation figures and the normally large equipment component of projects under this funding source.

7. A positive trend developed for new project approvals in 1996. Following modest increases in the previous two years, approvals of new projects increased by over \$26 million to \$100.8 million in 1996—the first time the \$100 million mark has been reached since 1990. While approvals under most sources of funds increased, a great part of this growth is owed to the Montreal Protocol, which has become the primary funding source for new approvals for UNIDO.

8. As part of the UNIDO reform process, the Organization is focusing its activities on seven thematic priorities. This focus was initiated in 1995 and started full implementation in 1996. With the predominance of Montreal Protocol-funded approvals, 50 per cent of new approvals in 1996 in value terms concerned projects in thematic priority 2 (environment and energy) (see figure 9). However, with the exclusion of the Montreal Protocol from the analysis, a more balanced distribution emerges. In this analysis, thematic priorities 4 (industrial information, investment and technology promotion) and 5 (innovation, productivity and quality for international competitiveness) receive the largest share in the value of new project approvals, with 24 per cent and 23 per cent, respectively, while the other five priorities all range between 7 and 11 per cent (see figure 10).

**Technical cooperation activities: project expenditure in 1996, by geographical area**

(In thousands of US dollars)

	A. By source of funds										Total				
	Africa a/ %	Arab States %	African Arab States b/ %	Asia and the Pacific %	Europe and NIS %	Latin America and Caribbean %	Global interregional %								
UNIDO regular budget															
RP	315	1.0	148	0.8	(3)	0.0	155	0.6	100	1.1	392	6.1	1,178	9.4	2,285
IDDA	945	2.8	114	0.6	(57)	0.4	0	0.0	0	0.0	0	0.0	0	0.0	1,002
UNDP/IPF, cash counterpart and special measures	4,300	12.9	1,372	7.3	(138)	1.0	2,647	10.7	3,216	34.8	869	13.5	127	1.0	12,393
UNDP/SIS	707	2.1	154	0.8	(13)	0.1	1,071	4.3	930	10.1	436	6.8	0	0.0	3,285
UNDP-administered trust funds	1,705	5.1	0	0.0	(75)	0.5	0	0.0	(2)	(0.0)	39	0.6	0	0.0	1,667
Self-financed trust funds	5,387	16.1	4,800	25.7	(4,795)	33.6	11	0.0	7	0.1	1,869	29.1	3	0.0	7,282
Third party-financed trust funds	1,282	3.8	91	0.5	(0)	0.0	1,023	4.1	2,048	22.2	494	7.7	1,968	15.7	6,906
Other trust funds	4	0.0	4	0.0	(4)	0.0	260	1.0	42	0.5	1	0.0	(1,442)	(11.5)	(1,135)
IDF d/	4,543	13.6	601	3.2	(376)	2.6	5,055	20.4	574	6.2	1,272	19.8	10,394	82.8	22,063
Montreal Protocol	11,982	35.9	11,216	60.0	(8,810)	61.7	8,402	33.9	1,312	14.2	884	13.8	20	0.2	25,006
UNDCP	39	0.1	0	0.0	(1)	0.0	1,496	6.0	888	9.6	157	2.4	224	1.8	2,803
Non-UNIDO funds	2,202	6.6	202	1.1	(7)	0.0	4,710	19.0	123	1.3	6	0.1	82	0.7	7,318
<b>TOTAL</b>	<b>33,411</b>		<b>18,702</b>		<b>(14,279)</b>		<b>24,830</b>		<b>9,238</b>		<b>6,419</b>		<b>12,554</b>		<b>90,875</b>
	B. By project component														
	Africa a/ %	Arab States %	African Arab States b/ %	Asia and the Pacific %	Europe and NIS %	Latin America and Caribbean %	Global interregional %			Total					
Project personnel	13,321	39.9	6,156	32.9	(4,917)	34.4	6,432	25.9	3,554	38.4	3,830	59.6	10,153	80.9	38,529
Subcontracts	9,915	29.7	8,831	47.2	(7,163)	50.2	7,860	31.7	2,284	24.7	521	8.1	(543)	(4.3)	21,705
Fellowships and training	1,992	6.0	528	2.8	(239)	1.7	2,432	9.8	552	6.0	440	6.9	1,389	11.1	7,094
Equipment	7,029	21.0	2,851	15.3	(1,728)	12.1	7,480	30.1	2,592	28.1	1,347	21.0	275	2.2	19,846
Miscellaneous	1,154	3.4	336	1.8	(232)	1.6	626	2.5	256	2.8	281	4.4	1,280	10.3	3,701
<b>TOTAL</b>	<b>33,411</b>		<b>18,702</b>		<b>(14,279)</b>		<b>24,830</b>		<b>9,238</b>		<b>6,419</b>		<b>12,554</b>		<b>90,875</b>

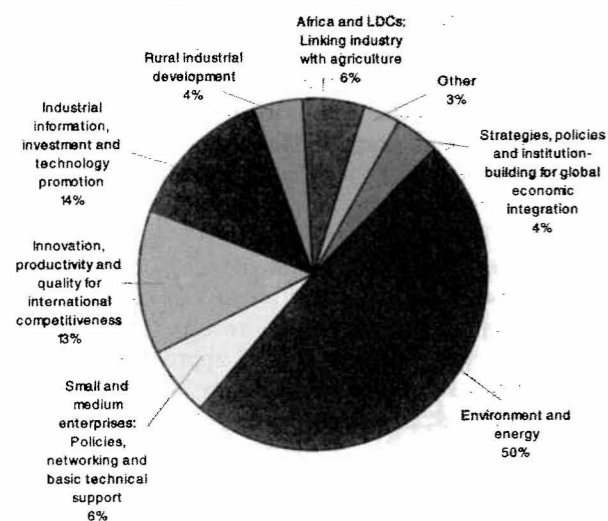
a/ Includes figures related to country projects in African Arab States.

b/ Figures in parentheses in this column relate to country projects in African Arab States only and are deducted from the column "Total" since they are already included under "Africa".

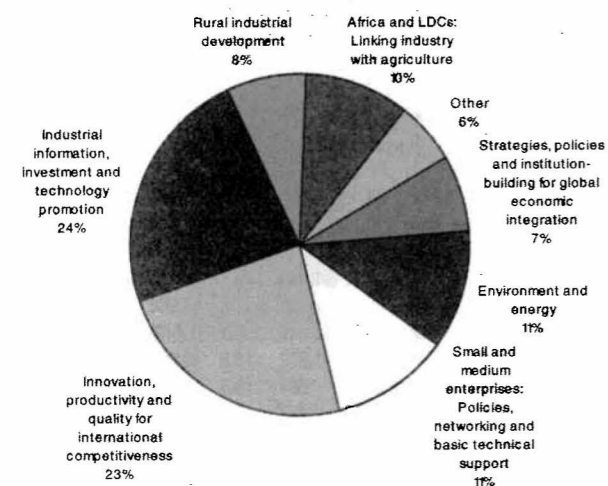
c/ Refers solely to IDDA expenditure in African Arab States.

d/ Excludes Montreal Protocol.

**Figure 9. Technical cooperation approvals by thematic priority, 1996 (percentage shares, including Montreal Protocol)**



**Figure 10. Technical cooperation approvals by thematic priority, 1996 (percentage shares, not including Montreal Protocol)**



9. In conclusion, the year 1996 can be considered a turning point for UNIDO. In spite of dramatic budget cuts and staff reductions, implementation figures in most areas remained the same or were higher than in the previous year, pointing towards a clear rise in staff productivity. UNIDO also demonstrated flexibility in gaining access to new sources of financing for its technical cooperation activities, following the dramatic decline in UNDP funding in recent years. Finally, for the first time since 1990, the value of project approvals surpassed the value of delivery, which can be seen as a clear signal for a sustainable trend in UNIDO technical cooperation programmes.

## B. The thematic priorities of UNIDO: Selected programmes and projects

10. In accordance with General Conference resolution GC.6/Res.2, the present chapter provides a description of selected UNIDO technical cooperation programmes and projects grouped under the thematic priorities. Included are summary narratives on the objectives of newly approved projects, on progress achieved in projects under implementation in 1996 and on the results obtained for projects completed during the year. For each project, the title, country coverage and source of funds are stated. The presentation is not intended to be comprehensive but provides samples that give a balanced and representative picture of the range and type of UNIDO technical cooperation. A complete list of new, ongoing and completed projects for 1996 is contained in addendum 2 to the present report.

### 1. Strategies, policies and institution-building for global economic integration

11. A steadily expanding industrial sector—generating export revenue, providing jobs, upgrading skills, assimilating new technologies and respecting the environment—is a vital component of sustainable economic development. In an era of economic liberalization, Governments still have the responsibility of ensuring the creation and maintenance of an environment conducive to such industrial development, based on a private sector-driven market economy, together with the establishment of the economic and social infrastructure needed to underpin industrial activity. Consequently, the provision of assistance in the formulation of industrial strategies and policies continues to be an essential aspect of UNIDO's work. It is increasingly evident that the developing countries are determined not to be left behind in a competitive, globalized world economy. Throughout the year, UNIDO received requests from countries in all developing regions, and from the economies in transition, for advice and assistance in updating existing industrial policies and strategies, designing new ones and enhancing the competitiveness of their industrial sectors.

#### New projects

##### *Updating and finalization of the industrial master plan of Côte d'Ivoire (Phase I)*

Budget: \$ 140,000  
Funded by: UNIDO regular budget

12. UNIDO had assisted in preparing the industrial master plan officially endorsed by the Cabinet of Côte d'Ivoire in 1988. The vagaries of international markets for the country's main export commodities, compounded by the devaluation of the national currency in early 1994, called for an in-depth revision of the plan's orientations

and conclusions. On the positive side, the first benefits of structural adjustment, the stimulus to exports of the currency devaluation, soaring prices for cocoa and coffee in the first half of 1996 and new oil discoveries, have encouraged the Government to adopt a bold economic development programme, of which UNIDO has been entrusted to cover the industrial dimension. The early analyses of the master plan will provide the basis for a review of the competitiveness of major industries, while market-oriented instruments will be developed to strengthen the Government's capacity to service private sector development needs.

##### *Support to the national programme for strengthening the private sector - Benin*

Budget: \$699,000<sup>1</sup>  
Funded by: UNDP

13. As one of the associated agencies, together with ILO, involved in this nationally-executed programme, UNIDO inputs include study of modalities to create a "one-stop shop" for promoting existing and prospective entrepreneurs; strengthening the system of industrial information; assessment of the pre-conditions to set up an export processing zone; support to strengthen the Chamber of Commerce and Industry; and strengthening of support services to enterprises, including a special component targeting women entrepreneurs.

##### *Special economic zones and science parks*

14. In recent years, there has been growing interest among developing countries in using special economic zones and science and technology parks as tools to create employment and foreign exchange earnings, promote technological development and improve international competitiveness. UNIDO has a long tradition of providing developing countries with guidance and advice on when, how and in what context to use export processing zones (EPZs), industrial estates and science parks in their development endeavors. UNIDO activities in 1996 took account of the growing interest in these instruments. To support their appropriate use and development, UNIDO engaged in country- and project-specific activities and others of a more general kind, oriented towards awareness creation and knowledge development on zones and parks.

15. While recognizing the importance of special economic zones and science parks and the interest of policy makers in the role they can play in enhancing industrial development, these tools are not a panacea to overcome industrial underdevelopment and a lack of international competitiveness. Hence the UNIDO policy in most specific projects involving these mechanisms is to integrate them in a more general industrial development strategy at the regional or national level.

<sup>1</sup> This budget comprises funds from seven projects.

16. For example, in the Sumgait regional development project in Azerbaijan described below, the objective is to set up an institutional framework for the support and management of a special economic zone to promote industrial development and international cooperation. In the case of the Kaliningrad project, the economic free zone is an integrated part of an industrial development project at the regional level.

17. To assist policy makers in deciding when and where EPZ initiatives are appropriate and how a zone should be managed and organized, UNIDO published *Export Processing Zones: Principles and Practice*. Copies were distributed to regional development offices, industrial organizations and governmental agencies in developing countries and countries in transition.

18. Many EPZs in developing countries have resulted in failure or poor performance. There has also been severe criticism of specific EPZs in the practices of exploiting low-wage and unskilled labour, disregarding basic human and trade union rights, delaying economy-wide trade reforms, discriminating against domestic firms and polluting the environment. To investigate the actual situation and contribute to the establishment of a code of conduct conducive to positive results for all those directly and indirectly involved, UNIDO has established cooperation with ILO. The immediate purpose of this collaboration is UNIDO participation in a world-wide analysis of EPZs, focusing on the relationship between the economic, social and labor aspects of the zones.

19. Developments in international manufacturing and trade necessitated a thorough revision of the first (1978) UNIDO guidelines for the establishment and management of industrial estates. UNIDO commissioned a series of studies on industrial estates as the basis for a new publication entitled *Industrial Estates: Principles and Practice* that was elaborated during 1996 for publication in early 1997.

20. Science parks and related instruments (technoparks, R and D parks, business incubators) are high on the priority lists of decision makers involved in industrial planning and regional development in countries in transition and in some developing countries. To support the planning and implementation of science park projects, a specific programme has been developed. The core product is a system for (self-) assessment, quality improvement and certification of science parks, linked to specially designed programmes for knowledge development and training and a handbook containing guidelines for the development and operation of science parks.

21. The project is one of four selected pilot activities designed to support UNIDO's global forum function. It contributes to this function by providing know-how and tools through which science park performance can be evaluated and compared against international standards and criteria, and through which the needs for development and improvement can be understood. In



the implementation of this project UNIDO collaborates with leading international experts and organizations.

#### Ongoing projects

##### *Restructuring and revitalizing industries in the Kaliningrad region of the Russian Federation (Phase IB)*

Budget: \$591,596  
Funded by: The Governments of Denmark, Finland, Norway and Sweden

22. After the successful implementation of phase 1A, the donor countries decided to provide further funds for implementing strategies outlined in the previous phase and for elaborating a programme to restructure selected industrial enterprises. The programme will be used as a model for other industrial enterprises. A number of training workshops are included for managers of those enterprises. Phase 1B also includes formulating a new industrial policy for the region, taking advantage of the restructuring processes of the selected enterprises. In close cooperation with the Kaliningrad administration and local institutions, UNIDO will assist in making the strategies operational, a process that will include establishing a regional development agency to be responsible for the restructuring policy of the region. Representatives from the donor countries are invited to participate in meetings of the Steering Committee chaired by the Kaliningrad administration.

##### *Support programme for industrial development of the Sumgait region of Azerbaijan (Phase II)*

Budget: \$226,601  
Funded by: UNDP

23. The primary objective is to facilitate the creation of an environment conducive to the industrial regeneration and development of the industrial city of Sumgait though foreign direct investment, while at the same time satisfying the needs of domestic investors. It is intended that the experience gained in rehabilitating this region will serve as a model and catalyst for the whole economy of Azerbaijan, thereby expediting transition to a market economy. Strong interest in the project has also been shown by other countries in the Caucasus region.

24. At the end of 1995, a UNIDO team of international and national experts made a careful analysis of the industrial potential of the region and recommended that Sumgait be designated a special economic zone (SEZ). In the course of 1996, the law on free economic zones, under which Sumgait will be designated a SEZ, was drafted, a structure for the Sumgait SEZ administration was proposed and the offices of the Regional Development Authority for the Sumgait SEZ were inaugurated by the President of the country. A team of 15 international and 10 national specialists visited Azerbaijan in the fall of 1996. They presented the draft law to the Cabinet of Ministers and held an initial

training course on the evaluation and preparation of industrial investment projects (COMFAR). They also conducted a seminar on the status of the Sumgait SEZ for 200 members of the local business and diplomatic community, evaluated the information needs of the SEZ and proposed a design for an information system. Promotional materials to be completed in early 1997 for distribution at an investment conference include an investment/business guide to Sumgait and Azerbaijan, a directory of Sumgait businesses, a brochure on the project, and profiles of several of the major industrial facilities located in Sumgait.

##### *Medium-term industrial strategy - Viet Nam*

Budget: \$1,294,000<sup>2</sup>  
Funded by: UNIDO regular budget, UNDP, and the Governments of Japan, the Republic of Korea and Sweden, plus one Associate Expert financed by the Government of the Netherlands

25. In Viet Nam, the UNIDO contribution to formulating a medium-term industry and trade strategy has gained wide recognition as a central initiative in the sector. International seminars in June and November organized in the framework of the project saw the active participation of representatives of UNDP, the World Bank, the Asian Development Bank, IMF and several bilateral aid agencies. In June, the Government took advantage of the platform offered by the project to convene an unprecedented consultation of the donor community on the future tenets of the country's industrialization. Meanwhile, staff of the Ministry of Planning and Investment developed, with UNIDO support, a decision-making tool to monitor Government impact on the course of industrial development in a market system by means, *inter alia*, of tariff and fiscal measures. The development of this tool comes at a critical time when Viet Nam must make important policy decisions pursuant to its recent accession to the ASEAN Free Trade Area.

##### *Review and analysis of industrial policy with recommendations on competitiveness strategies - Costa Rica*

Budget: \$90,000  
Funded by: UNDP

26. Building on an earlier subregional project for industrial modernization and competitiveness in Central America, the printing, publishing and agricultural packaging and conservation sectors were selected for a pilot project using the CompStrat methodology to analyze and enhance competitiveness. The CompStrat competitiveness strategy programme was developed by UNIDO in cooperation with the Institute for Technology

<sup>2</sup> This budget comprises funds from five separate projects, three of which were approved in 1995.

and Advanced Studies of Monterrey, Mexico, and the Ministry of Industry in India. It is based on a "cluster" analysis, using enterprise-level data, and includes a series of workshops. With the assistance of the software package, these data generate an industry profile and define the industry's attractiveness, as well as the competitive arena in which enterprises must operate and an assessment of the competitive position of the subsector. In the final stage of the CompStrat analysis in Costa Rica enterprises were provided with specific strategies designed to enhance their competitiveness (a CompStrat validation workshop was held in Monterrey in August and a similar exercise is being carried out in India with the results to be reviewed at an evaluation workshop in New Delhi in 1997). In Costa Rica, the data generated by CompStrat, based directly on enterprise-level experience, simultaneously generated valuable information for use in assessing the viability and timeliness of Costa Rican industrial strategies and policy, thus creating a bridge between the practice and the theory of industrial development. The final project component was a report submitted to the Minister of Economy, Trade and Industry containing recommendations for modifying and updating its current industrial policy.

#### Completed projects

##### *High-level advisory services to the Government of the Republic of Moldova in support of the process of transformation*

Budget: \$148,500  
Funded by: UNDP

27. The primary objective of the project was to provide high-level advisory services to the Government of the Republic of Moldova to transform the country to a market economy by assisting to formulate a strategy for and approaches to private sector development. Emphasis was placed on the industrial and other productive sectors. UNIDO provided high-level policy advice and suggested a programme to facilitate transformation and private sector development. A draft new industrial policy for the country was elaborated, which was discussed at a round-table meeting held at UNIDO Headquarters in October with the participation of the Deputy Prime Minister and other ministers, representatives of UNDP, the World Bank and the Permanent Missions of Bulgaria, Hungary, Poland, Romania, Russian Federation and Ukraine. UNIDO also provided inputs to a seminar on free economic zones and technoparks held at Chisinau in December with the participation of representatives from Bulgaria and Romania. As a result, an association of free economic zones covering some Danube River countries will be established in 1997.

##### *Workshops on successful industrialization experiences*

28. In Latin America, in particular, strong interest has been shown in activities aimed at assessing the

lessons to be learned from the industrial success of countries in other regions. In response, UNIDO organized a series of seminars and workshops where the comparative industrialization experiences of South-East Asia, Latin America and OECD countries were presented and discussed and their relevance to aspiring industrializing countries analyzed. A team of project experts from Chile, the Republic of Korea and Spain participated in a seminar organized by the Uruguayan Ministry of Industry, Energy and Mines aimed at promoting a working dialogue with the private sector. In Peru, policy makers from 16 Latin American and Caribbean countries took part in a conference organized by UNIDO with the Korea International Cooperation Agency. In Mexico, the private sector took the lead when the National Federation of Industries requested a team of UNIDO experts to make presentations on comparative industrialization experiences at its annual meeting. Out of this meeting came a further request for UNIDO to design a project for the formulation of a long-term industrial strategy for Mexico.

##### *Assistance in the preparation of a national plan for agro-industrial development - Bolivia*

Budget: \$109,500  
Funded by: UNDP

29. The National Plan for Agro-industrial Development has been published and is already being used by the local government and some international institutions as a reference. With a limited budget (the costs for the elaboration of the plan itself were approximately \$70,000) UNIDO was able to deliver a product which is to the full satisfaction of the client, and which will have an important impact on the whole country in terms of identification and allocation of financial and physical resources.

## 2. Environment and energy

30. Environmental concerns—both global and national—have emerged at the forefront of the international policy agenda over the last two decades. With the adoption of Agenda 21 and related Conventions, the world community has committed itself to a comprehensive international policy statement on the need to attain sustainable patterns of development. Agenda 21 has profound implications for industrial policy and industrialization patterns in developing countries and poses three critical challenges: (a) to ensure protection and conservation of environmental resources in the most cost-efficient manner; (b) to meet obligations under global environmental treaties; and (c) to avert potential competitive disadvantages for industry in developing countries that may emerge from international environmental norms and standards.

## New projects

**Support for an ecologically sustainable industrial development programme for the African region**

Budget: \$89,000  
Funded by: UNIDO

31. The objective of the project is to provide technical support and policy advice to the Governments of eight African countries through an ecologically sustainable industrial development programme. The programme will enable the Governments to rationally exploit the national resources, combat industrial pollution and have access to information on new non-polluting technologies for their medium- and long-term industrial development plans. Two regional workshops will be held to secure preliminary commitment for the subsequent phase of the programme.

**Risk reduction in agro-chemical development in African and Arab countries**

Budget: \$124,000  
Funded by: UNIDO

32. This project addresses issues related to risk minimization in the development of agro-chemicals in African and Arab countries. Two groups of experts visited seven African and seven Arab countries and discussed the issue of agro-chemical development with government officials, research institutions, industry associations, public and non-governmental organizations. The mission assessed facilities, problems and the type of infrastructure and assistance needed to set up regional networking. Based on the findings an expert group meeting was held in Mauritius where over 60 senior experts from more than 20 countries discussed how regional networking would provide incentives to national capacity-building to minimize associated risks. The meeting recommended that UNIDO, in collaboration with FAO and WHO, should cover the areas of data collection and dissemination, production and industrial safety, industrial hygiene and occupational health and safety, ecotoxicology and environmental monitoring, as well as the development of bio- and botanical pesticides, waste management and disposal, quality control and quality assurance, application technology, legislation (and its enforcement), and integrated pest management-related activities. The meeting also benefited from a presentation on the successful operation of the Regional Network on Pesticides for Asia and the Pacific (RENAP), and recommended strong linkages with the network to simulate similar approaches for the African and Arab countries. A programme for establishing a network is being prepared for submission to potential donors.

**Introduction of new technologies for abating mercury pollution caused by informal gold mining operations - United Republic of Tanzania**

Budget: \$326,420  
Funded by: The Government of Japan

33. Within the high-impact programme on introducing new technologies for abatement of global mercury pollution, this project will introduce more efficient gold recovery and cost-effective gravity gold concentration methods. These methods will minimize the utilization of mercury and stop the dangerous pollution of water courses and Lake Victoria with the toxic metal. Since a great majority of the informal (artisanal) miners are women, emphasis will be placed on their integration into the industrial development of the country. The project strategy is to introduce technology and equipment that can be produced by the miners themselves, or fabricated at low cost in modest facilities in major cities.

## Ongoing projects

**Industrial pollution reduction programme in Sri Lanka**

Budget: \$2,166,417  
Funded by: UNDP

34. Through the activities of this project, several factories have already introduced cleaner production measures which have proven to be very beneficial. In the case of one distillery, a cleaner production study identified several opportunities for improvement, allowing the company to attain more efficient production, reduce energy costs, reduce wastage and pollution and improve product quality. An investment of \$28,000 was required to implement these improvements, resulting in an annual saving of \$89,000, with a payback period of three months.

**The Montreal Protocol programme**

35. Under the Montreal Protocol, 55 new projects prepared by UNIDO with a total budget of \$24 million were approved in 1996, resulting in a total cumulative approval of \$103.5 million (including overheads). Delivery of approved projects totalled more than \$44.6 million. Activities in 1996 included the completion of 13 investment projects with a combined budget of \$19.4 million, as well as four technical cooperation projects, one institution-strengthening activity, one country programme and the preparation of 16 projects.

**Activities related to energy**

36. The energy-related activities of UNIDO constitute a direct response to developing countries' efforts to implement the United Nations Framework Convention

on Climate Change (UNFCCC). A study requested by the Group of 77 on the impact of accelerating the introduction of energy-efficient industrial technologies on reducing greenhouse gas emissions was nearing completion at year's end. The study identified economic and environmental benefits to developing countries of energy-efficient technologies in the following energy-intensive industries: iron and steel, aluminium, cement, petroleum refining, pulp and paper, and nitrogen fertilizers.

37. At the same time, a PC-based software package, the UNIDO Industrial Development Energy Technology Investment Framework ("IDENTIFY") was developed. IDENTIFY can be used to assess the impact of introducing energy-efficient industrial technologies in developing countries and economies in transition, and also incorporates a spreadsheet-based industrial technology inventory.

38. A project proposal was prepared to expand the scope of the Group of 77 study, particularly the inventory of energy efficient technologies. This technology inventory can be used in several current UNIDO programmes, including the cleaner production centres.

39. UNIDO funded the participation of two business and industry NGOs (from Africa and Latin America) in the workshop on consultative mechanisms for NGO participation in the Climate Convention organized by the Convention Secretariat and held during the meetings of the Subsidiary Bodies in Geneva in March. UNIDO participated in the second session of the Conference of the Parties to the UNFCCC in Geneva in July, where a special presentation was given on the application of the UNIDO software package. A similar presentation was given during a round table on joint implementation of the Convention in December. UNIDO participated in the reviews of the first national communications of Poland and Slovakia to the parties as required by the Convention.

40. Energy-related projects covering clean coal technology, renewable energy development and industrial energy end-use efficiency continued to be developed and implemented. Projects to introduce grid-connected wind turbines, advanced solar thermal, photovoltaic and fluidized bed coal combustion were developed under the priority programme for China's Agenda 21. A project to identify opportunities for energy efficiency gains in China's town and village enterprise sector is being funded by the Global Environment Facility.

41. A series of concepts were developed and submitted for the application of non-fossil fuel energy sources for use in remote areas where it is not economically feasible to extend standard distribution networks. Projects are under consideration for Argentina, Burkina Faso, China, Cuba, Indonesia, Kenya and Uganda.

**Programme for ecologically sustainable industrial development - Morocco**

Budget: \$454,500  
Funded by: Government of Belgium

42. Within the framework of elaboration of an ESID programme, this project will lead to the development of methods and means for the rational and sustainable exploitation of natural resources, particularly by focusing on efficient pollution prevention methods and technologies. A national ESID workshop held in Casablanca with the participation of the Ministers of Industry and Environment, representatives of the private sector, professional associations and others, agreed on an action plan for pollution prevention and abatement in the industrial sector. The second phase will include audits in textile and sugar factories and tanneries. Sectoral seminars will be conducted in the context of an environmental awareness campaign, and finally a database will be installed for the continuous provision of nationwide statistics on industrial pollution. Also within the project, a study tour of two high-level Moroccan delegates took place to the national cleaner production centres in China and India, which led to the proposal for the creation of a centre in Morocco.

**Programme for ecologically sustainable industrial development - Madagascar**

Budget: \$705,828<sup>3</sup>  
Funded by: The Government of Madagascar and the Industrial Development Decade for Africa

43. This project will establish institutional and technical capabilities—both in the industrial sector and in the Government—necessary for the conception and implementation of an ESID strategy. During the year, audits were conducted in two factories and a programme of action for waste minimization was put in place. A net economy of \$18,000 in the water bill was realized in one company with zero industrial effluent discharge—an experience that may be duplicated in six other company sites. For pollution monitoring and control, a laboratory was set up for which equipment is being purchased to analyze the environmental impact of industrial activities. In cooperation with the national cleaner production centre in Tunisia, a database has been initiated on clean technologies, the reinforcement of control capacities and pollution monitoring for existing industries.

44. Study tours for national capacity-building and sustainable human resources development included environmental norms (France, Hungary), NCPC (China, India), information systems on international environment (USA), ISO 14000 and 9000 (Switzerland). The project document covering phase 3 will be redrafted to include and build on the results of the first two phases for reinforcement of the capacity of the Ministry and for the

<sup>3</sup> This budget comprises funds from two separate projects.



integration of Madagascar in the Indian Ocean Commission programme for environmental management of coastal zones.

#### *National Cleaner Production Centres programme*

45. Throughout the year, work continued on the first phase of the UNIDO/UNEP National Cleaner Production Centres (NCPCs) programme, sponsored mainly by the Governments of Austria and Brazil (through a self-financed trust fund), the Netherlands, UNEP and UNIDO. Developing countries and economies in transition expressed strong interest in establishing centres. The objective is to create a national capacity in cleaner industrial production in the most cost-efficient manner, and to create an international network of NCPCs. In cooperation with host institutions in the respective countries, the programme has established centres in Brazil, China, the Czech Republic, India, Mexico, Slovakia, the United Republic of Tanzania and Zimbabwe. The centres undertake four main activities: in-plant demonstrations; training; information dissemination; policy assessment and advice. An evaluation carried out in 1996 by Lund University supported the viability of the approach and made recommendations to increase the efficiency of the programme.

46. Phase II, which started in early 1996, covers financing for NCPCs in Hungary and Tunisia and preparatory assistance for a centre in Central America. Two forums held in cooperation with NGOs strengthened the programme's investment component. Under the joint sponsorship of NIMTECH, an investment forum was held in September in Oxford, providing United Kingdom industrialists with information on the demand for investment in cleaner technologies in developing countries and economies in transition. Similarly, an expert forum in cleaner production for Eastern and Central Europe was convened in Vienna by UNIDO and ÖGUT (Austria). The directors of the Czech and Slovak NCPCs made presentations on the demand for cleaner technologies in their countries.

#### **Completed projects**

##### *Policy advice on measures for reducing and preventing the environmental impacts of industrial activity in the Bilecik region of Turkey*

Budget: \$93,208  
Funded by: UNDP

47. After analyzing patterns of water quality, the project identified the most important sources of pollution in the Karasu River Basin as well as the key prevention and abatement measures required to reduce industrial pollution. The project also provided training to Turkish professionals in the planning and management of environment quality. As a result of the project, the

outputs, reports and trained individuals were used by the General Directorate of State Hydraulic Works and Director of Food and Environmental Health Control Division of the Bilecik Health Department to correctly identify the major polluters of the Karasu River.

##### *Industrial environmental protection policies - Viet Nam<sup>4</sup>*

Budget: \$106,000  
Funded by: UNDP, under a TSS-1 arrangement

48. Based on field missions undertaken by UNIDO, the project identified ways in which the Vietnamese Government's environmental agencies can make a greater contribution to minimizing the environmental impact of present and future industrial development. Issues and proposals to deal with environmental problems were approached from macro and micro perspectives. The macro approach concerned a broad policy question: the relationship between the National Environment Agency and the line ministry Departments of Science, Technology and Environment, the provincial/city Services of Science, Technology and Environment and research institutions. The micro approach consisted of a series of discussions and recommendations to assist the National Environment Agency in formulating and implementing an industrial environmental management programme covering six key activities: ambient quality standards setting and monitoring; environmental impact assessment; regulatory activities; reporting and public information; training; and implementation of international agreements.

##### *Preparatory assistance in the treatment of tannery wastes in the Zablatani-Damascus industrial area - Syrian Arab Republic*

Budget: \$435,000  
Funded by: UNDP

49. The project assessed the situation in a cluster of tanneries and provided detailed designs for the common effluent treatment plant, including investment and cost estimates, as well as full tender documents and assistance in better process control. On this basis, the local authorities are now able to establish and implement comprehensive pollution abatement measures.

#### **3. Small and medium enterprises: Policies, networking and basic technical support**

50. The majority of UNIDO programmes and operational activities are targeted at small and medium enterprises (SMEs). Therefore, activities in support of

<sup>4</sup> The project was operationally completed, although project administration continued into 1997.

SMEs occur under all seven of the UNIDO thematic priorities. As significant agents of economic growth and employment creation, SMEs are an essential component in the industrial development strategies of most countries. In most developing countries, however, the possibilities for SMEs to seize new business opportunities are seriously constrained by limited access to financial, informational, human and technological resources. The lack of a conducive legal and regulatory framework, and deficient physical infrastructure, is also problematic. Essential linkages with business partners and markets, such as through subcontracting arrangements, are often weak. Projects under this thematic priority address such cross-sectoral SME support requirements.

#### **New projects**

##### *Promotion of small and medium private enterprises - Kazakstan*

Budget: \$480,000  
Funded by: UNDP

51. The transition problems of company towns in mining and mineral processing areas include the dependency of the entire town and community on the one company providing its livelihood. Changes in factor prices and environmental concerns during transition from a command to a market-oriented economy can impose major restructuring constraints on the companies. Corrective measures call for an integrated approach with policy- and institution-level interventions. The UNIDO approach was to develop a restructuring plan for the enterprise on the one hand, spinning off non-core activities, and promoting SME creation on the other. The latter was taken up as a measure of diversification and to counteract growing unemployment problems resulting from downsizing and underutilization of installed capacities.

##### *UNIDO/Italy programme for small and medium enterprises development*

Budget: \$2,674,000  
Funded by: The Government of Italy

52. Under the auspices of the UNIDO Support Programme for Innovation and Networking (SPINNet), the project aims at improving the overall performance and collective efficiency of sectoral clusters of SMEs in selected developing countries. The programme features implementation of innovative SME support interventions based on the adaptation of Italian know-how and experience to the needs and specific conditions of recipient countries. In particular, the programme aims to promote cooperation between Italian institutions and enterprises and SME clusters within developing countries as an effective way to accelerate the process of learning and imitation that have proven to be key factors

in the success of many small-scale Italian firms. During the year, the first phase concentrated on structuring the programme's organization both within the partner country, Italy, and in the first beneficiary country, India.

53. A key to the programme's mission has been the establishment of a network of Italian support institutions and experts which will assist UNIDO in achieving the projects' objectives. In India, a focal point and a network of national and local institutions have also been put in place. Study tours in Italy for Indian entrepreneurs and representatives of SME support institutions were organized through these networks.

54. The Italian network has already generated a report based on the Italian experience which provides important lessons for developing countries. In addition, a detailed survey of Indian clusters was conducted and presented at a national workshop in November, at which time a programme framework for restructuring and modernization of SME clusters was designed.

55. Several initiatives for cluster-to-cluster cooperation were finalized for 1997 and a preparatory phase initiated for consolidating the programme in Tunisia.

##### *Policy advice for SME promotion - Slovakia*

Budget: \$201,012  
Funded by: USAID

56. The project was initiated with the objective of strengthening the capacity of the National Agency for Development of Small and Medium Enterprises to analyze SME sector information and make recommendations on policies, the legal and regulatory framework and incentives that would help the promotion and development of SMEs. One of the major issues is how information on SME sector performance can best be collected, analyzed and provided to policy makers in a sufficiently consistent form to be of value in introducing policy changes. There are two components: (a) design of a system of monitoring and analysis for the sector; and (b) development of a policy framework for SME promotion. While the main focus in 1996 was on the monitoring/analysis aspect of the project, 1997 will concentrate more on policy development.

#### **Ongoing projects**

##### *Assistance to private SMEs in Viet Nam*

Budget: \$2,069,185  
Funded by: The Government of Germany

57. This project covers two main areas: institution-building (strengthening the capacity of selected public and private training, technological and representative institutions, including SME associations); and direct support (advice to government authorities focused on streamlining of the legal and regulatory framework concerning SMEs).

58. Promoting networking among SMEs, support institutions and Government is a key feature of the approach. The project is in its critical start-up phase, selecting representative business organizations to act as focal points for the service-related outputs of the project in its two locations (Hanoi and Ho Chi Minh City). These focal point organizations are expected to serve as the vehicle through which to promote service provision by a network of private and public organizations.

#### *National leather development programme - India*

Budget: \$7,082,034<sup>5</sup>  
Funded by: UNDP

59. 1996 was the final year for this programme executed by the Government of India to enhance the export potential of leather-based industries and develop human resources for the private sector. The six institutes assisted by UNIDO have achieved a suitable level of autonomy and are now able to provide professional training and services to industrial units. Most have become self-sustained in services and short-term training. The UNIDO contribution in implementing technical cooperation projects—especially at the plant level—led to savings in the overall \$15 million programme which were allocated to a new project and assigned to UNIDO to assist small-scale leather goods manufacturing units in West Bengal. UNIDO elaborated the basic document for the second phase of the programme (approximately \$3 million). The launching of the second phase is expected in 1997, with UNIDO to play a key role in its implementation.

#### *Industrial partnership and subcontracting*<sup>6</sup>

60. In 1996 subcontracting and partnership exchanges (SPXs) were set up at the national level in various parts of the world, including in Slovakia with financing from the European Union PHARE programme. Feasibility studies or preparatory assistance were undertaken for the creation of similar SPXs in Colombia, Lebanon, Mauritius, the Russian Federation and Saudi Arabia. Priority was accorded to the strengthening of methodology, such as a new version of the UNIDO Industrial Subcontracting System (UNIDOSS) software, and the preparation of a UNIDO guide on the establishment of subcontracting and partnership exchanges. Priority was also given to the expansion of the programme to other regions, including Africa and Central and Eastern Europe.

#### *Regional programme for the development of industrial subcontracting in Latin America*

Budget: \$1,302,240  
Funded by: The Governments of Italy and Switzerland

<sup>5</sup> This budget comprises funds from seven projects.

<sup>6</sup> Information on the recent evaluation of this UNIDO programme is provided in chapter VII.

61. The regional project is now operating as a network between more than 30 subcontracting and partnership exchanges in 14 Latin American countries, organized in the form of an international association ("ALABSUB"). ALABSUB organizes a number of activities each year, including international subcontracting fairs (SUBCONTRATA Latino Americana), and acts as a counterpart of the European Union AL-INVEST programme in Latin America. The exchanges have signed a UNIDO license agreement for the use of the new UNIDO Industrial Subcontracting System software (UNIDOSS V.2), which allows them to operate as a computerized network.

#### *Assistance to enable INTEC University to provide incubation services for small enterprise creation - Dominican Republic*

Budget: \$47,812  
Funded by: UNDP

62. This project supports the promotion of business incubation systems by assisting in the establishment of the Centre for Enterprise Innovation and Incubation at INTEC University in Santo Domingo. The incubator will serve as a key entrepreneurship centre for the Dominican Republic, promoting entrepreneurship and assisting in the creation of innovative small enterprises among students with a strong technical background through the provision of space, advisory services and business and technology networking.

#### **Completed projects**

#### *Programme of support to small and medium industrial enterprises - Madagascar*

Budget: \$1,064,923  
Funded by: UNDP

63. Progress in this comprehensive programme continued, with entrepreneurs being trained in innovation management. Contributions to organizing support systems included the re-organization of chambers of commerce, establishment of an industrial information and publication centre, and the organization of a subcontracting exchange supported by another UNIDO project. The programme continues with a nationally-executed project having complementary objectives and for which UNIDO has full technical responsibility. Surveys are being carried out in selected provinces and additional clusters of firms, such as in fish processing, will be supported.

#### *Assistance to small agro-industries - Niger*

Budget: \$669,650  
Funded by: UNDP

64. Working with both the private sector and the Ministry of Industry, this project provided major support to SME development in the important agro-industries

subsector. Assistance was provided in the re-organization of both the association of entrepreneurs and the chamber of commerce. Activities focused on the organization of clusters of producers in oil processing, dairy, cereals plants and leather processing. The project also contributed to the promotion of such new ventures as the processing and marketing of dried meat for export.

#### *Facility-cum-training centre for leather finishing in Kasur - Pakistan*<sup>7</sup>

Budget: \$744,600  
Funded by: UNDP

65. New facilities for training and servicing small traditional family units were created, increasing the market share of finished leather manufactured in the cluster of small tanneries served. An excellent replication effect is among the benefits derived from this project.

#### **4. Innovation, productivity and quality for international competitiveness**

66. The globalization of industrial production and trade places new competitive demands on developing-country firms and institutions. Increasingly, the determinants of competitiveness include the ability to source, distribute and network internationally, the flexibility and speed of the entire design, production and commercialization process, the ability to attain high levels of product quality and to produce with an efficient use of inputs. Systems of support to industrial competitiveness adopted in most, if not all, developed countries need also to be implemented by developing countries. Such support covers services by institutions specialized in technology management, including technology transfer and R and D, human resources development, information and data systems, venture capital financing, as well as metrology, standardization and testing, management and engineering consulting.

#### **New projects**

#### *Programme for industrial restructuring - Cuba*

Budget: \$98,000  
Funded by: UNDP, under a TSS-1 arrangement

67. Within the framework of the re-integration of Cuba into the world economy under market-led conditions, UNIDO is playing a role in the re-orienting and restructuring of the country's industrial base. The task includes policy and strategy design, changes in the legal and regulatory framework and awareness creation at the decision-making level. Decision support is being

<sup>7</sup> This project was operationally completed, although project administration continued into 1997.

provided in three key areas for which programme modules are being formulated: export promotion, commercialization of technology and managerial capacity-building. UNIDO's contribution has been mainly through the presentation of "best practice" experiences in Central and Eastern Europe as well as Central Asian countries.

#### *SITARC Pump Institute - India*

Budget: \$773,320  
Funded by: UNDP

68. The project focuses on upgrading the technology of irrigation pump sets and prime movers manufactured by small-scale industry in India with a view to: (a) achieving optimum levels of efficiency; (b) conserving scarce energy resources in exploiting ground water for irrigation; and (c) facilitating the development of a competitive small-scale sector. Capabilities of the Small Industries Testing and Research Centre (SITARC) in Coimbatore, a centre owned and managed by industry, will be enhanced in the areas of training, design, prototyping, testing, tooling, applied research and consultancy.

#### *Textile and clothing development centre for the Syrian Arab Republic*

Budget: \$400,000  
Funded by: UNDP

69. With the emphasis on response to market forces, technologies in the primary textile and fashion industries are key elements in the concept for a national centre for technology development in the textile and clothing industry being established in the Syrian Arab Republic. Garment production will be enhanced through the use of computer-assisted methods such as receipt of pattern markers via modem. Training and services to be provided by the centre will cover textile and clothing design, pattern design grading, colour optimization, work study, cost analysis, and marketing and sector-specific information.

#### *Regional programme for the establishment of high-tech incubation systems at the Academies of Science in the Czech Republic, Hungary, Poland and Slovakia - Phase I*

Budget: \$1,397,000  
Funded by: The Government of the Netherlands

70. The project aims at the creation of high-tech enterprises, utilizing know-how generated at the national level, primarily at each Academy of Science. The problem addressed is the deficient application of industry-related know-how and, as a corollary, the lack of resources that can be generated through such applications. In 1996, pilot activities were initiated in all four countries addressing individual critical concerns.



**Quality assurance, good manufacturing practices and quality control issues in vaccine manufacture in developing countries**

Budget: \$88,065

Funded by: UNDP, under a TSS-1 arrangement

71. This project featured a workshop targeting senior management of vaccine production facilities and of national control laboratories. The workshop provided managers with an understanding of key issues and was designed to equip them with tools to develop effective action plans for upgrading and improving their institutional capabilities. A total of 39 participants from 13 countries in all developing regions were advised on the need for their institutions to take full technical and financial responsibility for bringing about appropriate change.

**Strategic business alliances**

72. Given current competitive patterns in world markets, as well as technological innovation, including technology transfer, product development is often a critical multi-organizational endeavor. Strategic business alliances (SBAs), based on joint innovative activity or pooling of knowledge-based resources, is one such form which has recently emerged as a powerful instrument for coping with escalating technology and R and D costs, and expanding into new markets. With this in mind, the preparation of a guide for the planning, negotiation and management of SBAs, particularly by high-tech enterprises in developing countries, was started with the convening of a preparatory meeting of experts to look into the prospects and opportunities presented by SBAs and to elaborate on the framework of the guide. The guide, which will draw from the experience of selected developing countries, will provide managers of developing-country enterprises with a road map for decision-making in the development, formation, negotiation and management of SBAs.

**Awareness-building seminars/workshops and company diagnosis on the implementation of standardization and total quality management in ASEAN countries**

Budget: \$442,478

Funded by: The Government of Japan

73. Enhancing the competitiveness of the ASEAN countries in total quality management (TQM) and standardization, this project features the most recent in a series of seminars conducted within the framework of a programme to increase productivity and quality improvement. Designed to promote awareness and training in TQM for senior managers, the project also features the sharing of experiences among ASEAN countries on the introduction of TQM at the enterprise level based on company diagnostic surveys.

**Ongoing projects**

**Development of conditioning and diagnostic-based maintenance of technological equipment - Hungary**

Budget: \$88,115

Funded by: The Government of the United Kingdom

74. This project provides advanced theoretical and practical knowledge concerning vibration-based predictive maintenance of rotating machinery to the staff of the Budapest Technical University and the Miskolc University in Hungary. Assistance is rendered to specialized small-scale diagnostic maintenance companies in strengthening their capabilities in carrying out machinery diagnostic tests for local industry.

**Techno-economic development of Nigerian medicinal and aromatic plants for industrial utilization**

Budget: \$873,009

Funded by: UNDP

75. The National Institute for Pharmaceutical Research and Development was strengthened by providing a polyvalent pilot plant and modern analytical equipment for the development of plant-based products. Scientific staff were trained in quality control and product development by consultants, and the required technologies were transferred. The Institute developed new plant-based drug formulations, in particular a drug for the management of sickle cell anaemia which is now undergoing clinical trials. The Institute has established a small medicinal plant garden and a nursery and is in the process of developing good quality planting materials. Farmers are being assisted in the cultivation of the selected medicinal plants which are being used in the production of the newly developed drugs.

**Restructuring research and development centres**

76. Preparatory work led to the development of proposals for the restructuring of industrial R and D institutions in a number of countries. In November, an expert group meeting was held on the development of methodologies for the diagnosis and restructuring of industrial research centres. A project on the identification of new technologies for strengthening the competitiveness of Lebanese industry was finalized with a national workshop which included recommendations for future action.

**Assistance to the Textile Research Centre - Argentina**

Budget: \$554,065

Funded by: Self-financed

77. A self-financed trust fund agreement was set up between the Textile Research Centre (CIT) and UNIDO in the early 1990s, to the value of \$206,000. UNIDO assistance was sought to improve the Argentinean textile industry by strengthening the consultancy capacity of

CIT in San Martin. In particular, UNIDO assistance was required for the procurement of laboratory and auxiliary equipment, instruments and spare parts. In 1996, CIT increased its contribution by an additional \$348,000 to further improve quality and increase the quantity of the fabrics and garments produced by up-to-date, highly efficient methods and equipment. The Centre's dyeing/printing and finishing unit will be strengthened to provide high-level training and technical assistance to the Argentinean textile and apparel industry in the fields of textile dyeing, printing and finishing and garment manufacturing. By the year 2000, CIT will be equipped with up-to-date dyeing, printing and finishing equipment, a computerized colour matching system and a computer-aided-design system.

**Biotechnology programme**

78. UNIDO convened an expert group meeting with the purpose of identifying priority areas in biotechnology complementary to the work of ICGEB. Consideration of UNIDO's mandate and in-house capacity, client demand, and other international initiatives resulted in the formulation of UNIDO's biotechnology programme. The focus of the programme is on technology transfer through the promotion of networks and partnerships at the institutional and enterprise level; safety assurance in contained and environmental applications of biotechnology; and capacity-building and enabling mechanisms for the management of genetic resources.

79. In the area of safety assurance and contained environmental applications of biotechnology, UNIDO, during 1996, entered into formal collaboration with the Organization for Economic Cooperation and Development (OECD), Environment Directorate/Environmental Health and Safety Division. The purpose of this cooperation includes developing harmonized procedures for safety assurance and risk assessment in biotechnology. A first project focuses on the implications of release of genetically modified organisms in centres of origin of diversity. In addition, there has been cooperation between UNIDO's Biosafety Information Network and Advisory Service (BINAS) and the OECD's BIOTRACK On-line. The first step in 1996 was the construction of a joint BIOTRACK/BINAS page (BIOBIN) on the World Wide Web. Currently, this is an aid to users for navigation between the two sites. During the period 1997 to 1999, BIOBIN will be developed further in an effort to create a global information system related to regulatory issues on harmonization in biotechnology.

**Completed projects**

**Assistance to strengthen the Uganda Bureau of Standards**

Budget: \$1,139,208

Funded by: UNDP

80. The project provided assistance in the following areas: establishment of a building materials testing laboratory; establishment of a food and chemical testing laboratory; establishment of a documentation and standards information centre; identification of present needs of pharmaceutical quality control in Uganda; and identification of metrology requirements and conditions for maintenance and repair of precision instruments.

81. The project produced the outputs envisaged and prepared a solid base for standardization in standards formulation and testing. Networking arrangements with other laboratories further enhanced the scope of the project both in utilization of facilities and training of national engineers.

82. A major concern at the end of the first phase was to preserve the results achieved and build on established capabilities. Certification was the area identified for strengthening. One crucial element for securing sustainability and further continuous build-up of the Bureau (for example, in the area of certification) was the release of funding earmarked by the Government, as well as allocation of a permanent location for the Bureau.

**Development of equipment design capability of Hawamdieh Factory - Egypt**

Budget: \$773,832

Funded by: UNDP

83. Over a period of several years, this project developed the equipment design capability of the Hawamdieh Equipment Factory, which belongs to the Egyptian Sugar Company and is entrusted with the overhaul and erection of sugar factories and facilities of downstream industries utilizing by-products from the sugar-making process. More recently, the factory has rendered similar services to all food-processing industries. The project included the creation of a computer-aided design and drafting department through the provision of high-level expert services. Department staff were trained and a computer system, peripheral equipment and related software were installed and made operational.

**100 innovative businesses in Latin America and the Caribbean<sup>8</sup>**

Budget: \$330,000

Funded by: UNDP, under a TSS-2 arrangement

84. Aimed at studying how successful and innovative enterprises in the region managed their technological innovation processes, and at promoting partnerships among these enterprises, this project included an award ceremony presenting national and regional prizes to the most innovative small, medium and large firms. Similar projects will be developed for Africa and Asia in 1997.

<sup>8</sup> This project was operationally completed, although project administration continued into 1997.

### 5. Industrial information, investment and technology promotion

85. The effective promotion and absorption of industrial investment and technology flows is an important determinant of growth. The past decade has seen major increases in flows of investment and technology from developed to developing countries. However, there are great disparities between regions in the magnitude of such flows. Many developing countries lack information on technological opportunities as well as the human resources to handle the technology transfer process effectively. This is important, as competition is becoming increasingly technology-driven. To assist developing countries in this area, UNIDO offers support at the levels of policy, institutions, and enterprises. Training is fundamental to assistance at all three levels. Suitable information on investment and technology opportunities in many developing countries is also scarce, a problem addressed by a number of the projects described below.

#### New projects

##### *Investment and Technology Promotion Initiative: Promotion of industrial cooperation between companies from India and developed/developing countries*

Budget: \$869,000  
Funded by: The Government of India

86. This umbrella project aims at mobilizing financial, technical and other resources for the implementation of industrial investment and technology projects in India by assisting entrepreneurs to establish joint ventures and other forms of technology partnerships and business-oriented industrial cooperation, including strategic business alliances, with firms in developed and developing countries. The project will contribute to poverty alleviation by creating new employment opportunities through investments and technology inputs in SMIs. Emphasis will be given to the promotion of women entrepreneurs and ecologically sustainable industrial development. This project, which will benefit all Indian states, combines activities for establishment and operation of the initiative and the organization of up to four Intechmarts in different regions of India. Activities include follow-up to business contacts established during earlier Invesmarts and Intechmarts.

##### *Integrated investment and technology promotion programme - United Republic of Tanzania*

Budget: \$832,198  
Funded by: UNDP

87. The objectives of the programme are to sensitize and raise awareness of the investment promotion process

among private sector operators and government operators; to facilitate industrial cooperation between national project sponsors/investors and potential foreign partners; and to facilitate investment decisions and implementation of projects for which joint venture agreements are signed between national project promoters and foreign partners.

88. Strengthening the role of the private sector in the United Republic of Tanzania will enable it to play a more dynamic and active part in the industrial development of the country. An international investors' forum was held from 5 to 8 November in Dar es Salaam with the participation of 264 foreign investors from 44 countries. The forum organized more than 1,000 one-to-one business meetings between Tanzanian investors and foreign counterparts which resulted in the signing of four joint venture contracts and 86 letters of intent to the value of \$785 million. As contractual negotiations progress, it is expected that the number of signed cooperation agreements will further increase.

##### *Investment and technology promotion forum (Intechmart) for Bahia State, Brazil*

Budget: \$88,496  
Funded by: The Government of Brazil

89. Structural changes in Bahia in the last 30 years have transformed this traditional agricultural state into an economically diversified producer with a solid basis for growth and economic development. UNIDO was requested to assist the government of Bahia and its private sector to expand production in 10 selected industrial sectors by identifying and formulating investment and technology projects of high quality as well as mobilizing investment and other resources required for their commercial implementation. This will be achieved through various forms of business-oriented industrial cooperation between Bahian enterprises and investors from industrialized and developing countries and countries in transition. From the start of project field operations in September, 70 investment project profiles were prepared by year-end. In addition, a request was received from a foreign company looking for local partners in Bahia for a \$30-50 million joint venture.

##### *Training package on technology transfer management at enterprise level*

90. A programme was initiated for a training package on technology transfer management, including technical materials, teaching methodologies and case studies to be used in regular training courses. The objective is to provide managers of SMEs in developing countries with a broad overview of the major aspects of technology management at the enterprise level in order to provide them with a better knowledge of the risks, challenges and tools required to become more competitive and innovative. Training courses on technology transfer management are planned in 1997 in Malaysia (June), St. Petersburg (July) and Cuba (October).

#### Ongoing projects

##### *Investment Forum for Ukraine*

Budget: \$150,615  
Funded by: Ukrainian-Austrian Forum Kiev-Vienna

91. One outcome of the 1992 UNIDO investment conference for CIS countries was a draft proposal for an integrated industrial investment programme for Ukraine. The convening of a proposed investment forum was delayed until funds were mobilized by the Ukrainian-Austrian Forum Kiev-Vienna—a Ukrainian non-profit NGO—and officially approved by the Ukrainian Cabinet of Ministers.

92. Held in March 1996, the Forum attracted 82 representatives of 64 Ukrainian projects selected by UNIDO, 120 participants from 87 potential investors and investment promotion institutions representing 21 countries, in addition to 80 officials, observers and other Ukrainian entrepreneurs. More than 200 bilateral meetings were held between Ukrainian project representatives and potential business partners. As a follow-up to the Forum, IPS Vienna has taken up 13 of the projects for more in-depth study and promotion.

##### *Investment promotion seminar for the Rajin-Sonbong Free Economic and Trade Zone, Democratic People's Republic of Korea Tumen River Area*

Budget: \$274,334  
Funded by: The Government of the Democratic People's Republic of Korea

93. The programme started in 1995 with a financial analysis workshop and the identification of more than 100 investment proposals. Promotion materials such as the Rajin-Sonbong investment guide and a promotion video supported the promotion drive, which was mainly aimed at investing countries in the region as well as at Australia.

94. The international investment and business forum was held at Rajin City, Democratic People's Republic of Korea, from 13 to 15 September 1996. More than 400 foreign participants attended the forum, where industrial cooperation contracts worth some \$250 million were signed.

95. In connection with this ongoing project, the large-scale UNDP-financed international economic cooperation programme was negotiated and approved in 1996. The total budget of \$891,000, mainly covering human resources development components, includes some \$300,000 for investment service activities as a follow up to the Rajin-Sonbong forum. One of the goals of the follow-up programme is to enlarge the scope of investment by targeting European countries.

96. The activities carried out under these programmes should be seen in the context of the efforts of the Democratic People's Republic of Korea to open up part of the country for market-oriented business cooperation, for which UNIDO has provided technical assistance, including investment promotion, as an impartial broker.

##### *UNIDO build-operate-transfer programme*

97. UNIDO's assistance in the BOT mechanism is focused on the potential of such international business partnerships to enhance developing countries' industrial and technological capability and to make their industry more competitive in globalized markets. In response to specific requests from Member States, UNIDO has been developing a comprehensive programme covering: elaboration of guidelines and standard procedures; advice on policy and strategy; assistance in capacity-building and training; technical assistance for specific BOT projects; and certification of procedures. UNIDO assistance is primarily concentrated on the introduction phase of the BOT strategy in the host country, in the pre-investment phase of BOT projects, and in the evaluation and certification of critical steps during the implementation of BOT strategy or projects. Assistance during 1996 included activities in China, Ecuador and Mauritius.

98. In China, UNIDO is cooperating with the State Planning Commission in formulating regulations and establishing standard concession agreements for BOT projects in the road, power and water sectors. In 1996 UNIDO assisted the Government in concluding negotiations for implementation of the first BOT projects in China under the new regulatory framework.

99. In Ecuador, UNIDO is assisting the national electricity utility to apply the BOT mechanism for power generation, including the construction of hydro-power plants. This assistance includes the establishment of the basic legal framework for BOT projects in the power sector, the preparation of a standard concession agreement, establishment of procurement rules and procedures, the bidding documents and bid evaluation, as well as on-the-job training of a team of national experts who will be in charge of future BOT projects.

100. In Mauritius, UNIDO started a cooperation exercise with the Prime Minister's Office aiming at the establishment of a specific BOT legislative framework, the development of a first pilot project, and the strengthening of local consultancy capability.

101. The UNIDO BOT Guidelines provide basic information on the structure and procedures of BOT arrangements and are intended to help reduce the time and costs involved in developing and contracting BOT projects.

**Completed projects****Assistance in the consolidation of the Investment Promotion Unit - Argentina**

Budget: \$91,500  
Funded by: Industrial Development Fund

102. To ameliorate the effects of the limited foreign investment promotion experience of SMIs in Argentina, the General Confederation of Industry (CGI) requested UNIDO assistance in setting up a national investment promotion programme to deal with project formulation and evaluation, using a UNIDO methodology. In the project framework, direct support was provided in on-the-job training in project identification, formulation, evaluation, promotion and follow-up. Training in the methodology was provided for the counterpart and 55 entrepreneurs in two workshops. Some 30 investment projects were selected and sent to UNIDO IPS offices for promotion. The participation of CGI in BORITEC '96 Milan enabled the Confederation to establish contacts within the international business community and resulted in letters of intent for seven projects.

103. A follow-up investment promotion project is currently under discussion for funding by an Argentine finance institution. Another direct result of the project is the development of a pipeline project for a regional investment programme for La Pampa province, to be funded under a trust fund arrangement. UNIDO received the national award "Made in Argentina 1996 for Technological Innovation" from CGI for support in investment-related matters for the country's private sector. The Ministry of Economy has decided to start a new investment promotion programme with UNIDO support in 1997, with an estimated budget of \$300,000.

**Industrial cooperation for the promotion of investment projects in developing countries to be undertaken by the Japanese private sector**

Budget: \$2,477,876<sup>9</sup>  
Funded by: The Government of Japan

104. These projects were implemented within the framework of the industrial cooperation programme for promotion of investment projects in developing countries by the Japanese private sector. Operational since 1990, the programme has been instrumental in promoting foreign investment, particularly in small and medium industries, in a number of developing countries. The main idea is to facilitate recycling of financial resources from Japan in the form of industrial investments which will contribute to the economic development of developing countries. In 1996, 10 investment studies were carried out that resulted in the establishment of three industrial enterprises, with another six projects (in

Indonesia, Philippines, Thailand, United Republic of Tanzania and Viet Nam) being actively promoted.

**6. Rural industrial development**

105. For most developing countries, sustainable rural industrial development is a key to overall socio-economic development as the majority of the population still lives in rural areas and is still heavily dependent economically on agro-based productive activities. It is essential to address issues linked to rural industrial development in a coherent and comprehensive manner, with targeted interventions at the policy, institutional and enterprise levels, paying attention simultaneously to sustainability and gender issues. It is also important, through regional development activities, to support economic integration between rural areas and urban centres. Much of the work in this area was oriented towards creating supportive, autonomous institutions such as regional industrial development agencies that can stimulate local interaction and networking among firms and provide access to market information and know-how that the individual entrepreneur or small firm cannot afford on its own.

**New projects****Rural industrial employment generation - Bangladesh**

Budget: \$192,000  
Funded by: UNDP, under a TSS-1 arrangement

106. This project features an in-depth study that will ultimately result in the formulation of a rural industrialization component of the UNDP non-formal employment programme scheduled to start in 1997. The study focuses on practical recommendations to improve the competitive level of the cottage industry sector. A national workshop will be held in 1997 to present the findings and recommendations of the team.

**Creation of entrepreneur development centres - Federated States of Micronesia (Phase II)**

Budget: \$675,251  
Funded by: UNDP

107. This project aims at replicating the Micronesian Entrepreneur Development Centre project, piloted for two years in Phonpei State, by creating similar institutions in Chuuk, Kosrae and Yap States for the promotion of private micro, small and medium enterprises. Special attention will be given to the generation of employment in rural areas and outer islands. The project has developed the capabilities of promotional institutions in rendering assistance to new entrepreneurs and existing enterprises by providing training in entrepreneurship and business management, technical and managerial advisory services and business information dissemination. At the same time, the project

is contributing to improving the regulatory and policy framework for private sector development.

**Employment generation and sustainable livelihood in rural areas - Solomon Islands**

Budget: \$550,400  
Funded by: UNDP

**Small-scale industry development in Honiara and provinces - Solomon Islands**

Budget: \$329,300  
Funded by: The Government of Japan

108. The aim of these two complementary projects for the Solomon Islands is to generate new job opportunities and sustainable livelihoods through the promotion and development of small-scale and cottage industries in rural communities. The capacity of the Industrial Development Division and the Employment Unit of the Ministry of Commerce, Industries and Employment will be strengthened to provide support services to potential and existing entrepreneurs. To that end, effective linkages with other governmental and non-governmental organizations will be established. Action plans will be prepared to improve the administrative business environment and to reduce land-related problems for small-scale industries. During 1996, activities were taken up in the provinces of Honiara, Isabel, Makira and Malaita.

**Technical advice on rehabilitation of wood-processing capacity in Huambo region - Angola**

Budget: \$24,500  
Funded by: UNDP

109. To prepare for the return of economic activity and to support the creation of propitious conditions for peace in this important front-line area, this project supported a local cooperative to enable it to make prefabricated wooden bridge components (kits) and basic wooden furniture, as well as joinery and light timber-framed buildings. The project also complemented and supported the work of the Swiss Humanitarian Aid Agency in the province and led to a follow-up project to be funded by Switzerland.

**Ongoing projects****Shendi integrated women's development project - Sudan**

Budget: \$316,960  
Funded by: United Nations Fund for Population Activities

110. The objective is to develop income-generating activities among women combined with social support facilities that are essential for women to increase their

participation in economic activities. The project involved 25 villages with a total female population of 17,000. There are three components: income generation, health and literacy. More than 6,000 women, operating either at home or at one of the 25 women's centres, have been trained to develop their skills for income generation. The skill development programme is conducted by 114 trainers of the Ministry of Social Planning. In order to ensure the growth and sustainability of women's activities, the project has developed a revolving-fund programme of loans. A loan committee is planned to be established in 1997.

**Process and product development centre for essential oils in Kannauj - India**

Budget: \$632,000  
Funded by: UNDP

111. The project has set up a national centre capable of providing technical support services and training to farmers, local essential oil producers and industrialists engaged in the production of fragrances, flavours and aroma chemicals. It is located in a well-known rural town where indigenous fragrances (attars) have been produced for centuries. Locally-fabricated equipment for a pilot plant was installed and commissioned during the year, which enabled the centre to assist local industries in process and product development. Farmers were trained in agricultural practices and good quality planting materials were supplied to them, some being new aromatic plants to be introduced into areas in and around Kannauj. The centre also assisted in setting up field distillation units for these new oils. Improvement in the quality of essential oils was achieved by conducting training courses for representatives of local industries on the latest techniques used and on international standards requirements. Local entrepreneurs were trained in fragrance formulation and applications so that they could better initiate small-scale industries to produce consumer products. New products developed were transferred to local industries. The centre also assisted in extension work to expand the cultivation and processing of aromatic plants in marginal lands, and continued providing analytical services, product development and the solution of problems experienced by the industries. Booklets on agricultural practices and the processing of selected aromatic plants were published in the local language for the benefit of farmers and entrepreneurs.

**Regional industrial development**

112. An area of growing importance in UNIDO's work is regional development. This is based on the fact that industrial development, particularly at the entrepreneurial and small firm level, requires a supportive infrastructure and services at the regional or local level that are seldom supplied by the market or the central Government in developing countries and countries in transition.

<sup>9</sup> This budget comprises funds from two separate projects.



113. During 1996 UNIDO further developed its expertise on regional industrial development through informal expert group meetings and participation in forums, workshops and seminars. A paper on regional industrial development authorities was presented at an economic forum for the regions of Europe for economic cooperation, security and sustainable development, organized under the sponsorship of the Council of Europe. This concept will also be presented at a forthcoming meeting on rebuilding nations: stimulating regional and local industrial development in transitional economies, to be organized by UNIDO in cooperation with the Agency for Regional Development in Poland and the Ministry of Economy of the Republic of Moldova.

**Development of private investment in agro-industry for economic substitution of coca cultivation in the San Martin area - Peru**

Budget: \$40,000  
Funded by: The Government of Germany

114. This preparatory assistance project consists of studying conditions in the area and laying down the basis for a crop substitution programme which would focus on promoting private investment, both local and foreign. The field work has been completed and the development plan is being formulated. Two international experts visited the area and selected 20 crops that could lend themselves to industrialization and commercialization. The experts also identified obstacles to the industrial processing and marketing of these crops.

**Assessment of a pilot medium-scale multi-purpose flour mill for the United Republic of Tanzania**

Budget: \$744,000  
Funded by: The Government of Austria

115. The project objective is to establish a multi-purpose medium-scale flour mill suitable for milling different grains in rural areas and small towns, thus facilitating the distribution of flour. The mill, developed by an Austrian company, was transferred to the United Republic of Tanzania in October, and its installation will be completed in the coming months.

**Completed projects<sup>10</sup>**

**Processing of stevia - Democratic People's Republic of Korea**

Budget: \$576,106  
Funded by: UNDP

116. The project resulted in the development of a process for the production of a purified extract of the stevia plant to serve as a substitute for sugar. As large quantities of sugar had to be imported, a total extract of stevia was being used as a substitute in food and beverage industries. In addition to contributing to the development of a suitable process, UNIDO assisted the design and commissioning of a pilot plant for the production of purified stevia extract, taking into account all quality and safety requirements. The process developed is being transferred to industrial units in rural areas throughout the country.

**Integration of women in agro-industry development: sun drying of fruits and vegetables (Phase II)**

Budget: \$620,00  
Funded by: The Government of Japan

117. The objective of this global project, which focused on Senegal, was to provide rural women with technical assistance in setting up a solar drying centre to process local fruits and vegetables and to help them improve their managerial and marketing skills so as to benefit from the sale of their products. A final evaluation conducted by the donor determined, *inter alia*, that the project had a positive impact on the participation of women in rural development.

**Timber frame buildings for emergency shelter - Croatia**

Budget: \$1,327,434  
Funded by: The Government of Japan

118. This programme, begun in 1992, introduced the light timber-framing technique developed by UNIDO. The first phase of the project managed to complete 970 square meters of buildings despite being implemented in very difficult circumstances close to a conflict zone and to attract enough attention to justify a second phase. The second phase had a much greater impact owing to the care taken to ensure full national and regional government coordination and support, including that of the municipalities receiving the community buildings. Construction of three additional 320-square meter buildings (schools, clinics, post office, etc.) was completed, with training provided for Croatian workers in the technology used. The final activity was a workshop on rehabilitation and restructuring of the forest and wood working industries in Croatia, which relied to a great extent on the experience of the project and is likely to pave the way for continued UNIDO assistance—including help to re-establish links with the wood industries of Bosnia and Herzegovina.

**7. Africa and the least developed countries:  
Linking industry with agriculture**

119. This is the only thematic priority with a geographic focus. It encompasses a wide variety of sectoral and

subsectoral activities aimed at enhancing agricultural production and increasing the competitiveness of agro-based industries. The emphasis on linking industry with agriculture is in line with the current predominance of the agricultural sector in the economies of African and least developed countries, as well as the potential long-term international competitive advantage for these countries in agro-based products, the multiple forward and backward linkages between the industrial and agricultural sectors and the potential impact of these linkages on poverty alleviation, employment and income generation.

**New projects**

**Integrated programme assistance to strengthen the leather and leather products industry - Uganda**

Budget: \$756,900  
Funded by: The Government of Austria

120. This project will enable the newly-established Uganda Leather and Allied Industries Association to represent the interests of the industry and sustain regulatory achievements; improve the quality and grading of raw hides and skins, and increasing the quantities produced in two selected target areas; increase the quantity and quality of semi- and finished leather; apply clean technology in the tanning industry; and improve the quality of leather footwear and other leather goods.

**Urgent assistance to the fishing industry in Mauritania**

Budget: \$177,000  
Funded by: The Industrial Development Decade for Africa

121. Strict controls now required by the European Union—the major market for seafood exports from Mauritania—have severely curtailed the fishing industry in that country. This has had a significant adverse impact on employment and revenue. The project aims at the introduction of a quality assurance system known as hazard analysis and critical control points (HACCP), which will make the country's fish products acceptable to the European Union and other markets. The project will strengthen the Quality Control and Inspection Department through capacity-building, which will ensure sustainability of the HACCP system.

**National Leather and Footwear Industry Scheme - Malawi**

Budget: \$361,000  
Funded by: The Industrial Development Decade for Africa

122. As part of the Regional Africa Leather and Footwear Industry scheme, the project is designed to enhance and reinforce the capabilities of the Malawi hides and skins, leather and leather products subsector.

This will be achieved by: improving the quality of raw hides and skins; strengthening the capability of the local tanning industry, thereby enabling it to convert a larger percentage of raw hides and skins into leather than is currently the case; and enhancing the production base as well as the efficiency of the footwear and leather goods subsector. The project, which features a gender development component, will also provide substantial training in areas of leather processing, pollution control, and footwear and leather goods manufacture. Production facilities with sound commercial capacity will be upgraded. Capital equipment will be provided through a revolving trust fund operated under the Leather Association of Malawi.

**Ongoing projects**

**Development of prototype mobile seed dressing applicators suitable for African countries. Seminar on Seed Dressing - Arusha, United Republic of Tanzania**

Budget: \$762,000  
Funded by: The Government of Germany

123. On-the-job training in operating the applicators was a prominent feature during the year. Many government and private enterprises showed keen interest in the prototype machine, which was displayed in many exhibitions in Africa. Participants in the international seminar on seed dressing from more than 20 countries from the region discussed the use of seed applicators. The prototype machines—both manual and tractor operated—were demonstrated. Participants unanimously agreed on the suitability of the machines for Africa for both seed dressing and post-harvest treatment. The meeting strongly recommended that UNIDO and FAO should arrange promotion of the machines for commercialization, emphasizing training, safety and the participation of private enterprises. This approach would be extremely beneficial for small farmers lacking financial resources. Further field trials are underway in the United Republic of Tanzania and will be completed prior to termination of the project.

**Design of an integrated development programme for the wood products manufacturing industrial system - Ghana**

Budget: \$108,500  
Funded by: The Government of the Netherlands

124. Under this formulation project a draft programme document was produced covering a package of projects valued at \$22 million (\$12-13 million for UNIDO implementation). Its presentation at a round table of donors, government and industry in Accra in July, and additional work to revise and update the programme and prepare project profiles, resulted in an increase in overall programme volume to \$27.5 million (\$16-17 million UNIDO). The programme has been selected as the integrated industrial development component of the

<sup>10</sup> The following projects were operationally completed, although project administration in some cases continued into 1997.

Forestry Development Master Plan of Ghana. The set of projects represents a comprehensive example of UNIDO's programme approach, aimed at intensive involvement with donors and Governments in support of long-term sustainable industrial development. It also represents a good example of linking forestry development with industry in Africa, and has significant components of rural development, transfer of technology, SMI development, investment promotion and strategy advice.

#### **National Africa Leather and Footwear Industry Scheme - Ethiopia**<sup>11</sup>

Budget: \$1,531,845

Funded by: The Government of Switzerland and UNDP

125. Major achievements were reached in the field of leather products export promotion and in tannery pollution control. Staff posting, equipment provision and project monitoring were successfully completed. Work plans for three years were prepared and approved. Designs and specifications for slaughter slabs and preservation sheds were approved, and construction started at four sites. A study on procurement of raw material (hides and skins) based on quality, as well as a study on the disease "ekek", were prepared.

126. Factories participating in the project for improved quality of leather footwear manufacturing benefitted from the supply of equipment and machines, training, expert assistance and attendance at fairs. Factories have improved the quality of shoes and uppers being manufactured, facilitating penetration of international footwear markets.

127. The main output of the tannery pollution control and cleaner technology project is the construction of two effluent treatment plants and a chrome recovery plant. Following delays in obtaining funds for civil works and the purchase of some equipment, two effluent treatment plants are expected to start operation in mid-1997.

#### **National Africa Leather and Footwear Industry Scheme - Uganda**

Budget: \$863,300

Funded by: The Government of Austria

128. The main focus in 1996 was the development of leather product clusters and strengthening of the newly-established leather association. The tannery processing fish skin from Lake Victoria Nile perch started operation in July and is undertaking important steps for marketing fish skin leather outside Uganda. The project's second phase was designed and received funding in early January 1997.

<sup>11</sup> Covers four separate projects, including associated projects for improved quality of leather footwear manufacturing and tannery pollution control and cleaner technology.

### **Completed projects**

#### **Extension of the national hides and skins, leather and leather products improvement scheme - United Republic of Tanzania**

Budget: \$575,000

Funded by: The Government of Finland

129. The project has succeeded in creating better trainers in target areas. Provision of transport equipment and rehabilitation of slaughter facilities have resulted in the improvement of skins collection as well as the quality of raw hides and skins in the target area. A grading system has been established and is now being followed. Environmental pollution has been minimized by the installation of proper effluent treatment plants at the three major tanneries. Provision of proper production equipment to Shan, Twins and Morogoro leather goods plants has resulted in increased production. Promotion of women in the leather industry has been demonstrated through assistance given to Pelly's Enterprise, which serves as a model factory run by women entrepreneurs. The project has contributed to the revival of the country's leather industry through the provision of equipment, training and consultancy/expert advice. The creation of the Leather Association of Tanzania and a revolving fund will have a positive long-term effect on the development of the country's hides and skins and leather subsector.

#### **Techno-economic study of the capacity and needs of the fishing industry of Senegal for focusing on a range of new products**

Budget: \$286,000

Funded by: The Industrial Development Decade for Africa

130. The project achieved its objective of increasing the range of commercial sea products produced by Senegal, as well as increasing their quality and value added. This has in turn contributed to improving the country's balance of payments through the export of these products to markets such as the European Union. This was attained through the introduction of the hazard analysis and critical control points (HACCP) system. The project has also facilitated the provision of better conserved products for the local and subregional markets. Furthermore, the project established a capacity for quality control within the Directorate of Fisheries. The project also initiated collaboration in research and development between Senegalese industries and R and D institutions in Europe.

#### **Women-in-development component of the National Africa Leather and Footwear Industry Scheme (NALFIS) - Zimbabwe**

Budget: \$144,288

Funded by: The Government of Denmark

131. National- and subregional-level awareness of the importance of women's contribution to the development of the leather sector has been heightened in that advancement of women is given greater cognizance than previously and women workers are now more readily accepted by the predominately male labour force. Women's capabilities in the leather and leather products industry have been enhanced and at least 100 women have been trained in various leather sector skills. Donor financing facilitated the secondment of a women-in-development expert, several training courses and seminars and the provision of modern equipment to Zimbabwean women entrepreneurs and cooperative administrators. These have also enhanced the effective integration of women in a range of economic activities in the leather sector.

### **C. Economic and technical cooperation among developing countries**

132. Among the sample projects described in their thematic context in the preceding section, many contain activities in support of economic and technical cooperation among developing countries (ECDC/TCDC). The following paragraphs provide a brief overview of activities containing major ECDC/TCDC elements. The projects described reflect the careful consideration given to the selection of strategies and development of programmes for ECDC/TCDC within the context of the growing economic and industrial differentiation among groups of developing countries in the various regions.

133. ECDC/TCDC financing and resource mobilization are pursued both with developing countries and with the donor community. UNIDO specifically supports initiatives towards co-sponsoring ECDC/TCDC programmes on a cost-sharing basis and seeks to complement such efforts, *inter alia*, by promoting triangular cooperation involving the participation of developed countries. In 1996, UNIDO began implementation of a project in which, under Japanese funding, investment project appraisal expertise from the Philippines is being applied in Kyrgyzstan. Eventually, the project will result in a portfolio of investment opportunities for promotion through the IPS office in Tokyo.

134. Towards the end of 1996 an important substantive contribution was made in the preparations for the South-South Conference on Trade, Finance and Investment held in San José, Costa Rica, in January 1997. UNIDO prepared extensive background documentation on such issues as the nature of industrial development in the era of globalization and the different modalities of industrial cooperation in regional economic groupings such as Mercosur and ASEAN. Detailed descriptions of relevant UNIDO programmes were also prepared, along with various proposals for South-South cooperation in industry contained in an industry-related action programme.

### **Regional and subregional cooperation and integration**

135. The creation and strengthening of networks is an important element of many ECDC/TCDC endeavours, such as the project for risk reduction in agro-chemical development in selected African and Arab countries. In the preparatory phase of this project, existing capabilities were assessed and focal points identified for establishing an Afro-Arab network.

136. The regional small and medium enterprise development programme for Africa focuses on the organization of a network of private and public SME institutions. Designed to facilitate continuous interaction and exchange of experience, the programme includes a series of publications on key issues related to methods of intervention, as well as advisory support upon request, a pilot executive seminar for policy makers and managers of SME support institutions and the development of selected management support tools. Special attention is given to the participation of African policy makers, practitioners and researchers in the implementation of activities to be carried out within the framework of this umbrella programme.

137. Within the high-impact programme for integrated advisory services for industrial policy and competitiveness strategies, the focus is on South-East Asian countries at varying stages of development. While the primary beneficiaries are the low-income countries of the region (Cambodia, Lao People's Democratic Republic, Myanmar and Viet Nam), others such as Malaysia and Thailand will participate as partners for the benefit of their less developed neighbours. As a mark of its support, Thailand has offered premises for the programme in Bangkok, in addition to a \$100,000 open-ended contribution to its budget.

138. The regional workshop on the development of the agro-related metalworking sector for Arab countries held in Casablanca, Morocco—organized in cooperation with the Arab Industrial Development and Mining Organization—identified opportunities for industrial investment and regional integration opportunities.

139. In cooperation with San Diego State University in the United States of America, UNIDO sponsored an international symposium on medicinal formulation based on plant matter to develop guidelines and recommendations for use by Governments, companies and organizations. The outcome provided information urgently needed by developing countries that are presently engaged in or are about to begin agro-processing activities using medicinal plants.

### **Promotion of investment, technology and policy cooperation**

140. In a rapidly changing global economic environment, enterprises in developing countries increasingly request assistance in respect of access to new technologies and international production and trade



linkages. Two projects approved and implemented for China aimed at disseminating information in the areas of float glass and environment-friendly technologies for mining and mineral processing. In cooperation with Jiangsu province, UNIDO held the Nanjing Forum at which technologies for SMIs were promoted. A technology compendium containing 400 technology offers was prepared and distributed prior to the Forum, which was attended by some 45 international participants from 13 developing countries. The meeting and subsequent plant visit generated some 20 cooperation proposals, including glass fibre and food additives production and motor cycle construction.

141. Two integrated programmes for investment, technology and information were approved, respectively, for selected anglophone and francophone African countries. The key objective of these programmes, both of which feature strong ECDC/TCDC elements, is to identify particularly innovative companies, assess their technological innovations and their capabilities to promote technological alliances with companies in other countries. The needs that such companies have for assistance in forming partnerships will also be assessed.

142. The year also saw the approval of a project to assist the 13 member countries of the Asian and Pacific Coconut Community in the establishment and implementation of uniform standards for aqueous coconut products. This policy and strategy programme is designed to strengthen the sustainability and global competitiveness of coconut industries in those countries.

143. Promotion of cooperation in human resources development has always been a key activity for ECDC/TCDC. With that goal in mind and in cooperation with the Governments of India and Turkey, UNIDO organized group training programmes in selected subsectors of industry, including utilization of medicinal and aromatic plants, beet sugar technology, cotton textiles, and fruit- and vegetable-processing. Among the successful outcomes of the programme was the development of networking and the establishment of business contacts.

#### D. Human resources development

144. Industrial human resources development (IHRD)—as a special consideration cutting across thematic priorities—continued to represent an important feature of nearly all UNIDO programmes. Activities in support of developing countries (particularly for LDCs) and economies in transition include significant IHRD components, as do programmes focusing on women in industrial development, as reflected in the high-impact programme for the development of entrepreneurship for women. IHRD activities relate in particular to capacity-building at the policy, institutional and enterprise level through on-the-job training, individual fellowships, study tours and group training programmes. In line with the in-depth evaluation of UNIDO IHRD

activities (20 May 1993, ODG.15 (SPEC.)), particular attention was paid to the creation of a comprehensive framework and an integrated approach. To maximize the impact of group training programmes, care was taken to incorporate elements identified in the recent evaluations of those programmes. Throughout the year, the development of strategies and tools continued, in tandem with the refinement and application of existing ones, so as to enhance the effectiveness of UNIDO's response to countries requesting support. Indeed, demand orientation remained the overriding principle in the development of UNIDO IHRD activities.

#### Technical cooperation activities

145. Technical cooperation activities undertaken by UNIDO responded directly to the concerns of Member States as expressed in General Conference resolution GC.6/Res.4. More than 440 UNIDO projects carried out during 1996 were directly related to IHRD, covering a broad range of sector-specific and thematic areas, but with particular emphasis on industrial policies, institutional support, investment and environment. Other areas included training of trainers, managers, entrepreneurs and technicians, with particular attention given to the needs of SMIs and the integration of women in industrial development.

#### Strategy and policy advice

146. In Bahrain, preparatory work was carried out as an initial phase of a project to assist the Government in the development of a programme to improve the competitiveness and productivity of SMIs. This programme would contribute to an assessment of the demand for and supply of skilled labour. A workshop is planned for 1997 to discuss follow-up measures.

147. Assistance provided to Zambia will strengthen the capacity of the Ministry of Commerce, Trade and Industry for the formulation, promotion and coordination of IHRD policies given the changing requirements of a market-oriented environment. Training was provided to over 50 staff of the Ministry.

148. In Brazil, an integrated project fully funded by the Federation of Industries and the National Industrial Training Service helped provide advanced services to the Federation of Industries of the State of Minas Gerais in the development of integrated IHRD policies, strategies, planning mechanisms and training outlines for middle-level technicians in manufacturing industries.

149. In cooperation with the Swiss authorities, a training needs assessment survey was carried out in 18 countries in Asia, Eastern Europe and Latin America using a questionnaire. A five-day workshop was also held in Switzerland, attended by 22 participants from ministries of transport and national railway organizations of eight countries in Asia and Eastern Europe. The programme was aimed at the introduction of modern managerial and technological methods to improve railway services in

respect of maintenance, rehabilitation, safety of operation and the environment. Participants were familiarized with modern techniques and equipment used in the railway sector in Switzerland that could be applied in setting up railway standards and technical specifications in their respective countries.

150. Project proposals relating to IHRD strategies and policies, especially needs assessment leading to the formulation of national action plans, were formulated and promoted in Cameroon, Côte d'Ivoire, Ethiopia, Ghana, Kenya, Libyan Arab Jamahiriya, Republic of Moldova, Nigeria and Uganda. The proposal in the Libyan Arab Jamahiriya was approved in 1996, as were TSS-1 projects for the United Republic of Tanzania and Zimbabwe.

#### Institutional support

151. Assistance to the Institute Rozvoje Podnikani at Ostrava, Czech Republic, continued in a second programme with emphasis on organization, redesign and reengineering; matching human resources requirements to the newly designed organization, including preparation of a motivational system; training requirements related to work design; team development; customer service; continuous improvement and expanded skills in management and supervision of staff.

152. Technical cooperation with the Democratic People's Republic of Korea included an international economic cooperation programme designed to expand export-oriented production, which contained a major IHRD component. Focusing on training of trainers, the programme plans to establish the necessary critical mass of talent to staff the institutions responsible for the initial operation of an economic free trade zone. Building on the engineering strengths of the country, a business institute will be created within the programme. Training courses and other learning opportunities to be developed through the institute will enhance capacity for quantitative analysis in economic decision-making consistent with established international practice, and will create a core of professional managers able to assume management responsibilities in various capacities.

#### Enterprise level

153. In cooperation with the Government of Japan and with the assistance of two training institutions, UNIDO successfully implemented three training programmes in Japan that dealt with vital areas for developing countries: production management in manufacturing industry; quality improvement of industrial products; and technology management and industrial development. Thirty participants from all developing regions attended the programmes, where they were exposed to advanced Japanese techniques and technologies and to a wide range of practical experience in selected industrial fields. Simultaneously, UNIDO provided substantive technical

inputs through the development of training material based on UNIDO methodologies and international experience.

154. An advanced training method was developed for a course on maintenance of biomedical electronic and computer-assisted equipment to be implemented in Hungary for African trainees. A CD-ROM presenting substantive issues, practical experience and exercises was developed with the financial support of the Hungarian Government.

155. Special attention was given to strengthening industrial human resources development capabilities and capacities in Africa. French-speaking countries in the region benefited from a programme focusing on entrepreneurs, trainers and consultants in food processing. Twenty entrepreneurs, industrialists, trainers and consultants from 11 sub-Saharan countries attended a training programme at Tangiers, Morocco, implemented from IDDA resources in close cooperation with the African Training and Research Centre in Administration for Development.

156. In the United Republic of Tanzania and countries of Central America, integrated programmes were implemented based on the UNIDO training approach for women entrepreneurs in the food-processing industry. In the course of the Tanzanian project, the UNIDO entrepreneurship development methodology was adapted to the country's needs and used for the training of women in business. A training workshop was held for 18 trainers and pilot/refresher training courses conducted for 94 women entrepreneurs and managers in the food-processing sector in six regions of the country. A second phase of the project was approved with the aim of further enhancing business development capabilities among women entrepreneurs.

157. In Central America, the regional training programme covering Guatemala, Honduras and Nicaragua was finalized and training programmes carried out for 24 trainers who in turn organized pilot training courses for approximately 60 women entrepreneurs. Following the completion of project activities and adaptation of training materials, an extension phase is envisaged. Both projects focus on rural women's employment generation and poverty alleviation as well as providing access to new technologies.

#### Operational instruments

158. Additional effort was devoted to refining and applying the IHRD operational instruments initiated in 1995. The Human Resources Diagnosis and Reorientation Map (HRD-ROM) was, for example, applied in Bahrain. Requests for application of the Graduate Resources Integration Programme (GRIP) were received from Brazil, the Islamic Republic of Iran and Thailand.

159. GRIP was introduced at the Paris World Congress of Engineering Educators. Achievements include the following:

- Codification of industrial skills categories (over 5,000 skill groups have already been identified and put into a database as a basis for conducting a skills gap analysis).
- Codification of education/training categories (codification of education and training categories has been made along the lines of the industrial skill categories to help measure the gap between the needs of industry and levels of graduates).
- Identification of laws and regulations relevant to IHRD (over 140 categories of laws and regulations directly relevant to IHRD have been identified and included in a database as a basis for conducting a survey of the environment in which university-industry linkages develop).
- Formulation of a survey for curriculum review.

160. On the basis of the above, a benchmark study is planned on industry-university linkages where concrete policy recommendations and action plans can be made based on quantitative data. To date there are no studies available in which statistical data is the basis for specific action plans by Governments, industry and academia.

### E. Integration of women in industrial development

161. The year was characterized by the consolidation of the programme for the integration of women in industrial development within the framework of the UNIDO thematic priorities and the Platform for Action adopted in 1995 by the Fourth World Conference on Women.

162. Substantively, the programme aims at reinforcing linkages between industrial and social development (particularly in terms of poverty alleviation) by promoting and increasing economic opportunities for women and by broadening the human resource base for industry on a more equitable basis. Close interaction and consultations were maintained with several agencies of the United Nations system and with international NGOs with a view to increasing the efficiency of the programme, avoiding duplication and responding, in a concerted manner, to follow-up requirements of previous United Nations global conferences, such as the International Conference on Population and Development and the World Summit for Social Development.

#### *Follow-up to the Fourth World Conference on Women*

163. During the course of 1996, the three-point agenda identified by UNIDO in its follow-up action plan to the Beijing Conference was further elaborated to take fully into account the seven thematic priorities. Hence the

plan encompasses the actions required to facilitate the adoption of gender-sensitive industrial policies, reinforcing capacity-building and entrepreneurship development and improving access by women to information on technology, investments, markets and communications. A comprehensive document comprising strategic objectives, outputs and specific programmes was developed following the three-point agenda. The plan is consistent with the inputs to be provided by UNIDO for the implementation of the United Nations System-Wide Medium-Term Plan for the Advancement of Women adopted in 1996 by the Commission on the Status of Women.

164. In this regard, UNIDO actively participated in the first meeting of the newly-established ACC Inter-Agency Committee on the Advancement of Women and Gender Equality, which defined the programme of work and the responsibilities of the various agencies in the implementation of the Beijing Declaration and the Platform for Action. Particular emphasis was placed on implementing, evaluating and monitoring gender mainstreaming strategies in all United Nations programmes through more widely applied gender analysis methods. Furthermore, in view of the importance given to human resources development to reduce gender disparities, UNIDO participated in the December expert group meeting on vocational training and lifelong learning convened by the United Nations Division for the Advancement of Women, where UNIDO's innovative approaches towards developing human resources for industry were presented.

165. UNIDO also took part in the subregional conference of senior governmental experts on the implementation of the Platform for Action in Central and Eastern Europe, held in September by the Division for the Advancement of Women and the Economic Commission for Europe. The UNIDO contribution related to the improvement of women's participation in labour markets, entrepreneurship development in small- and medium-scale enterprises, the provision of data and information on women and industry and on networking and training for Governments and NGOs engaged in the implementation of national plans of action.

#### *Implementation of gender-mainstreaming strategies*

166. Concluding an effort of nearly two years, the gender-sensitization programme for UNIDO staff was completed: a series of gender training workshops enabled some 120 staff members to be trained in gender analysis and mainstreaming; and a set of "gender-oriented" guidelines and checklists were developed for several industrial subsectors. Moreover, based on in-house consultations, a gender dimension was introduced for the seven thematic priorities with guidelines prepared for each theme and disseminated to the component coordinators. Issues bearing on thematic priorities 1 (strategies and policies), 3 (small and medium industries), 4 (innovation, productivity and quality), 6

(rural industrial development) and 7 (linking industry with agriculture) will be emphasized as they are of particular relevance for the advancement of women in industrial development. In addition to guidelines for gender-mainstreaming, the database on women and industry was completed, with 109 indicators covering 217 countries and territories, thus providing a useful tool for improved gender analysis. A gender perspective was introduced into the discussions and documents emanating from the preparations for the launching of the Alliance for Africa's Industrialization. In particular, technology developed within the framework of the project "Development and distribution of food-processing and related equipment for rural women in sub-Saharan African countries" was demonstrated at the inauguration of the Alliance.

167. A good example of the integration of gender into UNIDO activities was provided by the implementation of a TSS-1 study on rural industrialization in Bangladesh. A mission was undertaken in September/October in the rural areas of the country to examine constraints and opportunities for women's participation in small and cottage industries. While the programme itself will encompass a wide range of both formal and informal off-farm employment, the findings of the mission recommended a focus on the provision of micro-credit and related support and on the needs for environment awareness and the transfer of simple environmentally sound technologies and skills.

168. Gender mainstreaming is considered one of the major strategies to achieve gender equality and will be the subject of substantive reporting to the Economic and Social Council in 1997.

#### *Development and implementation of women-specific projects and programmes*

169. In 1996, more emphasis was placed on the development and implementation of women-specific programmes and projects. In particular, the following programmes and projects were promoted, developed, funded and implemented. A high-impact programme was launched on women's entrepreneurship development, so as to achieve a more meaningful and visible contribution to industrial development. Preparatory assistance programmes were developed and approved for three African countries (Côte d'Ivoire, Senegal, Zimbabwe) and two full-fledged national integrated programmes were formulated in Ethiopia and Mali in the food-processing sector. As regards the programme in Mali (funded by Belgium), this began in December with a national workshop for all actors and participants in the programme. In another project, the second phase of the training programme for women entrepreneurs in agro-industries in the United Republic of Tanzania (funded by Austria) was fully developed and is now operational. This project will enable the design and testing of additional training modules on the processing of spice and aromatic plants by women

entrepreneurs. In Nigeria, a needs assessment mission was completed and a programme formulated to introduce the UNIDO training programme for women entrepreneurs in the food-processing industry within the framework of the UNDP country programme.

170. With respect to policies and strategies, the results of the regional study on the participation of women in manufacturing in Latin America and the Caribbean were applied in Colombia, where an integrated national programme was prepared with the goal of increasing the role of women in industrial activities. A similar programme is envisaged for the Mercosur countries with the support of the Inter-American Development Bank. Technical advice for the development of poverty alleviation strategies, with particular emphasis on women, has been requested by the Government of Togo in consultation with the African Development Bank.

171. To a large extent, the considerable interest generated by the project "Development and distribution of food-processing and related equipment for rural women in sub-Saharan African countries" can be traced to the demonstration at the launching of the Alliance for Africa's Industrialization of the multi-purpose trailer platform. As a follow-up to the pilot phase of this project implemented in Burkina Faso and Mali, where village women were provided with appropriate food-processing technologies—particularly milling and dehulling—a new project was formulated to consolidate the results and expand operations in northern Mali, with UNDP becoming a new major partner, together with IFAD (the latter having funded the first phase of a regional project). The demonstration of the technology during the launching of the Alliance in October prompted requests from various African countries for replication of the project. The formulation of a dissemination strategy is now being initiated in cooperation with the partners involved.

172. A project was formulated for the United Republic of Tanzania within the high-impact programme on introducing new technologies for abatement of global mercury pollution. The project, funded by Japan, has now become operational and includes a strong gender component since many women are involved in artisanal gold mining.

#### *Inter-agency cooperation and interaction with NGOs*

173. UNIDO involvement in system-wide consultations included the Commission on the Status of Women and the ACC Inter-Agency Committee on the Advancement of Women and Gender Equality. Detailed inputs were provided by UNIDO for the update of the report on gender, science and technology as well as for the report by the Secretary-General on follow-up to the Beijing Conference.

174. Regular contact was maintained with NGOs having consultative status with UNIDO. For example, UNIDO was represented at the XXII International Congress of

Business and Professional Women held in Venice, Italy, in July. UNIDO programmes and projects were also presented at the meeting of the International Steering Committee on Economic Advancement of Rural Women held in Amman, Jordan, in May. Similarly, UNIDO was represented at the first global women entrepreneurs trade fair and investment forum, organized by the Ghana Association of Women Entrepreneurs and held at Accra, Ghana, in June/July. UNIDO also sponsored the participation at the trade fair of three women entrepreneurs from Burundi.

175. UNIDO's competence in terms of women's entrepreneurship was demonstrated by the invitation received from the Golda Meir Mount Carmel

International Training Centre to participate in the symposium on economic development, entrepreneurship and gender that took place at Haifa, Israel, in October. The UNIDO contribution was a lecture on entrepreneurship development: empowering women for development. On a similar note, the Non-Governmental Liaison Service requested UNIDO's participation in the United Nations-NGO consultation meeting on women held in the Russian Federation in April, where UNIDO was the lead agency on the issue of women and business. The workshop discussed the analytical framework for the implementation of the Russian National Platform for Action and identified the need for NGO participants to learn more about programme development and project management.

## CHAPTER IV

### UNIDO AS A GLOBAL FORUM FOR INDUSTRIAL DEVELOPMENT

#### A. Conceptual introduction

1. A conceptual overview of UNIDO's function as a global forum for industrial development was provided in the 1995 annual report. Greater emphasis on its upstream global forum function gives UNIDO the possibility to increase the impact of its reduced resources on the industrialization process. Improving the policy, institutional and normative framework in developing countries and economies in transition is essential for creating an enabling environment for an industrialization process led by the private sector.

2. The normative activities, in particular, will allow countries to assess their progress towards industry-related international and national targets. This is essential in a world where the achievement of established norms and standards is a pre-condition for participation in global markets. At the same time, such an assessment will allow industry in developing countries and economies in transition to identify needs for technical cooperation.

3. In the four areas described in the 1995 report which were selected for further exploration (UNIDO seal of accreditation, UNIDO industrial development index, guidelines for industrial science and technology parks, performance norms and benchmarks for industrial processes), work has progressed on development and application of the concepts involved. In all activities, intensive contacts were made and cooperation arrangements established with other competent United Nations agencies and with some universities, national governmental institutions and NGOs.

#### *UNIDO seal of accreditation*

4. During the General Conference of the International Organization for Standardization (ISO) held in London in September 1996, the concept of the UNIDO seal of

accreditation was presented so as to identify a joint operation procedure with the Quality System Assurance Recognition (QSAR) programme of the ISO International Electrotechnical Commission. As a consequence, it was decided that UNIDO could assist developing countries by implementing pre-audit activities in those accreditation bodies willing to be registered in the QSAR programme. A working group will be established to design procedures and schemes for the pre-audit activities.

#### *UNIDO industrial development index*

5. UNIDO approved a pioneering project to develop an industrial development index and a set of related industrial development indicators. Work began with an in-depth review and comparative analysis of existing indexing schemes, such as the UNDP Human Development Index and the competitiveness indicators of the World Economic Forum. Empirical data will come from the UNIDO industrial database, supplemented by primary data obtained from sample surveys.

#### *Guidelines for industrial science and technology parks*

6. To assist in the appropriate use of science and technology parks, particularly in connection with regional industrial development, and to support their continuous development and improvement, UNIDO has initiated the formulation of a system for (self-) assessment, quality control and certification of science and technology parks. The system will consist of a manual and a methodology for (self-)assessment, quality control and certification. Specially designed knowledge development and training programmes for promoters and managers of parks will be an element of the system, as well as a handbook containing guidelines for park development and operation.



### Performance norms and benchmarks for industrial processes

7. Preparatory work focused on the assessment of industrial performance against existing international benchmarks and norms with respect to technological, environmental and social parameters for industrial processes. Work on the development of a methodology was also initiated. The methodology borrows concepts from the life cycle approach to assessing industrial processes. Informal contacts were made to establish cooperation with other international organizations active in setting standards and norms for industrial processes. These contacts will be formalized and an interorganizational group established in 1997 to ensure full cooperation in this sphere. This activity will enable UNIDO to make recommendations on improvements in the technological, environmental and social factors that comprise industrial processes.

8. Three countries (India, Indonesia and Zimbabwe) were contacted and arrangements for implementing pilot activities in the textile dyeing and printing industry were discussed. Paving the way for collaboration with the Indonesian Agency for Environmental Protection, a field mission revealed a strong interest in activities relating to industrial performance benchmarks, life cycle analysis and eco-labeling in the field of textiles. In Zimbabwe, preliminary contacts with the UNIDO-supported National Cleaner Production Centre were established. In India, implementation agreements were finalized with the Confederation of Indian Industries and various textile units.

### B. Industrial statistics

9. During the year, UNIDO carried out its second round of the annual collection of detailed industrial statistics from 174 developing countries. The year saw the beginning of the collection of industrial statistics classified according to the new revision (revision 3) of the International Standard Industrial Classification (ISIC). This entailed development of a new questionnaire, a new database and related software.

10. The statistics collected relate to an aggregate of firms in widely diverse national contexts. The data are reported to UNIDO in a form that adheres in some measure to international conventions, yet retains significant idiosyncratic features. UNIDO thus assumes the task of harmonizing these data in a way that permits international comparability. The Organisation for Economic Cooperation and Development does the same for the 20 developed countries it covers and, once merged, the two sets of data provide a world view of industry in figures.

11. In the reporting period, the volume and complexity of this task increased in that a larger number of countries started to report data at the four-digit level of ISIC against the customary three-digit level of disaggregation.

In addition, more countries, including many countries in transition, adopted revision 3 of ISIC, thereby compelling UNIDO to maintain parallel series in revision 2.9 (to ensure continuity) and in revision 3 (to follow the new international recommendations).

12. Using the database thus created, UNIDO developed information products tailored to the needs of constituencies that require global statistics. The four major UNIDO industrial statistics databases are sold for secondary dissemination and final users or are exchanged for data from national sources. A total of 147 copies of the various UNIDO databases were supplied to international brokers such as the World Bank, the World Trade Organization and the Organisation for Economic Cooperation and Development, national entities such as ministries of trade and industry, private commercial companies and private non-profit entities such as research companies, and academic institutions.

13. UNIDO is responsible for publishing the *International Yearbook of Industrial Statistics*. The 1996 edition, issued by a commercial publisher, presented industrial statistics for over 100 countries and for a number of selected country groups. A further publication, *Using Statistics for Process Control and Improvement*, provides an introduction to basic concepts and techniques of statistical process control, and is expected to place the adoption of new management techniques within the reach of SMEs in developing countries.

14. Besides generating global information, UNIDO also contributes to the establishment of international standards and norms in the field of industrial statistics. The value of statistics depends greatly on international comparability that, in turn, depends on universal acceptance of conventions. UNIDO maintains day-to-day contacts with more than 100 national statistical offices and several international organizations. As a member of the Statistical Commission and its Task Force on Industrial and Construction Statistics and Working Group on International Statistical Programmes and Coordination, the ACC Subcommittee on Statistical Activities, and the International Statistical Institute, UNIDO participated in the course of the year in five meetings on matters of international coordination. An important aspect of such international coordination was the global introduction of revision 3 of ISIC.

15. UNIDO also contributes to a United Nations-wide programme on indicators of sustainable development, in the role of lead agency for the industry-related component of that programme. Furthermore, UNIDO was active in disseminating the tools of statistical methods used to control quality in manufacturing processes. Another activity involved UNIDO staff lecturing on industrial statistics at the Institute for Social Studies in The Hague, Netherlands.

16. UNIDO continued to provide a Windows version of NISP (National Industrial Statistics Programme)

software to national users through technical cooperation programmes. NISP is used for data collection, tabulation and dissemination of statistics created by UNIDO. It is fitted with all the standard features and procedures internationally recommended for processing industrial statistics. Thus, when NISP is adopted by data producers, it contributes to providing an enhanced global forum where data can circulate easily.

### C. Industrial information

17. The major activity of the industrial information programme during 1996 was to build up national capabilities to meet the demand for information and other support services from both public and private sectors (in particular SMEs) in a commercially sustainable and self-sufficient way. The growing importance of the use of information technology, in particular use of the Internet, was demonstrated in that all developing regions and countries with economies in transition were covered in the design and operation of projects. An integral part of all these projects is the upgrading of skills in the use of information technology and the efficient use of new opportunities from the Internet. In addition to the projects, special training programmes were developed and implemented in selected African, Eastern European and Latin American countries.

18. A major project reflecting the application of information technology was successfully completed in Sri Lanka, where ITMIN (Industrial Technology and Market Information Network) was introduced. The first six months of full project operation showed that the concept used is the most efficient for achieving sustainability and reaching the widest possible audience.

19. The UNIDO presence on the Internet was increased by improving and expanding the content of its World Wide Web (WWW) server with the aim of providing wider access to UNIDO industrial information resources and services resulting from technical cooperation and investment and technology promotion programmes. Existing resources and networks for businesses were drawn together into one interactive WWW resource to give users easy access to UNIDO networks for investment promotion, technology centres, subcontracting exchanges, training opportunities and other industrial information.

20. The Industrial and Technological Information Bank (INTIB) WWW business site will also be used to enhance UNIDO cooperation with partner institutions such as the Asian and Pacific Centre for Transfer of Technology, the African Regional Centre for Technology, the Multilateral Investment Guarantee Agency, the United Nations Conference and Trade and Development Global Trade Point Network, and Group of 77 Chambers of Commerce. An interface to UNIDO's extensive collection of country information has also been provided.

21. To provide easy access to sources of information on technology, investment and environment-related issues, the International Referral System was redesigned and updated. Increased support was provided to international technology centres in networking and monitoring developments in new and emerging technologies through a new periodical launched to cover genetic engineering and biotechnology, information technology and new and advanced materials.

22. Strategic alliances with United Nations organizations were strengthened through participation in the inter-agency project on universal access to communication and information services. Cooperation with NGOs was enhanced through participation in the forty-eighth International Federation for Information and Documentation Conference on the Globalization of Information: The Networking Information Society.

### D. Research publications

#### *Industrial Development - Global Report 1996*

23. The Global Report 1996 highlights the challenges and opportunities presented by the process of globalization of markets for goods, services, labour, capital and technology. While accepting that this process can lead to increased global welfare, the Report argues that a widening of international disparities may result if the process fails to integrate into the global economy the small, technologically and industrially less advanced economies. Consequently, the central message is that globalization must be accompanied by a commitment to a more sustainable and equitable pattern of development, which is essential for the future stability and viability of the world economy.

24. As in 1995, the Global Report 1996 was issued in English, French and Spanish, with the English edition co-published with Oxford University Press, United Kingdom, and the Spanish edition co-published with the Fondo de Cultura Economica, Mexico.

#### *Industrial Development Reviews*

25. While the industrial development review programme was discontinued in the 1996-1997 biennium, several reviews initiated in the previous biennium were finalized and published in 1996. These included a two-volume review of the Central Asian Republics formerly constituting part of the Union of Soviet Socialist Republics (Azerbaijan, Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan), and a review on China, both co-published with the Economist Intelligence Unit in the United Kingdom and issued as sales publications. Others covered Eritrea, Ethiopia, Kenya and Uganda, of which the first three were completed and issued as non-sales publications. In addition, seminars on industrial development linked to the reviews of the Islamic Republic of Iran (published in

1995) and China were held at Tehran and Beijing, respectively.

***The Globalization of Industry: Implications for Developing Countries beyond 2000***

26. This research report was issued as a follow-up to the 1995 Global Forum on Industry and updates the conclusions and recommendations of the Forum. The document also takes into consideration more recent developments in the world economy and highlights the measures taken by UNIDO in response to those developments. Noting that the globalization process poses particular risks for LDCs—most of which are located in Africa—the report contains a chapter dedicated to an analysis of these risks and proposes measures to help address them. Special reference is made to the Alliance for Africa's Industrialization.

***Survey of Selected World Industries***

27. This publication aims to provide a deeper insight into the effects of the rapidly changing economic and industrial environment that is characterized by the increasing globalization of trade and investment and the rapid diffusion of new technologies at the sectoral level. To that end, the Survey analyses the impact of these developments on specific industrial sectors at a global level. The four industries chosen for this purpose are the automotive, construction equipment, pharmaceutical and semiconductor industries, which were selected on the basis of their strategic importance, technological intensity and growth potential.

***Industrial Economics for Countries in Transition - Evidence from Eastern Europe and Asia Pacific***

28. This study focuses on problems faced by economic and industrial policy-makers in the economies in transition with regard to such important issues as enterprise restructuring and privatization, industrial strategy and trade policy, tax reform and income policy, and productivity growth. It is based on a large, diversified and first-hand body of empirical research conducted by a distinguished group of contributors who explore the long-term prospects for industrial growth, the accumulation of technology and the overall framework of economic restructuring and industrial reform in the countries in transition. The book was co-published with Edward Elgar Publishing Limited, United Kingdom.

***Guidelines for Infrastructure Development through Build-Operate-Transfer (BOT) Projects (UNIDO BOT Guidelines)***

29. This publication represents a response to the growing demand in both industrialized and developing countries for information, advice and guidance on the formulation and implementation of infrastructure projects within the BOT framework. As such, it is intended to provide both a general overview of the conceptual, legal and financial

issues associated with BOT projects and practical guidance for project development, negotiation and implementation. This book is issued as a UNIDO sales publication and has sold widely.

***Manual on Technology Transfer Negotiation***

30. This publication evolved from the educational activities in technology transfer operations conducted by UNIDO over several years. It is intended to serve as a consolidated source of practical information on technology transfer and contract negotiation, covering both guiding principles and international practices and approaches to the many aspects of technology transfer. Although it is oriented towards use by developing countries, the Manual can readily be used as a reference document by any technology negotiator. It is issued as a UNIDO sales publication.

***Principles for Promoting Clusters and Networks of SMEs***

31. Responding to the mounting evidence from both developed and developing countries that clustering and networking can help SMEs raise their competitiveness, this discussion paper examines the role of public policy in this process with reference to the experience of several developed and developing countries.

***Support Systems for SMEs in Developing Countries - A review***

32. This discussion paper reviews UNIDO's 30-year history of designing and establishing a range of support systems for SMEs in developing countries, and analyses issues critical to the future role of SMEs. The review is intended to give a clearer understanding of the new challenges facing support institutions, and of the urgent need to devise appropriate responses to these challenges.

***Opportunities and Challenges in the Development of the Pharmaceutical Industry in Asia and Pacific Developing Countries***

33. This paper was prepared for inclusion in a United Nations Conference on Trade and Development publication entitled *Expansion of Trading Opportunities to the Year 2000 for Asia-Pacific Developing Countries: Implications of the Uruguay Round and Adaptation of Export Strategies*. It reviews the major trends in the pharmaceutical industry and discusses the implications of the Uruguay Round agreements on the industry in general terms and with respect to selected countries. The paper also identifies key aspects of future trends in this industry that would need to be taken into account by countries in the region.

***From Waste to Profits***

34. This publication is presented as an information package on waste minimization and pollution control in

the context of industrial development, and is based on the experience gained from a UNIDO-supported project to assist small-scale industries in India. It comprises a report on the project, supporting guidelines and a film on cleaner production in India. Taken together, the package describes a practical approach to implementing a programme to reduce pollutant discharges and increase financial returns.

***Information Sources on the Leather, Footwear and Leather Products Industry***

35. With coverage of developing as well as industrialized countries and areas, this publication aims to provide easy access to existing information sources considered of direct practical interest and value to potential users. Data have been compiled to facilitate rapid access to referenced entities and easy acquisition of the periodicals and books listed.

***Acceptable Quality Standards in the Leather and Footwear Industry***

36. This publication is intended to provide developing countries with quality control information and recommendations for acceptable quality levels for leather, leather products and footwear. Specifically, tanners, manufacturers and traders will be encouraged to improve quality control.

**E. Global technology centres**

37. To an increasing extent, UNIDO global centres on new technologies are perceived by developed and developing countries as a valuable mechanism for linking new technology promotion with investment opportunities through international collaboration and the development of partnerships and strategic alliances. In 1996, five centres were in operation, with a further five at the promotion and negotiation stage.

***International Centre for Science and High Technology (ICS)***

38. Following ratification of the agreement between the Government of Italy and UNIDO, the institutional arrangements for ICS entered into force on 26 February, bringing to an end the pilot phase of the Centre, which now has become a full-fledged UNIDO institution. The annual contribution for 1995 and 1996 was transferred to UNIDO in June, and after approval of the work programme for 1996-1997, implementation of subprogrammes, projects and activities was initiated.

39. Twelve expert group meetings were carried out in the four areas of competence of the Centre: chemistry, environment, high technology and technology management. A two-week training course in Malta on geographic information systems and risk assessment for integrated coastal management benefited participants

from Mediterranean countries. In Latin America, a regional workshop on technology monitoring and forecasting was conducted in Bolivia. The workshop led to a commitment of participants to pursue a regional approach to technology forecasting through a joint programme for which financing will be sought.

40. Within the environment component, meetings were organized on: decision support systems and environmental impact assessment for industrial development; monitoring of industrial siting and pollution by remote sensing and in-situ automated instrumentation; and biodiversity prospecting and business creation. One key function of these activities is their role in helping the selected developing country participants shape the focus of ICS programmes during the coming year. Substantive recommendations made by participants resulted in more focused and demand-driven ICS environment subprogrammes.

***International Centre for Genetic Engineering and Biotechnology (ICGEB)***

41. Following the establishment of ICGEB as an autonomous intergovernmental organization, UNIDO entered into an agreement with ICGEB that resulted in the establishment of a Liaison Office at UNIDO Headquarters. The purpose is to ensure complementarity of activities and build on the respective strengths of the two organizations. In this regard, UNIDO will be making extensive use of ICGEB scientific and technical expertise in the implementation of biotechnology-related projects, while ICGEB will engage UNIDO expertise in technology transfer, licensing and matters pertaining to policy.

***International Centre for Application of Solar Energy (CASE)***

42. Cooperation between UNIDO and CASE was enhanced during 1996 with an increasing range of activities including the development of a network of national and regional centres. CASE expanded its programme both in content and in its coverage of developing countries and is concentrating, with UNIDO, on establishing a network of focal points in developing countries.

***Hangzhou International Centre for Small Hydro Power (HIC)***

43. With the support and advice of UNIDO, the Centre was established in China and a programme of cooperation with UNIDO was developed.

***International Centre for Hydrogen Energy Technologies (ICHET)***

44. In the area of renewable energy technology promotion, a feasibility report on the establishment of ICHET was completed and an expert group meeting was



held. Following the meeting, the Government of Turkey offered to host a Centre and to provide \$40 million in cash and in kind for the Centre's establishment and initial operation. UNIDO and the Government of Turkey are in the process of finalizing an agreement.

#### New initiatives

45. New initiatives on establishing global centres included:

- Preparatory work was completed for starting the pilot activities of a new international materials assessment and application centre, initially funded through a trust fund agreement with Brazil. The centre will provide an international forum for managing specific techno-economic aspects of new materials in an integrated multidisciplinary and transsectoral fashion.
- A proposal was initiated for the establishment of an international centre for advancement in manufacturing technology in India, and in the Republic of Korea an international centre for materials evaluation technology initiated its first year programme under a trust fund arrangement.
- The most recent initiative was launched by UNIDO and the Samsung Advanced Institute of Technology (Republic of Korea) which expressed an interest in the establishment of an international centre for cooperation in new technologies. Further promotional work will be carried out in 1997 in order to develop a concept and explore the centre's feasibility.

#### F. Investment promotion network

46. For the Investment Promotion Service (IPS) network, 1996 was a year of innovation and consolidation. In addition to the opening of new IPS offices, the services provided were diversified through new mechanisms.

47. In July, IPS Vienna was re-opened and the Investment and Technology Promotion Initiative in India became operational. Negotiations continued to allow the IPS office in Seoul to resume full operations early in 1997. Similarly, discussions progressed with the aim of establishing an IPS in the Philippines and an Investment Promotion Unit in Egypt, again scheduled to begin operations in 1997. Also in 1996, financing was secured to establish an Investment Promotion Unit in Saudi Arabia. As in the previous year, the objective was not only to expand the network, but to diversify the participating organizations to ensure the access of developing country businesses to UNIDO expertise and methodologies.

48. Mobilizing the flow of investment and technology to Africa was a priority for the network. In October, a consultative meeting of African investment promotion agencies and UNIDO Investment Promotion Services was convened in Abidjan, Côte d'Ivoire. The meeting

formed an element in the activities launching the Alliance for Africa's Industrialization. The meeting identified a range of measures to enhance the capacity of the investment promotion agencies to attract overseas capital and investment. Recommendations of the meeting related to such areas as making full use of modern information technology, developing skills in project identification, formulation and appraisal, as well as endorsing the call for a project completion facility, which would facilitate the final negotiations on investment projects.

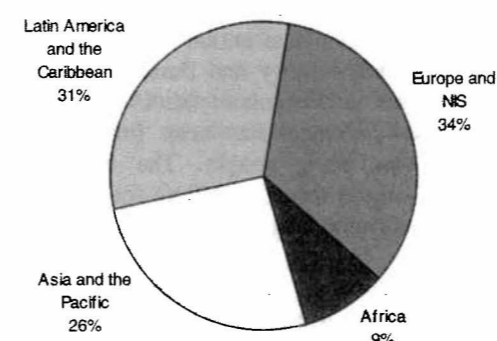
49. Guided by UNIDO Headquarters, the IPS network was active in areas emerging as potential destinations for overseas capital. For example, follow-up activities were undertaken by IPS Tokyo on a project to promote investment in Myanmar. Initially, recommendations were made on Myanmar investment policies, and in the latter phase investment opportunities were publicized to the interested business community. This exercise was repeated in Mongolia in July 1996. At a training seminar on investment promotion and business management, local entrepreneurs became acquainted with the operation of a market economy and entrepreneurs were equipped with improved negotiation and business management skills.

50. An example of the enhanced coordination between the IPS network and other UNIDO programmes was the Cleaner Industrial Production Forum held in the United Kingdom in September. The Forum incorporated workshops on preventive environmental management for SMIs. The event was organized by UNIDO in cooperation with NIMTECH, the focal point for the UNIDO investment promotion programme in the United Kingdom. This event, which attracted representatives from 36 countries, combined UNIDO knowledge of environmental requirements of developing countries and NIMTECH expertise on the capacity of United Kingdom sources to meet those requirements.

51. A series of measures to improve the efficiency of the network were developed. These included the introduction of a staff exchange system to allow staff members from the IPS network a greater insight into Headquarters operations. Further, the performance evaluation system was extended to staff members in IPS offices and closer coordination of the Delegates' Programme was introduced to ensure that this Programme clearly reflects the priorities of the broader UNIDO programme.

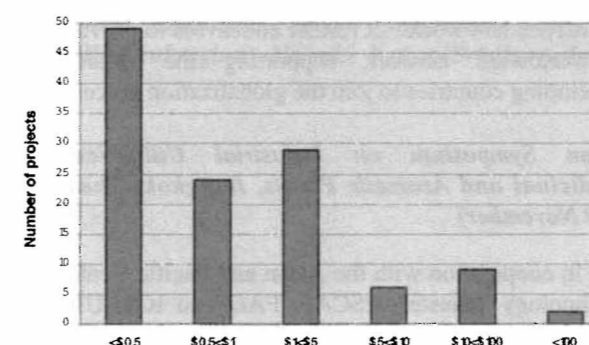
52. The regional breakdown of concluded investment projects shows that countries with economies in transition in Europe were the leading recipient regions with 34 per cent, as shown in figure 11. These were closely followed by Latin America and the Caribbean and by Asia and the Pacific with 31 and 26 per cent respectively. To offset the decline in investment projects for Africa (9 per cent) UNIDO has intensified the investment promotion programme for the region, notably by increasing the number of African applicants in the

Figure 11. Investment projects promoted by region - 1996



delegates programme. The results of this endeavour will be reflected in the 1997 statistics. Figure 12 provides a breakdown of concluded investment projects by size and clearly demonstrates UNIDO's emphasis on the promotion of small and medium investment projects: 41 per cent of projects are below \$0.5 million and 85 per cent below \$5 million.

Figure 12. Investment projects promoted by size - 1996 (millions of US\$)



#### G. Selected meetings

53. Out of the large number of meetings organized in 1996 by UNIDO (for a complete list, see Appendix F in Addendum I to the present report), this section reviews selected meetings which clearly reflect the global forum role of UNIDO.

*Seminars on the impact of the Uruguay Round Agreements on the export supply capability of manufacturing industries*

*Lusaka, Zambia (17 May)*

*Kampala, Uganda (30 May)*

*Dar es Salaam, United Republic of Tanzania (14 June)*

*Maputo, Mozambique (26 June)*

54. Linked to the project to assist Governments of selected French-speaking African countries in assessing the impact of the Uruguay Round Agreements on the

export supply capabilities of their agro-based industries, these seminars addressed manufacturing industries in the four English-speaking African countries selected. Participants included representatives from the private sector and from Ministries of Industry and Trade. Designed as an input to the IDDA-financed project to carry out, through diagnostic studies, country-level assessments of the impact of the Uruguay Round Agreements, the meeting reviewed the findings and recommendations of the diagnostic studies.

*Expert group meeting on the contribution of biotechnology to industrial development - Vienna, Austria (3-5 June)*

55. This meeting represented a key element in the formulation of the UNIDO biotechnology programme. Convened with the purpose of identifying priority areas in biotechnology complementary to ICGEB and fitting to UNIDO programme priorities, the meeting considered organizational capacity, client demand and other aspects. The conclusions of the meeting led to a programme focus on: (a) technology transfer through promotion of networks and partnerships at the institutional and enterprise level; (b) safety assurance in contained and environmental applications of biotechnology; and (c) capacity-building and enabling mechanisms for the management of genetic resources.

#### UNIDO participation in HABITAT II

56. UNIDO took an active part in HABITAT II (the second United Nations Conference on Human Settlements) in Istanbul in June. The report of a colloquium held by UNIDO in October 1995 entitled "Urban industrial development" was used as a platform for all UNIDO interventions. Within the framework of the Summit, and with the goal to initiate a dialogue with new partners in development, UNIDO hosted a round-table meeting for a number of mayors invited from major developing-country cities. The Director-General addressed the City Assembly on the issue of evolving relationships between agencies such as UNIDO and local authorities. Presentations were made to the World Business Forum and Dialogue 4, *The Future of Urban Employment*, on cleaner production methods and the role of industry in economic and social development.

57. As a follow-up, UNIDO was invited to participate in a seminar hosted by the City of Vienna for Beirut, Gaza, Sarajevo and Tirana, to discuss future cooperation among these cities with the active participation of both the City of Vienna and UNIDO. Furthermore, a workshop was conducted in Vienna in November, again hosted by the City of Vienna, to decide on concrete forms of cooperation among the partners. The host and UNIDO made numerous presentations and offered to assist in technical cooperation projects as well as to accept trainees/interns from the four invited cities. It was further decided to next meet in Beirut to examine how the city's positive experience with its redevelopment



agency (Solidaire) can be adapted to other cities in a post-conflict situation.

**Subregional workshops on formulation and implementation of policy measures for ESID**

*New Delhi, India (24 July)*  
*Santiago, Chile (7-11 October)*  
*Hanoi, Viet Nam (23 October)*

58. UNIDO launched its programme for Asian national networks for sustainable industrial development with a regional introductory workshop in conjunction with the World Conservation Union in Beijing in November 1995. Five countries participated in this workshop: China, India, Indonesia, Nepal and Viet Nam. Follow-up activities in 1996 included a national seminar on incentives for eco-efficiency held in New Delhi in July and a national workshop on sustainable industrial development in Hanoi in October. UNIDO also launched its programme for Latin America and the Caribbean by organizing a workshop on the industrial dimension of national sustainable development strategies in Santiago in October. Country teams from Argentina, Bolivia, Chile, Colombia and Peru, with observers from Brazil, Ecuador and Mexico, explored various options for pursuing sustainable industrial development. Country delegations committed themselves to presentations to their colleagues on topics covered in the workshop and to hosting a national seminar on some aspects of sustainable industrial development in their countries. The intended use of these events is to form national networks of industry-oriented institutions and individuals who share a common goal: cost-effective and pro-active integration of the industrial sector into the Agenda 21 process of preparing and implementing national sustainable development strategies.

**Regional workshop on industrial policies for competitiveness - The experience of the Republic of Korea and its relevance for Latin American countries - Lima, Peru (5-8 August)**

59. Applying the approach adopted for the 1995 meeting on the relevance of the experience of the Republic of Korea for industrial policies and strategies in African countries, this workshop focused on countries in Latin America and the Caribbean. Participants from government and the private sector were provided with assessed information on the industrialization experience of the Republic of Korea, including competitiveness-enhancing strategies over various development stages. The costs of both meetings were covered from a project financed jointly from a Republic of Korea trust fund contribution and UNIDO regular budget resources.

**Regional meeting on industrial and business information services and networks - Prague, Czech Republic (8-10 October)**

60. This was the third in a series of meetings of information specialists to address the lack of

coordination in Central and Eastern European countries in the development of industrial and business data banks, information services and networks. Recommendations adopted by the 26 participants from 17 countries included one for immediate action to proceed with a project for regional industry and business information services developed as a result of the 1995 meeting. A regional project document has been formulated, and financing is now being sought. The meeting also underlined the central role of UNIDO for coordination and promotion of common approaches.

**International Business Advisory Council inaugural meeting - Vienna, Austria (10-11 October)**

61. The purpose of this meeting was to establish the International Business Advisory Council (IBAC). Twenty-four industrial executives from all regions discussed approaches aimed at helping UNIDO to build more effective partnerships with private industry. The Council will function as a think-tank advisory group for the Organization, helping to build bridges with industry and between industry and government. IBAC's mission is to serve as a global platform to assess key issues affecting business and industry. The Council will facilitate interaction between industrialists from developed countries and those from developing countries and economies in transition in an increasingly interdependent world. It further endeavors to provide for a worldwide network supporting the efforts of developing countries to join the globalization process.

**Asian Symposium on Industrial Utilization of Medicinal and Aromatic Plants, Bangkok, Thailand (4-9 November)**

62. In cooperation with the Asian and Pacific Centre for Technology Transfer, ESCAP, FAO and ICS, UNIDO organized this symposium to promote the industrial utilization of medicinal and aromatic plants in Asia, thus enhancing employment creation in the rural sector. Participants (36 scientists from 14 Asian developing countries, 10 representatives of local and foreign companies and 17 representatives of international agencies) developed concrete recommendations for action-oriented follow-up. Those recommendations, together with country papers and other inputs, are being compiled as a publication to constitute the basis for future cooperation. A primary objective is the development of a network to coordinate R and D for the industrial utilization of medicinal and aromatic plants in the region.

**Expert forum on cleaner industrial production in Central and Eastern Europe: Technology transfer - new opportunities for cooperation - Vienna, Austria (5 November)**

63. Jointly organized with the Austrian Society for Environment and Technology (ÖGUT) and attended by 130 experts from government, enterprises, banks and

institutions from Austria, Croatia, Czech Republic, Hungary and Slovakia, the forum discussed the UNIDO programme on cleaner industrial production as well as new challenges and new commercial opportunities for Austrian companies to participate in cleaner production. A highlight of the forum was the presentation of some 60 new opportunities for Austrian enterprises to take part in cleaner production in Central and Eastern Europe.

**Expert group meeting on the identification of critical technological needs for sustained competitiveness - Vienna, Austria (2-3 December)**

64. Organized under the International Centre for Science and High Technology project on identification of critical technological needs for sustained competitiveness, the workshop was attended by more than 20 participants from 14 different countries. The aim was to prepare and make available guidelines to help make explicit SME technological demands and required assistance in technology transfer processes. The guidelines will be finalized in the first semester of 1997 and will then be tested for final application through field training programmes.

**Expert group meeting on the industrial strategy and integrated industrial sector programme for the COMESA subregion - Nairobi, Kenya (3-6 December)**

65. This meeting was convened within the framework of UNIDO assistance to COMESA in defining a strategy to enhance cooperation in industrial development and market integration in the subregion. Representatives from government and regional organizations (ARSO, ECA and OAU) reviewed the strategy developed by the project and cleared it for submission to the Council of Ministers and Authority of Heads of State and Government.

**Expert group meeting on forecasting and foresight activities in Latin America - Santa Cruz, Bolivia (11-13 December)**

66. In recognition of the importance of technology forecasting and foresight activities for technology policy and strategy formulation, UNIDO—together with the International Centre for Science and High Technology and the Academy of Sciences of Bolivia—is exploring possibilities for a regional programme leading to their development and application in Latin America. This meeting introduced technology foresight methodologies and practices used in Germany, Japan, the Netherlands and the United Kingdom to experts and government representatives of five Latin American countries, five potential donor countries, regional organizations (CAF, ECLAC, OAS, SELA) and UNDP. The considerable interest expressed led to the decision to cooperate with national and regional counterparts in formulating a large regional programme.

## CHAPTER V

### THE REGIONAL DIMENSION

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1. The present chapter provides brief descriptions of the key challenges faced and presents the thrust of UNIDO activities in each developing region and in the case of the least developed countries. It provides aggregate figures on UNIDO involvement broken down by source of funds and by project component. It does not entail a comprehensive review of regional activities as this would overlap with the contents of chapter III. The chapter highlights key regional events such as ministerial-level meetings. It also provides information on UNIDO field representation.

#### A. UNIDO Field Representation

##### *Introduction*

2. UNIDO field representation is a key instrument for its programme of technical cooperation with the recipient countries. The major function of the field offices is to respond to the demand for UNIDO assistance and provide technical advice to Governments and industry to formulate the programme of support from UNIDO. Field offices maintain contact with representatives of donors and development finance institutions to help mobilize financial resources for UNIDO projects. Field offices also perform a fundamental role in facilitating the coordination of technical cooperation projects at the field level and providing assistance to Headquarters field missions.

##### *Status of field representation in 1996*

3. As of 31 December 1996, UNIDO maintained 41 field offices: 15 in Africa, four in Arab States, nine in Asia and the Pacific, two in Europe and in the Newly Independent States of the former Soviet Union and 11 in Latin America and the Caribbean. Of the 41 UNIDO field offices, 23 were headed by UNIDO Country Directors (UCDs), three by UNIDO National Directors, two by National Programme Officers, one by an Industrial Development Adviser, one by a Programme

Officer and three by Junior Professional Officers. The remaining eight field offices were staffed by General Service staff. The staff structure of UNIDO field offices by region and country is shown in addendum 1 to the annual report (IDB.17/10/Add.1, appendix L, table 1).

4. The growing demand for UNIDO services would require a larger field presence, but the limited availability of financial resources has forced UNIDO to maintain its field structure at a minimum level. The total budget allocated for the field representation programme for the biennium 1996-1997 amounts to \$16.4 million, which is just sufficient to maintain the present field structure. The situation will become more difficult after 1997 with the cessation of UNDP sectoral support funding.

##### *Developments in the field representation programme in 1996*

5. In view of the forthcoming reduction in resources and the cessation of UNDP funding by the end of 1997, the entire concept of field representation was under review during 1996.

6. In that context, two important events in 1996 signified the restructuring of UNIDO field representation, namely the conclusion of the new coordination agreement at the field level between UNDP and UNIDO, and the approval by the Industrial Development Board of the concept of reorientation of the UNIDO field representation programme presented by the Director-General (IDB.16/19).

##### *Coordination arrangements between UNDP and UNIDO at the field level*

7. In October, the Administrator of UNDP and the Director-General of UNIDO signed new arrangements concerning coordination between the two organizations at the field level. Compared with the previous arrangement, the new agreement introduces a significant

innovation in the role played by UCDs within the United Nations system, as they are now UNIDO representatives to Governments and other entities in the countries of their coverage. This change in status has important implications. Unlike in the past when UNIDO was represented in the field by the UNDP Resident Representative, UCDs will now be the principal channel of communication between the Organization and Governments as well as with organizations in the countries of coverage on matters pertaining to the formulation, development, implementation and evaluation of programmes and projects. Moreover, the new arrangement states that, in addition to the traditional responsibility for programming and programme development, provision of technical advice to Governments and support to UNIDO programme and project activities, the UCD is also responsible for mobilization of financial resources that can be sourced at the field level.

#### A new approach to field representation

8. In November, a proposed new field representation system was presented to the sixteenth session of the Industrial Development Board. In view of the prevailing financial realities, the Board acknowledged the necessity of developing a field representation programme that would be sustainable within a realistic resource scenario as well as adequate to the needs of developing countries in the present context of the world economy.

9. The new concept for UNIDO field representation is based on the principle of a network of two interconnected layers of coverage: subregional offices and national focal points. The subregional offices would be organized as multi-service providers for clusters of countries in various subregions, responding promptly and effectively to the demands for and requirements of services in the countries of coverage. The subregional offices would be interconnected with focal points in individual countries, which could normally be located in relevant private or public local entities and would report to the UCD of the respective subregional office. The rationale of the new approach is to enable UNIDO to build up effective field teams that could cover a wider range of functions and services, while optimizing the use of limited resources through concentration on fewer but larger field offices. This new field representation approach was welcomed by the Board.

#### B. Africa

10. After more than a decade of continuing decline in the economic performance of the continent, modest economic recovery was recorded in several African countries in 1996. Most countries have now instituted wide-ranging political and economic reform. However, given the high population growth rate (an average of 2.7 per cent per annum), unsustainable external debt, diminishing resource flows especially in official development assistance, unstable exchange rates and

pockets of civil war, only 12 countries were able to attain an annual growth rate of 6 per cent of gross domestic product (GDP). For the continent as a whole, the annual GDP growth rate remained below 3 per cent. With the current emphasis on economic globalization, African countries have come to acknowledge that even though international support is needed to transform their economies, they must take ownership of their development goals and programmes to ensure a competitive place in an increasingly globalized economic system.

11. The industrial sector continued to be characterized by structural weaknesses, high dependence on imported factor inputs including industrial raw materials, low utilization of installed manufacturing capacity, low investment, shortage of critical skills for industry, inadequate managerial and entrepreneurial capabilities and high production cost, including energy.

12. Realizing that any major attempt to transform the African economies should involve concrete measures to improve the status of industry in Africa, UNIDO offered a wide range of technical cooperation services to African countries within the framework of the seven thematic priorities of UNIDO. In particular, technical cooperation was extended to the Organization of African Unity (OAU), the Common Market for Eastern and Southern Africa (COMESA), the Southern African Development Community and the Central African Customs and Economic Union in defining their industrial policies and strategies (in the case of COMESA) and in developing an integrated industrial development programme. UNIDO also convened an expert group meeting in December that reviewed and finalized the draft COMESA integrated industrial development programme.

13. During the period under review, some 90 projects were approved for a total amount of some \$23.5 million, covering all sources of funds with a total of \$827,700 under TSS-1 and TSS-2 and \$1.5 million for supplementary activities under the IDDA programme. Programme development missions were fielded to 10 countries.

14. In 1996, expenditures in the region from all sources of funds amounted to \$33.4 million of which \$11.9 million were from Montreal Protocol funds. Both trust funds and funds from UNDP accounted for some \$6.7 million, each. A total of \$4.5 million was expended from IDF and nearly \$1.3 million came from the UNIDO regular programme for technical cooperation. (For a percentage breakdown of sources of funds, see figure 13; figure 14 shows expenditure by project component.)

15. One of the most important UNIDO projects, the regional Africa leather and footwear industry scheme, continued to have a great impact. During the year, major activities of this programme concentrated on private industry development, pollution control, institution-building and marketing. Various study tours, participation in fairs and seminars and on-the-job training through international experts were organized

Figure 13. Technical cooperation expenditure in Africa in 1996, by source of funds (Total of \$33.4 million)

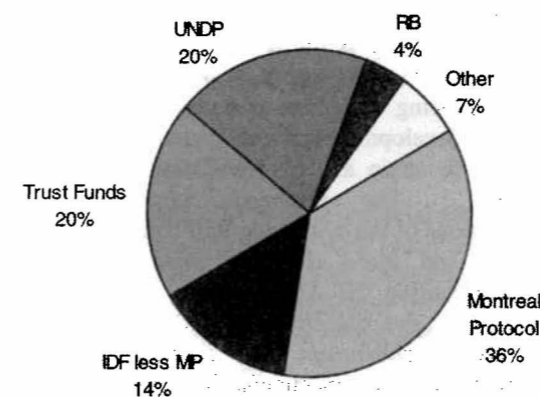
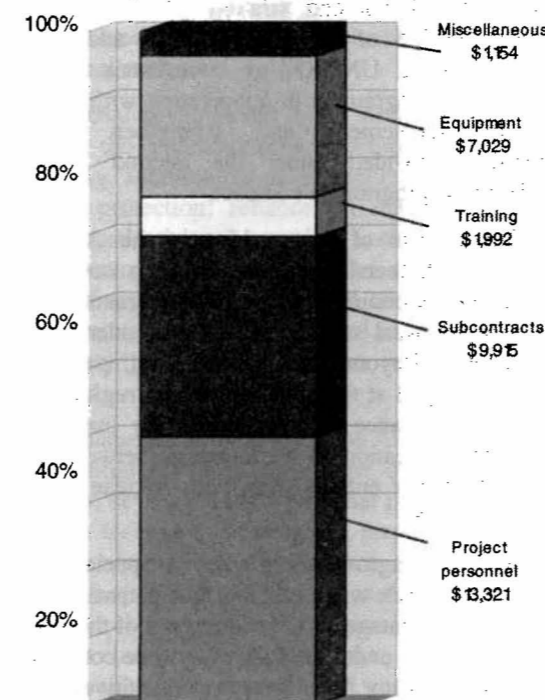


Figure 14. Technical cooperation expenditure in Africa in 1996, by project component (In thousands of US dollars)



throughout 1996. Publications were issued on acceptable quality standards and information sources and important contacts were undertaken with international organizations such as the United Nations Information Centre, Milan, Italy, that will influence the future course of the programme. An in-depth evaluation mission was carried out in November and December to assess the present status of the programme and to address more closely new aspects such as political advice for the development of the sector, clean technologies and investment promotion.

16. Another large-scale regional programme covered the food-processing sector of seven sub-Saharan African countries and attracted funding from Germany, which has earmarked funds for implementation starting in the first quarter of 1997. This success in funds mobilization encouraged the adaptation of the programme for replication in other regions as well as the group of francophone African countries.

17. Within the framework of the objectives and goals of the Second IDDA, the United Nations New Agenda for the Development of Africa in the 1990s and the reorientation of UNIDO services, UNIDO held consultations with OAU, the Economic Commission for Africa (ECA), the Bureau of the Conference of African Ministers of Industry, policy makers in Government, the private sector and other key development players in the region to define a new partnership for accelerated industrial development in Africa. A major initiative within the framework of the new partnership, the Alliance for Africa's Industrialization, was launched by UNIDO in October 1996 (see paras. 21 to 23 below).

18. In April, the first meeting of the Bureau of the twelfth meeting of the Conference of African Ministers of Industry was held at Pretoria, South Africa, under the chairmanship of the Minister of Commerce and Industry of Botswana, with participation by the Director-General. The meeting provided a unique opportunity to brief the Bureau on UNIDO programmes in Africa, focusing on the seven thematic priorities of UNIDO, on follow-up action undertaken by UNIDO on the resolutions of the General Conference at its sixth session — particularly within the framework of IDDA — and on preparatory activities for the launching of the Alliance for Africa's Industrialization. The Bureau recommended that the theme for the thirteenth session of the Conference of African Ministers of Industry (CAMIL13) should be "Africa's Industrialization in the 21st Century". The Conference, which is scheduled for May 1997 at Accra, Ghana, will focus on such key issues as globalization of the world economy, science and technology, industrial investment and the private sector.

19. UNIDO participated in the Policy Forum of the Global Coalition for Africa held at Ouagadougou, Burkina Faso, in October. The theme of the Forum was "Supply response: A review of experience in some African countries". Issues covered included factors influencing supply response, creating a regulatory environment for investment, and donor perspectives on supply responses within a framework of cooperation with Governments and the private sector.

#### Industrial Development Decade for Africa and the Alliance for Africa's Industrialization

20. As African nations approach the beginning of the next century, the challenge is to assess the progress they have made in their economic transformation process and to define their strategic vision as players in the emerging technologically advanced and highly competitive global



economy. As an input into the process of reviewing and reorienting the future industrial development strategy of the region, UNIDO held extensive consultations with the Bureau of CAMI, the Secretariats of ECA and OAU, key private sector groups, African experts and policy makers, with the aim of starting a new partnership to bring global attention to the urgent need for accelerated industrial development in Africa.

21. The Alliance for Africa's industrialization is a new initiative by UNIDO that was designed in response to the expressed needs of Governments and the private industrial sector in Africa. One of the pillars of the newly reformed UNIDO, the Alliance is a complementary input by UNIDO into the Secretary-General's United Nations System-Wide Special Initiative for Africa. This endeavour will focus the attention of African decision-makers and the international community on the region's industrial development potential and the need to mobilize that potential through enhancing the role of the private sector and facilitating the integration in the dynamic world economy.

22. The concept of the Alliance has received overwhelming support from key regional private sector and political organizations. At the OAU Summit held at Yaoundé, Cameroon, in July 1996, a resolution was passed that endorsed the creation of the Alliance as: "A dynamic mechanism for the attainment of the goals and objectives of the Industrial Development Decade for Africa" and invited "Africa's development partners and the international community to intensify their cooperation with African governments and private sector industrial enterprises in support of the Alliance".

23. The Alliance was launched by African Heads of State and Government at Abidjan, Côte d'Ivoire, on 23 October 1996, and is positioned to boost the implementation of the second Industrial Development Decade for Africa in meeting the twofold challenges of the Uruguay Round Agreements and the increasing globalization of the world economy.

24. The First and Second Industrial Development Decades for Africa (adopted by the General Assembly in 1982 and 1994) provided a major impetus for UNIDO programmes for Africa and for collaboration with OAU and ECA. The programme for the Second IDDA is a result of a joint concerted effort of African Governments and organizations, decisionmakers, planners, scholars, officials and businessmen. The programme supports the structural transformation of African economies with a view to achieving the goal of self-reliance and self-sustained development through industrialization, which is expected to constitute the main engine of growth for these economies. The goals and objectives of the Second IDDA are: (a) structural transformation of African economies; (b) linkages between industry and other economic sectors; (c) mobilization of financial resources; (d) private sector development; (e) human

resources development and training; and (f) promotion of regional/subregional industrial cooperation.

25. A mid-term evaluation of the programme for the Second IDDA was undertaken, the major goal of which was to assess progress made in implementing the programme in terms of its successes and failures—with a view to introducing corrective measures—while taking into account developments at the national and global levels, so as to attain a goal of sustainable industrial development. The findings, conclusions and recommendations of the evaluation will contribute to the reorientation and more effective implementation of IDDA, incorporating the Alliance as a mechanism to attain the goals and objectives of IDDA. This will involve the establishment of country priorities, identification of a mechanism/strategy for the formulation of integrated programmes of technical cooperation activities, the modalities of implementation and mobilization of financial resources for these activities.

26. The Alliance has also been conceived as a mechanism that would permit ECA, OAU, and UNIDO to adjust the focus and strategy of IDDA for the remaining period of the Decade. In addition, the Alliance enables UNIDO—as coordinator and lead agency of the programme in cooperation with ECA and OAU—to supplement and strengthen technical cooperation provided under the Second IDDA in optimizing the programme's impact.

27. The concept of partnerships in the Alliance is innovative. Partnership begins within a country and involves all economic actors (Government, private sector, the informal sector) and, at a broader level, all civil society. Beyond the national level, partnerships need to be forged at the subregional and regional level. Finally, the Alliance is intended to be implemented through the formation of partnerships between public and private sector entities from both African and non-African countries.

28. The field of agro-industry enjoys a special focus in the Alliance which will build on this potential area of comparative advantage. The programmes of the Alliance will be developed under the following three components: (a) capacity-building for industrial competitiveness; (b) linking industry and agriculture to enhance productivity and competitiveness; and (c) promoting private investment and other forms of international industrial cooperation and policy support.

29. CAMI.13 is expected to play a vital role in ensuring the internalization of the Alliance as well as setting the stage of the development of the required programmes. It is also expected that the relationship between IDDA and the Alliance, and the modus operandi (including an integrated plan of action, a Secretariat structure and funds mobilization strategy) for the Alliance will be charted out at that time.

30. The rapid implementation of the programme for the Second Industrial Development Decade for Africa, utilizing the Alliance as a new support mechanism to enhance the attainment of its goals and objectives, is expected to contribute to transforming some of the African countries to newly industrializing countries during the next 15 to 20 years.

### C. Arab Countries

31. Arab countries have placed special emphasis on the growth and diversification of their manufacturing sectors over the past three decades, with a sizeable proportion of their investment budgets allocated to industry and its related infrastructure. However, the performance of Arab industry has been uneven. Some countries have been highly successful in establishing internationally competitive industries, applying state-of-the-art technologies that can enable them to develop horizontal and vertical linkages for further industrialization. Other countries in the region have not been successful in establishing the mechanisms necessary to absorb technological progress and gain a competitive edge. The result is that a large number of industrial subsectors in the Arab world risk losing their competitiveness in international markets.

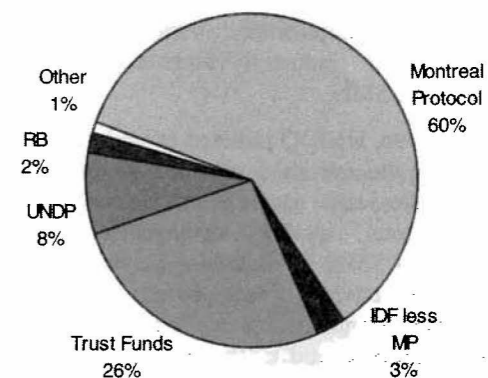
32. Industrial development in the Arab countries shows many of the characteristics common to developing regions (e.g. adoption based on import substitution; high levels of protection; reliance on massive technology imports mostly through turnkey contracts; shortage of skills at many levels of industrial responsibility; the absence of regional or subregional coordination). These factors, among others, have resulted in low productivity, uneven quality of products and low return on industrial investment.

33. The manufacturing sector in the Arab countries has a high potential to act as an engine of growth, if it is allowed to develop along a path that promotes its ability to capture technological progress, provide employment, earn net surpluses for the balance of payments, and become a major source of savings and capital promotion. The major challenge for the region is to enhance its significant industrial base to take advantage of its installed capacity, restructure its weaker segment and turn from an inward orientation to become a dynamic competitor on the world market.

#### UNIDO support

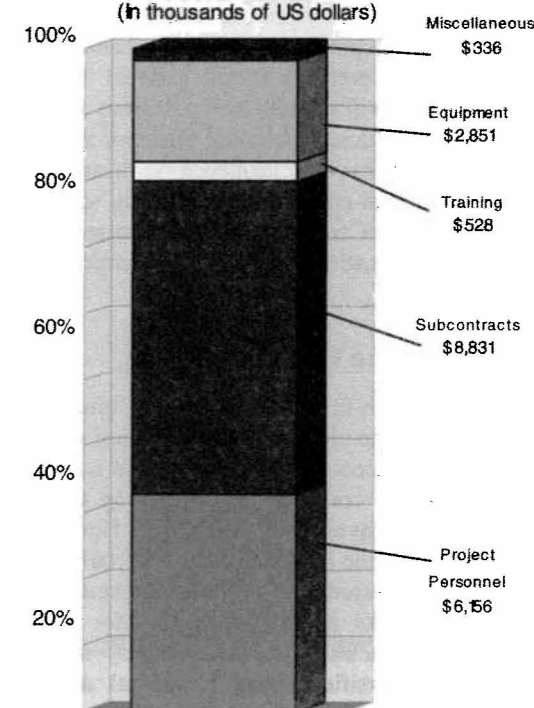
34. In the Arab States, of the total of \$18.7 million expenditure, the largest source of funds was the Montreal Protocol, with a total of \$11.2 million. Nearly \$5 million were expended from trust funds, while UNDP sources accounted for some \$1.5 million. A total of \$0.6 million came from IDF while some \$0.2 million were spent from the UNIDO regular budget. (For a percentage breakdown of sources of funds, see figure 15; figure 16 shows expenditure by project component.)

Figure 15. Technical cooperation expenditure in Arab States in 1996, by source of funds (Total of \$18.7 million)



35. In line with the UNIDO regional programming strategy for support of industrial development in the Arab region developed in 1995 and in compliance with General Conference resolution GC.5/Res.13 on the Special Programme for Industrial Development in the Arab Countries, UNIDO operational activities at the regional level covered the following areas: industry-related services; total quality management and ISO 9000; restructuring and performance improvement in the iron and steel sector; industrial project preparation, evaluation and the application of computer model for feasibility analysis and reporting; and development of the agro-related metalworking sector.

Figure 16. Technical cooperation expenditure in Arab States in 1996, by project component (in thousands of US dollars)



36. Within the framework of the UNIDO programming strategy for services to the Palestinian people developed at the end of 1994, three projects were under implementation during 1996. They cover promotion of renewable energy applications, building materials and the construction industry, and support to the development of SMIs.

37. During 1996, UNIDO initiated or undertook a range of activities at the national level related to strengthening of the textile and garment industry, investment promotion, total quality management and the development of SMIs. UNIDO also played a major role with regard to activities financed from the Multilateral Fund of the Montreal Protocol in Algeria, Egypt, Lebanon, Morocco, Sudan, the Syrian Arab Republic and Tunisia.

38. Development of agro-related metalworking industries is one of the highest priority areas in the region. Thus, UNIDO in close cooperation with the Arab Industrial Development and Mining Organization, conducted a regional workshop on the subject at Casablanca, Morocco, in May. The main objectives of the workshop were to identify investment opportunities in the field, to propose modalities of improving the efficiency of existing factories and workshops and to provide recommendations with regard to the possibilities for integration and coordination between agro-metalworking industries.

39. UNIDO also undertook a regional project in the development of industry-related consulting services in Algeria, Morocco and Tunisia. Through the project, the respective Ministries of Industry and relevant government institutions were assisted in a variety of ways: in formulating a medium-term programme aimed at enhancing national project execution capabilities through the development of industry-related consulting services; in the preparation of national institutional frameworks that will coordinate the various government bodies and institutions (including business and industry associations) that have an influence on or an interest in the development of consulting/engineering services; and in the definition of technical cooperation requirements, including identification of potential sources for their financing.

#### D. Asia and the Pacific

40. East and South-East Asia including China continued to be a main engine of global manufacturing value added (MVA) growth, accounting for more than half of MVA in all developing countries and attracting the bulk of foreign direct investment (FDI). However, the impressive economic dynamism in most countries of the region has witnessed some slight slackening, owing mainly to setbacks in export markets for technology products. Nevertheless, industrial activity has become increasingly diversified along horizontal and vertical lines. Notwithstanding distinct variations obtaining between countries and subregions, industrial activity has

gradually moved away from a limited range of unskilled labour- and low technology-intensive goods to a larger variety of higher skill- and technology-based goods. More importantly, industry in Asia and the Pacific has been largely integrated with international markets, both in terms of trade and FDI. This success is largely attributable to most Governments having made substantial progress in regaining and maintaining macroeconomic stability and in progressively introducing outward-looking, export-led industrialization policies. This has been complemented by other initiatives conceived to remove market distortions and hence to allow market forces to exercise their power, including a heavy emphasis on private sector-led industrial development and a deregulation of financial markets.

41. However, while the above trends continued for large parts of the region, the pace and extent of economic progress and reform have differed widely, with ASEAN member states and other more advanced developing countries taking the lead over South Asia and the region's LDCs.

#### Constraints to industrial development in the region

42. The most striking constraints to further industrial advancement of the region viewed from a perspective of sustainable human and economic development can be summarized as:

- Persistent and growing imbalances and disparities in the generation and distribution of wealth and income within national boundaries of the countries of the region;
- Dramatic variations both in annual growth rate of national economies and in per capita gross national product, ranging from \$160 in Nepal to more than \$7,700 in the Republic of Korea;
- Pervasive widespread poverty in many countries, despite national and regional advances, with no apparent link between per capita income at the aggregate level and alleviation of poverty;
- Lack of adequate job creation, coupled with population growth that in turn leads to massive unemployment and underemployment in some countries of the region;
- Urbanization, rural/urban differences, gender inequity, high illiteracy rates, and uneven regional development that further hamper the creation of sustainable livelihoods;
- Serious environmental problems caused by rapid economic and population growth coupled with industrialization with subsequent inefficiency in resource usage.

#### UNIDO support

43. In response to the above challenges, UNIDO has conceived, formulated and implemented support activities based on the seven thematic priorities, and

specific requests received for technical cooperation. These included, *inter alia*: strategy and policy advice on achieving industrial competitiveness; capacity-building support to private sector manufacturing and service industries; development of technically skilled and quality-conscious human resources for industrialization; SMI networks for subcontracts and outsourcing; and development of innovative market-led approaches to ecologically sound and sustainable industrial development.

44. In the Asia and Pacific region, a total of \$24.8 million was expended in 1996. Of that amount, \$8.4 million were from Montreal Protocol funds and \$5.5 million were from IDF. Funds from UNDP accounted for \$3.7 million and \$1.3 million from trust funds. A total of \$6.2 million derived from other sources, namely \$1.5 million from UNDCP and \$4.7 million from other non-UNIDO funds. (For a percentage breakdown of sources of funds, see figure 17; figure 18 shows expenditure by project component.)

45. A large-scale project on safer pesticides and information approved in 1993 continued to have an impact on the region. Under the UNDP-funded Farmer-Centered Agricultural Resource Management Programme (FARM) executed by FAO and UNIDO (a subprogramme of the Regional Network on Pesticides for Asia and the Pacific—RENAP), the project aims at providing assistance in the production and formulation of safe pesticides through a variety of approaches covering industrial safety, hygiene, occupational health, clean technologies and effluent treatment. RENAP workshops held in Indonesia, Malaysia and the Republic of Korea dealt with the subject of risk reduction and covered such topics as application technology, analysis of environmental matrices for pesticides and industrial chemicals and industrial safety and waste management. Within the framework of the project supported by France under the Industrial Development Fund, data on pesticide use is gathered: in 1996, data (index and economic) for three countries in the region were published. The RENAP programme has generated "spin off" national projects in China and India on capacity-building in safer pesticide formulation and in Pakistan on ecotoxicology. The RENAP network also catalyzed a proposal in the Afro-Arab region to set up networking in risk reduction in agro-chemical development. An expert group meeting was held in Mauritius in which RENAP experts actively participated. One of the recommendations of the Mauritius meeting was that the RENAP model be adopted with suitable adjustments.

46. In the region, phase II of a project to promote and develop agro-related metalworking industries in selected LDCs continued to gain momentum. The project aims to support agricultural production and processing by improving local capabilities and generating a more conducive environment for local manufacturing of

agricultural tools, implements and machinery, including post-harvest and food-processing equipment. Under the third component of phase II, successful blacksmith training courses in manufacturing agricultural tools and implements were held in Bhutan, Myanmar, Nepal and Western Samoa during 1996.

Figure 17. Technical cooperation expenditure in Asia and the Pacific in 1996, by source of funds  
(Total of \$24.8 million)

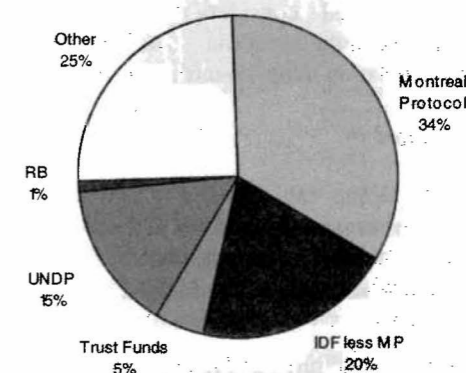
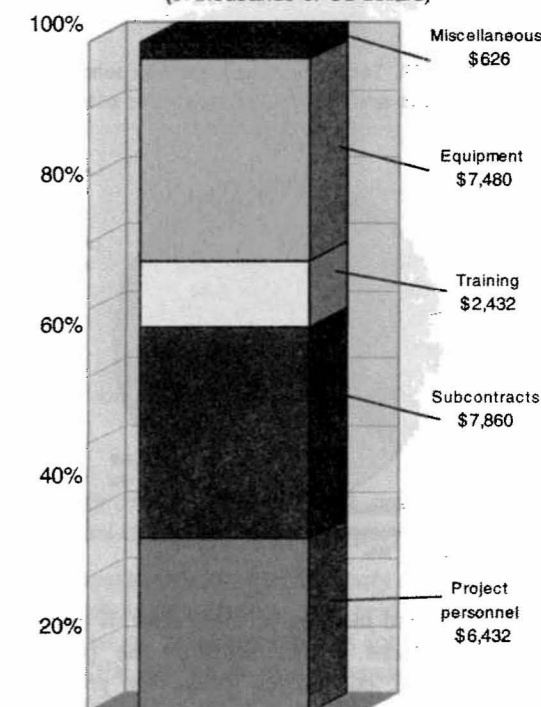


Figure 18. Technical cooperation expenditure in Asia and the Pacific in 1996, by project component  
(In thousands of US dollars)





## E. Europe and the NIS

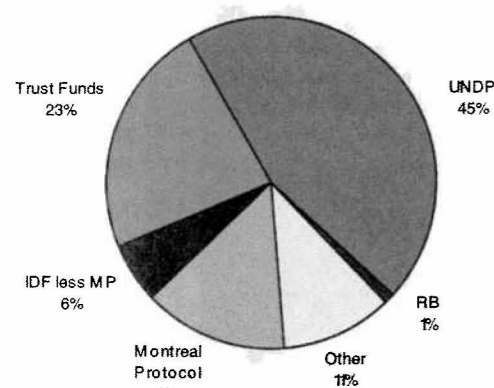
47. With only few exceptions, the economies in transition of East-Central and Southeastern Europe and in the Newly Independent States of the former Soviet Union (NIS) improved their level of development, while the same pattern of development within the region continued as in the previous year. In general, those countries that started earliest with the transformation process and the introduction of market mechanisms continued to demonstrate the most favorable development within the region. But this level of growth of the economies as a whole, and of industry in particular, remained considerably below the level necessary to match the aspirations that have been created within the population in the countries of the region.

### UNIDO support

48. In developing the UNIDO programme for the economies in transition, primary emphasis is on consistency with UNIDO programmes in the developing countries as a whole and on maximizing the value added of UNIDO services provided to countries in the region.

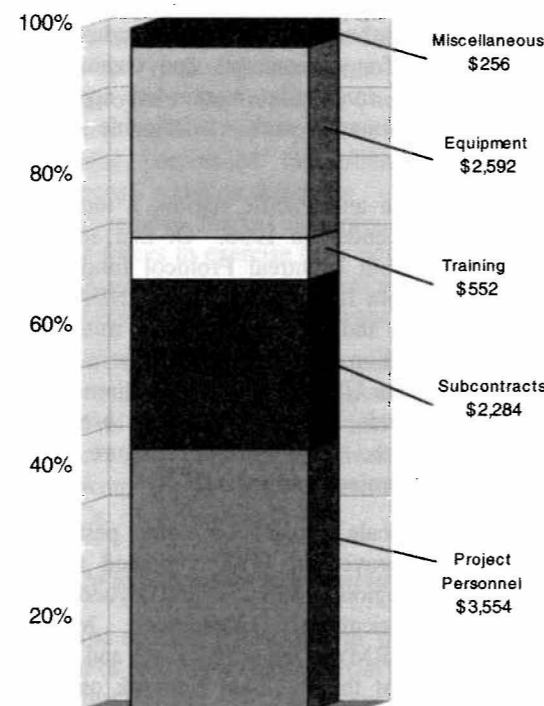
49. In 1996, expenditures in the region from all sources of funds amounted to \$9.2 million of which \$4.2 million were from UNDP sources. Trust funds accounted for some \$2.1 million and \$1.3 million were from the Montreal Protocol. A total of \$0.5 million was expended from IDF and \$0.8 million came from UNDCP funds. (For a percentage breakdown of sources of funds, see figure 19; figure 20 shows expenditure by project component.)

Figure 19. Technical cooperation expenditure in Europe and NIS in 1996, by source of funds (Total of \$9.2 million)



50. The small and medium private sector, if allowed to flourish, introduces a dynamism to the process of development and encourages others by providing a practical, positive example of possible achievements. Small and medium private enterprises are the engine of growth, and are major job creators. A European regional project gives catalytic support to such enterprises. The

Figure 20. Technical cooperation expenditure in Europe and NIS in 1996, by project component (In thousands of US dollars)



project draws from the experience of supporting SME development in Romania and is therefore based at Bucharest. It is an umbrella support project to three recipient countries (Albania, Kazakstan and the Republic of Moldova) in the establishment of sustainable organizations and systems to promote the small and medium private sector. Emphasis is placed on the need to maximize the use of local knowledge and expertise and to join those elements to specific foreign experience in an interlinked process. The project establishes SME development centres that are the precursors of nationwide networks. These centres will be linked and have good connections to local and international catalyst organizations, will be structurally well developed and, most importantly, have carefully selected national staff, well trained and capable of taking the programme forward with minimum assistance. The target beneficiaries are small and medium enterprises throughout the recipient countries.

51. In 1996, the second phase of the project on restructuring and revitalizing the Kaliningrad region in the Russian Federation was approved with financial support from four Scandinavian countries. This phase will focus on direct restructuring assistance to a number of industrial enterprises in the Kaliningrad region, and promotion of SMEs as well as of foreign investment. Assistance will be also provided to upgrade the capabilities of local experts in investment project preparation and feasibility studies.

## F. Latin America and the Caribbean

52. 1996 was characterized by an overall economic recovery of the region after the recession of the previous year. Growth rates have been at an average of 3 to 4 per cent and the year was characterized also by increased industrial output and a continued investment drive which in some countries rose to record levels. According to forecasts, the positive trend of foreign direct investment will continue growing during 1997.

53. The integration process of the southern cone countries in Mercosur has consolidated and expanded through special agreements signed with Bolivia and Chile as associated members. With this expansion and the interest of other countries to become members of Mercosur, the vision of a South American Free Trade Area is becoming a feasible reality.

### UNIDO support

54. A scheme to develop interdisciplinary dialogues was initiated as a tool towards achieving a strategic approach at the country level. The scheme comprises in-house experts who conduct interdisciplinary consultations on project implementation in a particular country, with the objective of developing a consensual UNIDO approach.

55. In Latin America and the Caribbean, a total of \$6.4 million was expended in 1996. The largest expenditure emanated from trust funds, with some \$2.4 million. UNDP sources accounted for some \$1.3 million, an amount that was matched by IDF expenditures. Some \$0.8 million were expended from Montreal Protocol funds. (For a percentage breakdown of sources of funds, see figure 21; figure 22 shows expenditure by project component.)

56. Assistance in the development of short- and medium-term industrial competitiveness strategies has been an active area of UNIDO's work in the region. The "Programa VISION 2020" developed in Mexico in cooperation with the National Chamber of Industry and the work with the Ministries of Industry in Bolivia, Haiti, Honduras, Panama and Uruguay in formulating strategies for sectoral development are good examples of this growth area. Seminars were held at Lima, Peru and Montevideo, Uruguay, providing first-hand information on industrial strategies successfully used in other regions of the world.

57. In line with the growing importance of Mercosur in the region, UNIDO initiated activities for the development of a joint UNIDO/Mercosur programme. Preparations were undertaken to provide Mercosur's common market group with a technical cooperation programme aimed at enhancing the competitiveness of Mercosur agro-industrial SMEs. This is the main target group foreseen to benefit from the opportunities given by the enlarged market as a platform into the world economy. UNIDO's role as honest broker to provide assistance in the formulation of policy guidelines was

Figure 21. Technical cooperation expenditure in Latin America and the Caribbean in 1996, by source of funds (Total of \$6.4 million)

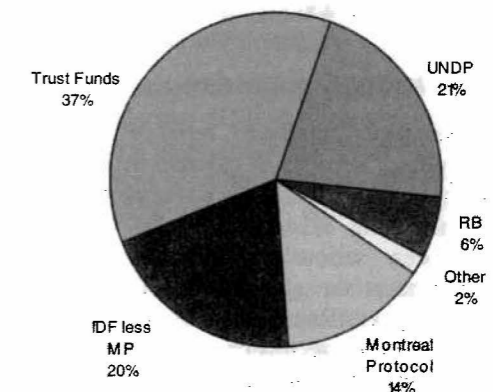
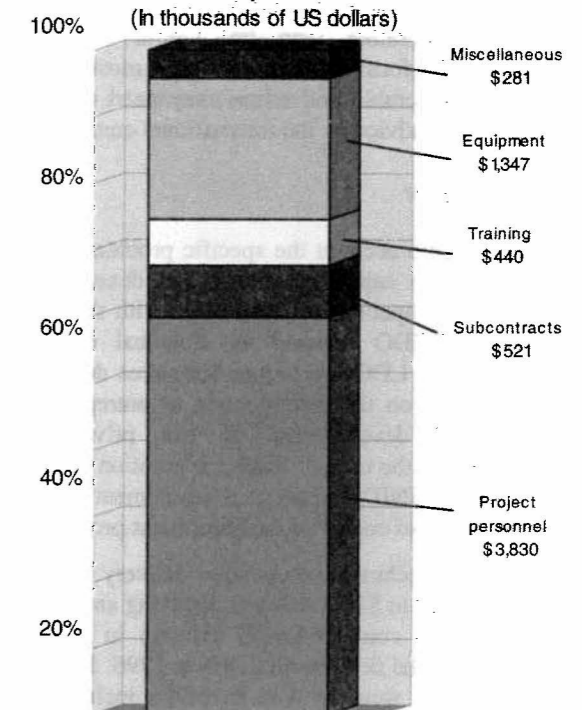


Figure 22. Technical cooperation expenditure in Latin America and the Caribbean in 1996, by project component (In thousands of US dollars)



increasingly recognized. Related projects have been implemented in Argentina and Paraguay.

58. In cooperation with the University of Lima, Peru, as host institution, a workshop was held in August 1996 with a focus on industrial policies for competitiveness, comparing the experience of the Republic of Korea with its relevance for the Latin American and Caribbean countries. The event was attended by 20 high-level Government representatives responsible for formulation of industrial policies from 16 countries, and private



sector organizations. The exchange of views with top-level experts from the Republic of Korea enabled the participants to draw well-assessed conclusions relevant to programming the industrial recovery and development in their respective countries.

### G. Least developed countries

59. The development problems faced by LDCs are daunting. In spite of decades of external assistance, the economic prospects for LDCs have not improved, and in addition to their long existing structural weaknesses, LDCs have been seriously affected by emerging economic changes at the global level. Those changes include the Uruguay Round Agreements that have resulted in a global move towards a free market. The formation of strong economic groupings as well as the introduction of series of quality and environment standards such as ISO 9000 and ISO 14000 have created major challenges for access by LDCs to the world market. It is being increasingly recognized that economic growth and competitiveness now depend more on the existence and further development of human resources, technological capabilities and sustainable development considerations rather than on natural and mineral resources. The former areas are where most LDCs are extremely vulnerable and where they need coordinated assistance and advice by the international community.

#### UNIDO support

60. Taking into account the specific problems of LDCs with respect to capacity-building and development of technological capabilities, and in line with the thematic priorities, UNIDO focused its technical cooperation programmes in LDCs on human resources development with emphasis on the development of entrepreneurship for women, development of the private sector (particularly in the area of SMIs), promotion of flows of FDI through UNIDO integrated investment promotion programmes, and energy and environment programmes.

61. The total technical cooperation delivery to LDCs in 1996 amounted to \$10.3 million, depicting an increase of 20 per cent as compared with delivery in 1995 (\$8.6 million). Of total delivery to LDCs in 1996, \$8.6 million or 84 per cent went to African LDCs including Arab LDCs in the region. The level of net project approvals increased to \$13.2 million, a 74 per cent increase over 1995 (\$7.6 million). Out of the total approved resources, \$11.7 million or 89 per cent were allocated to African LDCs, including Arab LDCs in the region.

62. These figures show that the support to LDCs improved significantly in 1996, both in terms of net approval and delivery. The figures also show that net approvals surpassed delivery for the first time since 1990, which will ensure a continued upward trend of delivery in 1997. The above-mentioned figures do not include a vast number of regional, interregional and global technical cooperation projects and training

programmes from which a great number of LDCs have benefited together with other developing countries.

63. Particular attention was placed on resource mobilization for the development and implementation of priority programmes and projects in African LDCs. A total of \$5.7 million was earmarked for African LDCs under UNIDO IDDA resources for the biennium 1996-1997. This unprecedented step, taken in response to Board decision IDB.15/Dec.7, created additional flexibility for financing country-specific and regional programmes designed specially for African LDCs.

64. In delivering its technical cooperation to LDCs, UNIDO focused, *inter alia*, on areas outlined in thematic priority number 7 (Africa and the least developed countries: Linking industry with agriculture). The high-impact programme on application of quality principles to the food-processing sector for seven South and East African countries including five LDCs was approved and the implementation of its first phase started. A similar high-impact programme is being formulated, based on the findings of a preparatory phase carried out in 1996, for another 10 African and Asian LDCs. This programme will also be forwarded to potential donors for consideration.

65. The preparatory phase of an agro-related industrial development programme for three African countries, including two LDCs, was completed. Based on the findings of this preparatory phase, a medium-term integrated technical cooperation programme on agro-industrial development for the selected countries is being formulated.

66. A project aimed at establishing a regional *tissuthèque* with its headquarters in Mali has been finalized and submitted for financial consideration by potential donors. The project will assist rural and small entrepreneurs in participating LDCs in improving the quality of textile products and finding access to regional markets.

67. Taking into account the urgent needs of LDCs in human resources development, active support was given to 15 LDCs that ranged from study tours, fellowships and on-the-job training, to the formulation and implementation of large-scale programmes and projects in the food-processing subsector with emphasis on development of entrepreneurship for women. The multi-funded follow-up to the ongoing food-processing project for rural women in Burkina Faso and Mali was approved under UNIDO/IFAD and UNDP resources. This follow-up project aims at establishing local capabilities through further training of women and staff of non-governmental organizations to ensure the sustainability of the ongoing project, under which 26 multi-functional platforms have been already installed in Burkina Faso and Mali. The platforms, consisting of a diesel engine to provide power generation for welding machines, straw cutters, battery chargers and water pumps, allow the communities to make more rational use of energy.

68. To support LDCs in mobilizing local and foreign investment, UNIDO carried out an investment promotion programme for the United Republic of Tanzania, which aimed at strengthening capacities within the Ministry of Industry, the Investment Promotion Centre and other private sector institutions. As part of this programme UNIDO held an investment forum in Dar es Salaam from 5 to 8 November which resulted in the signing of four contracts and 75 letters of intent with a total value of \$786 million.

69. In conjunction with the launching of the Alliance for Africa's Industrialization at Abidjan, Côte d'Ivoire in October, a consultative meeting of African investment promotion agencies including LDCs was organized at which the agencies discussed various aspects of investment promotion activities in their respective countries. They also discussed the possibility of networking their agencies with UNIDO IPS offices.

70. The demand by LDCs for policy advice on industrial strategies, capacity-building and private sector development has been met by UNIDO support to 14 African and Asian LDCs ranging from direct advisory services in the formulation of industrial policies and competitiveness strategies to capacity-building initiatives. Such institutions as ministries of industry, national institutes of statistics and meteorology, and

investment promotion centres benefited from UNIDO initiatives both at the programming as well as project levels. Two large-scale projects benefited the Ministries of Industry in Lesotho and Uganda by implementing their privatization programme and private sector development plans and strategies.

71. A needs-assessment project for 18 African LDCs was approved under UNIDO resources, the aim of which is to assess the possibilities and prospects of networking existing sources of information and value-added services in these countries both at national and international levels.

72. UNIDO support continued towards environmentally sustainable industrial development of LDCs. The first stage of the high impact programme on introducing new technologies for abatement of global mercury pollution was approved for four African LDCs, and its implementation has started. This project will assist the participating countries in improving the income of their miners through introducing more efficient recovery technology. Three LDCs are receiving UNIDO assistance in the phasing out of ozone-depleting substances in reducing water pollution emanating from textile and carpet industries and in establishing institutional capacity to formulate a strategy for ecologically sustainable industry.

## CHAPTER VI

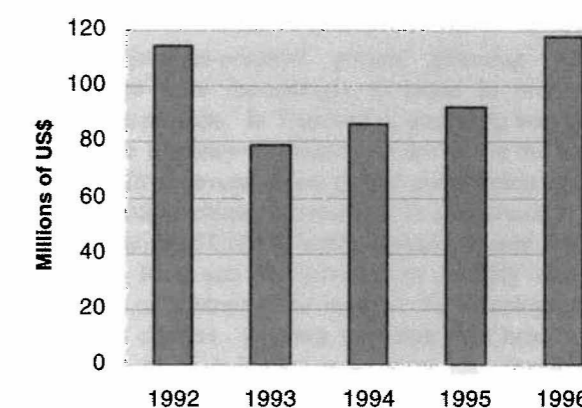
### MOBILIZING FUNDS FOR UNIDO SERVICES

1. In 1996, UNIDO mobilized more funds for new technical cooperation activities than in any year since 1990. The total value of new projects approved amounted to \$100.8 million, a 35 per cent increase over the \$74.7 million of 1995. Including net changes to ongoing projects, UNIDO mobilized \$117.8 million, an increase of 27 per cent over 1995 (see figure 23). All main groups of external funds showed increases over 1995.

2. For the second year running, the Montreal Protocol was the single most important source of net approvals at \$40.6 million—some 34 per cent of the total. This represents a considerable increase from \$29.4 million (33 per cent) in 1995. However, unlike in previous years, IDF and trust funds also registered important increases. Funding from UNDP showed an increase from the previous year for the first time since 1990. Distribution of net approvals by region and thematic priority<sup>12</sup> reflects the nature of projects selected by donors for financing.

3. The high-impact programmes, prepared as part of the reform in late 1995, led to significant new approvals. Application of quality principles to the food-processing sector in seven sub-Saharan countries attracted \$2.3 million from Germany. Preparatory work on a similar programme for other African countries is underway, also financed by Germany. Japan, the Republic of Korea, Sweden and UNDP contributed to the Viet Nam part of integrated advisory services for industrial policy formulation and competitiveness strategies, for a total of more than \$1 million. Austria and Japan contributed to introducing new technologies for abatement of global mercury pollution, including the first country-level application in the United Republic of Tanzania. To enable the development of entrepreneurship among women, Belgium funded a project in Mali valued at more

Figure 23. Net approvals, 1992 - 1996



than \$1 million and contributed to preparatory assistance for Côte d'Ivoire and Senegal, while Germany funded a needs assessment project for Zimbabwe.

4. Agreement was reached with the Government of Mauritius and the World Bank on the funding of a project to assist in the establishment of an industrial subcontracting and partnership exchange, an area in which UNIDO has extensive experience. The project, with a value of \$198,500, funded by a World Bank grant, was scheduled to start at the beginning of 1997. The World Bank has contracted UNIDO directly to carry out a private sector review in the former Yugoslav Republic of Macedonia as part of its preparations for a private sector development loan. The UNIDO review includes an assessment of the emerging private sector in the country, including regulatory, policy and institutional impediments to private sector development. An agreement was signed in 1996 with the Inter-American Development Bank, and joint projects are being developed. An agreement was also signed in December with the Asian Development Bank (ADB), and a model agreement for services to be provided by UNIDO in relation to ADB-financed loans is under discussion. One

<sup>12</sup> IDB.17/10/Add.1 - PBC.13/10/Add.1, appendices C and D.

change that has taken place is the nature of contacts between UNIDO and development finance institutions. While in the past UNIDO aimed essentially at project funding, in 1996 the contacts were increasingly of a conceptual and substantive nature, concentrating on particular areas of UNIDO strength.

5. In 1996, European Union funds were also mobilized. The Government of the Czech Republic engaged UNIDO to assist in the establishment of an industrial subcontracting and partnership exchange at Prague. The project is financed by the European Union from its PHARE export and enterprise development programme. The exchange will promote subcontracting arrangements between Czech SMEs and main contractors at national and international levels.

6. After pending legal and financial issues were resolved, the agreement for the first UNIDO-executed project financed by the Common Fund for Commodities (CFC) was signed in December with CFC funding of

\$2.6 million. A project for product and market development for sisal and henequen, with Kenya and the United Republic of Tanzania as partners, was scheduled to start operations early in 1997. A considerable volume of pipeline projects is expected to yield CFC-financed project approvals in 1997.

7. UNIDO approaches to the private sector were more systematic in 1996 and have led to improved contacts with private sector entities. An agreement was signed with IBM, and several projects that may attract funding are under development. Other companies were approached with a view to mobilizing resources in cash or in kind. In an effort to improve the substantive nature of cooperation with the private sector, the first meeting of the International Business Advisory Council was convened in October with the participation of representatives of some 20 large companies and industrial organizations from all regions. Future meetings are expected to present further cooperation opportunities.

## CHAPTER VII

### QUALITY ASSURANCE, EVALUATION AND INTERNAL AUDIT

#### A. Quality assurance

##### *The management of UNIDO services*

1. The quality management principles for development cooperation (GC.6/8/Add.1) were built into the guidelines for the management of UNIDO services: programme and project development and programme and project approval, issued as Director-General bulletins in April 1996. Application of the quality criteria to project proposals submitted to the Programme and Project Review Committee (PPRC) was monitored during the year using the established quality of UNIDO indicators. To date, the focus of monitoring has been primarily on the "relevance" criterion as the first essential characteristic of quality indicating a continuous improvement of project proposals as they are submitted to PPRC and reflecting increased adherence to the quality management principles. The unapproved projects normally required reformulation to better meet the quality criteria. (The percentage of project proposals approved by PPRC that secured financing from IDf donors rose during the period under review.)

2. Documentation on quality principles, concepts, methods and indicators for managing development cooperation was made available in a series on the quality management of development cooperation, which now comprises: I. Principles and concepts (reviewed and finalized, ready for publication); II. The methods (drafted, to be finalized); and III. How to assess the quality of service proposals (drafted, tested, to be finalized). Support for the publication of the series has been provided by Germany.

3. Decentralization of the quality assurance function in the Human Resource, Enterprise and Private Sector Development Division continued to be enhanced following the request of that Division for assistance in ensuring that all Professional staff possess the required

knowledge of the principles and methods for developing programmes that meet defined UNIDO quality criteria.

4. Objectives-oriented project planning (OOPP) workshops were increasingly included in preparatory assistance projects. In Thailand, a workshop was held to enable the Ministry of Industry to decide on the support required from several development cooperation agencies for promoting cleaner production in that country. With the assistance of UNIDO staff, workshops were also held in Costa Rica and El Salvador to identify the main elements of a strategy to support the development of industrial clusters. Another workshop was held in Mali to launch the high-impact programme for development of entrepreneurship for women.

##### *Inter-agency cooperation*

5. Advice was provided to the International Atomic Energy Agency on how to improve project design, develop quality criteria and improve the evaluation framework. In addition, the UNDP office in Uzbekistan asked UNIDO for OOPP methodology training as a tool for the quality management of development cooperation, and UNIDO staff conducted a training workshop at Tashkent in August, attended by 15 UNDP staff.

6. To further improve the management of development cooperation, a Working Session on the Quality Management of Development Cooperation was convened by UNIDO in March to exchange information on recent experience and developments in: (a) the sector programme concept of the Danish International Development Agency; (b) the decentralization of the quality assurance function to the field as advocated by the German Agency for Technical Cooperation (GTZ); and (c) quality indicators and how to assess the quality of service proposals as conceived by the European Union and UNIDO. Discussions at the Session included the quality of management within development agencies,

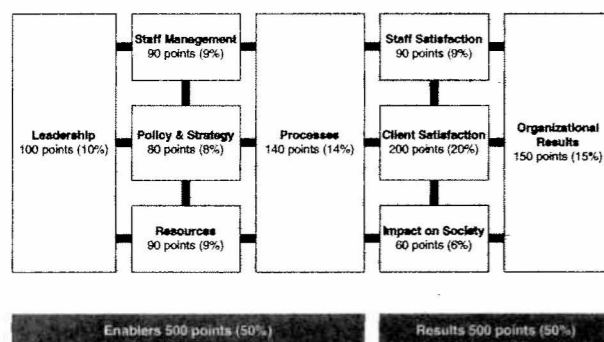


given its direct impact on the quality of the services delivered by them. In this connection, UNIDO presented an overview of its reform process and its blueprint for using the model developed by the European Foundation for Quality Management (EFQM) for the self-assessment of organizational excellence. The number of multi- and bilateral agencies attending these working sessions continues to increase. New participants in 1996 included representatives of the Foundation for Advanced Studies on International Development, the International Monetary Fund and UNDP.

#### Self-assessment of UNIDO performance

7. Building on the reform process and the initial work to develop a self-assessment approach to the measurement of UNIDO performance, the Director-General decided to use the EFQM model. The model, shown in figure 24, comprises five enabler and four result criteria and provides a coherent framework relating staff with the organization's processes and results. With the support of an EFQM coach/trainer and funding from Germany, teams were set up and trained for each of the enabler and result criteria. The model is being adapted to become self-assessment guidelines for UNIDO. Work began on the preparation of a position report providing baseline data on how UNIDO works and what it achieves. After an assessment of the report, a decision will be taken on areas for improvement in 1997. The report is also expected to form the basis for future benchmarking with other agencies.

Figure 24. EFQM model



## B. Evaluation of UNIDO services

### Annual analysis of technical cooperation

8. On an annual basis, UNIDO analyses the results of all in-depth evaluation and self-evaluation reports completed during the previous year and provides the foundation for an assessment of project performance. A total of 16 in-depth evaluations and 78 self-evaluation reports were completed in 1995, forming the basis for the review conducted at the end of 1996. The analysis contains structured information on project management,

funding sources, attainment of objectives, shortcomings in design, problems in implementation and lessons learned for future use.

9. On average, project performance was at a level similar to that achieved in the previous year; the immediate objectives were achieved or likely to be achieved as planned in 71 per cent of cases in 1995 (65 per cent in 1994). The project impact in 1995 was considered satisfactory to high in 38 per cent of the projects (43 per cent in 1994).

10. Sustainability continues to be a problem affecting some projects. The reasons are multiple, including lack of adaptability of counterparts to market economy conditions and consequent problems in marketing services and earning income, and sometimes insufficient attention to financial sustainability of counterpart institutions.

11. The review found that the satisfactory quality of project design (project formulation) decreased slightly from 78 per cent in 1994 to 69 per cent in 1995—still well above the level of 42 per cent achieved in 1993. The decrease may be attributable to an unclear definition of the purpose of the project and, in some cases, to an underestimation of the risks involved. In particular, further improvement in project design should concentrate on applying quantitative performance indicators at the purpose (immediate objective) and development objective (impact) levels.

12. The quality of project monitoring and backstopping was assessed as very good to satisfactory in 56 per cent of evaluated projects, which is approximately at the level of previous years.

13. Towards the end of 1996, a client feedback questionnaire was introduced to obtain directly from users their opinion on the quality and application of UNIDO services. While response has been good, there is not yet adequate experience to draw conclusions.

### UNIDO programme for the promotion of industrial subcontracting and partnership

14. The evaluation of this programme included visits to nine target countries. Industrial subcontracting at the national and international levels plays a significant role in industrial development. However, minimum conditions should exist in the country to sustain viable subcontracting arrangements. Subcontracting does not occur naturally to the intensity desired, thus promotion of the subcontracting concept needs to be undertaken. In developing countries, experience has shown—and was validated by the evaluators—that the best institutional approach to promote subcontracting is the establishment of an SPX (subcontracting and partnership exchange), as advocated by the UNIDO programme.

15. In total, approximately \$6.3 million of technical cooperation funds have been spent on the programme since 1984. As a result, 41 national SPXs were

established, a number of methodological documents prepared and regional networking among SPXs was established in Latin America. A consolidated manual on the methodology, operational procedures and organizational aspects is now under preparation.

16. An association with a chamber of industry or commerce seems to be the most desirable institutional setting for an SPX, provided it enjoys sufficient operational autonomy. The UNIDO Industrial Subcontracting System (UNIDOSS) software with its users' manual and nomenclature plays the central role in instituting common approaches and standards in the whole programme. All the SPXs have installed this software; however, its actual utilization varies and leaves scope for improvement. All exchanges are focused on the metalworking industry, covering also the plastic and rubber and the electric-electronic industry sectors. In most cases, the SPXs are financed wholly or to a great extent through subsidies. In some cases, they manage to cover a significant part of the operational costs by the income generated through membership or service fees.

17. Most inquiries made to SPXs are generated either through participation at fairs or through personal contacts. The participation of SMEs in public procurement programmes is relatively low in developing countries. The ultimate indicator of achieving the purpose of establishing and operating an exchange is a contract resulting from matchmaking activities. The impact of the SPXs in terms of the total value of subcontracting really undertaken, while seemingly positive, cannot be quantified exactly as companies are often reluctant to provide this information. However, several important contracts reported by some enterprises and SPXs show that impact exists.

18. The sustainability of the programme can be measured by the survival of the SPXs (32 are operating out of 41 established) and their capacity to generate subcontracting work. The exchanges assisted by UNIDO show ranges of sustainability, with some SPXs closed down because minimum criteria were not met, while the majority shows established business and financing.

19. The evaluation of the SPX programme recommended that the UNIDO programme on subcontracting and partnership should be pursued and that it merits adequate funding both for Headquarters support (regular budget) and for technical cooperation activities.

20. It was further recommended that the programme distinguish between SPXs at different levels of development. As a rule, newly-established SPXs should be supported to develop and consolidate the core subcontracting functions (promotion and matchmaking). Well-established and successfully operating exchanges should be encouraged and supported to engage in more sophisticated activities to meet the challenge of the following trends: co-makership/partnership and industrial districts or clusters (in a geographical area). The programme should also observe the evolution of information technology to exploit its potential not only

for promotional activities but also for facilitating contractor-subcontractor communications.

21. The programme should be expanded to a number of further recipient countries. However, an SPX should only be established when all necessary conditions are met: the existence of a potential subcontracting market in the country; the existence of potential stakeholders who share the constitutional principle of the SPX operation; and a potential to create a capable and sustainable institution.

22. Public subsidization of the exchanges, through general or specific taxation, in varying degrees according to the country, should be accepted. National subcontracting needs to be given increased attention by the SPXs. To stimulate demand, the exchanges should increase their activities with main national contractors. The organization of national fairs and subcontracting tours either for large single contractors or specific industrial subsectors should be encouraged to make known the demand for subcontracting services in the country and to establish contacts.

23. The role of exchanges in stimulating participation of SMEs in government procurement schemes should be enhanced. Monitoring of matchmaking, despite the difficulties it entails, should be pursued by the SPXs.

24. Linkages should be established in particular with activities and supporting programmes in the field of quality management, technology information and investment and export promotion. Whenever possible, UNIDO support to subcontracting should thus be offered as a part of a programme consisting of a package of services.

### Investment promotion services

25. The evaluations carried out in 1996 in respect of two Investment Promotion Service (IPS) offices further underlined the relevance of IPS offices as a window on business opportunities in developing countries, particularly for SMEs. Most IPS offices have a good reputation as a neutral source of information and matchmaking.

26. Among the various IPS promotional activities, the delegates programme was found to be the most effective in bringing results and at the same time offering to nationals of developing countries a good opportunity for training abroad. Alternative sources of financing the delegates programme have been explored and utilized by some IPS offices. This programme is a unique characteristic of the IPS offices and deserves to be strengthened.

27. It was also found that investment decisions on small projects are often not based on structured pre-investment studies but more on personal contacts and trust among partners. In such cases, UNIDO and IPS offices should place increased emphasis on identifying and networking partners, in addition to support to project formulation.

28. While operating mainly at the initial stage of project promotion, IPS offices should also enhance their support to partners in their actual negotiations. In some offices, a facility has been established for financing feasibility studies for the development and implementation of joint ventures between entrepreneurs of developing and developed countries.

29. Furthermore, it was particularly recommended to further strengthen the linkages of IPS offices with development banks and other financing institutions and with complementary UNIDO technical cooperation programmes, in particular networking of SMIs (for example, through subcontracting exchanges), enterprise restructuring and privatization, and technology promotion. The evaluation recommended the establishment at Headquarters of a special unit to facilitate the promotion of projects suitable for financing, based on UNIDO's accepted COMFAR methodology.

#### Other evaluation services

30. At the invitation of the Group of 77 and China, UNIDO, together with the World Bank, the International Monetary Fund and the Inter-American Development Bank, briefed the Group on new developments in evaluation of technical and financial cooperation and on the benefits thereof to recipient countries. UNIDO also participated in and provided the methodological guidance for the management audit of the Argentine space programme, which comprises, *inter alia*, the manufacture and launching of satellites for a variety of uses.

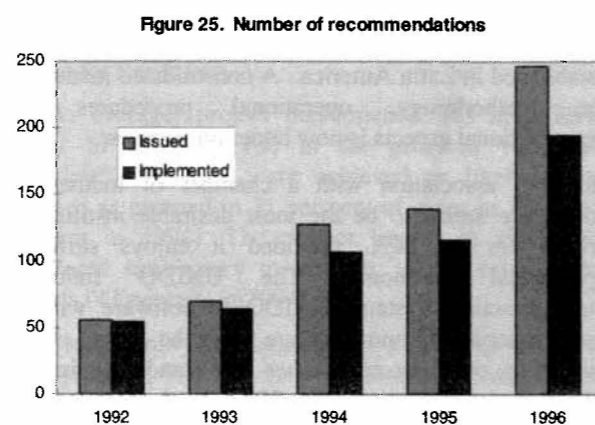
### C. Internal Audit

31. Internal Audit assists the Director-General to discharge his accountability to Member States by assessing the adequacy and effectiveness of the Organization's management control systems. The management control systems are designed to ensure the efficient use of resources, accuracy of financial information, compliance with rules and regulations and safeguarding of assets.

#### Audit and investigation

32. In 1996, Internal Audit issued 20 formal reports (4 project audits, 5 financial audits, 7 management audits and 4 investigations), 51 audit observations and 113 audit comments, which contain 246 audit recommendations. Figure 25 shows an upward trend in the number of audit recommendations and in those actually implemented.

33. As a result of project audits, decisions were taken to phase out several large-scale projects that have been ongoing over 20 years on the grounds that they have had little impact and also lie outside the new priorities of the Organization. Another audit led to a change in the



institutional framework for the implementation of a multi-million dollar project.

34. As a result of two financial audits, financial controls were strengthened for activities carried out by several joint committees. Management audits focused on a cost and strategy overview of management information systems. Audits of two IPS offices led to a major change in financial control of extrabudgetary resources as well as the accountability structure of IPS offices.

35. As a result of audits and investigations, recommendations were issued to improve overall management controls: (a) providing adequate systems and guidelines that include compliance with existing rules and regulations, (b) strengthening oversight on the activities of field offices, (c) better management reporting, (d) personal accountability, and (e) removal of redundant controls.

#### Advisory service

36. Internal Audit has newly assumed the responsibility of updating and maintaining Director-General's bulletins. After a complete review of 201 Director-General's bulletins, 152 obsolete bulletins were abolished and the remaining 49 valid ones were renumbered<sup>13</sup>. An ongoing exercise will result in the updating of all existing bulletins.

#### Coordination with the External Auditor, Joint Inspection Unit and other Internal Audit services

37. Internal Audit coordinated the replies of the Organization with the External Auditor, and, in that connection, a new Director-General's bulletin on the procedures for external auditing was prepared. Internal Audit also provided coordination with the Joint Inspection Unit (JIU). In 1996, information on seven JIU reports relevant to the work of UNIDO was reported to the Board<sup>14</sup>.

<sup>13</sup> UNIDO/DGB(G).1/Rev.1.

<sup>14</sup> IDB.15/9 and IDB.16/12.

#### Support activities

38. While management control systems of UNIDO have improved significantly during the last several years, documentation of the new control framework has not yet been completed. In that respect, Internal Audit assisted managers to clarify the control framework and its documentation in the form of Director-General's bulletins, manuals and guidelines.

39. UNIDO's management control systems are changing from the previous "central control" to "decentralized control". Managers and staff are given more authority and flexibility within certain boundaries, and are accountable for results. Delegation of authority is being applied in the project cycle system, official travel, recruitment of consultants, and also from Headquarters to the field offices. The change is unprecedented in the

Organization. It entails considerable opportunity as well as some risks. Internal Audit provided advice on how to ensure that a balance is maintained between empowerment and accountability, flexibility and coordination, and, in general, between freedom and discipline.

#### New funding modalities

40. As the Organization seeks to expand its funding base, new funding mechanisms have been considered, such as are fees collection and service charges by IPS offices. However, the existing financial and legal framework were not adequate to cope with the new possibilities, and new concepts and financial rules and procedures were needed. To that end, Internal Audit assisted in the design of new control mechanisms.

## ABBREVIATIONS

<b>A</b>		<b>HRD-ROM</b>	Human Resources Diagnosis and Reorientation Map
ACC	Administrative Committee on Coordination		
ADB	Asian Development Bank		
AIDMO	Arab Industrial Development and Mining Organization	<b>I</b>	
ARSO	African Regional Organization for Standardization	IAEA	International Atomic Energy Agency
ASEAN	Association of Southeast Asian Nations	IBAC	International Business Advisory Council
<b>B</b>		ICGEB	International Centre for Genetic Engineering and Biotechnology
BINAS	Biosafety Information Network and Advisory Service	ICHET	International Centre for Hydrogen Energy Technologies
BOT	build-operate-transfer	ICS	International Centre for Science and High Technology
<b>C</b>		IDDA	Industrial Development Decade for Africa
CAF	Andean Development Corporation	IDF	Industrial Development Fund
CAMI	Conference of African Ministers of Industry	IFAD	International Fund for Agricultural Development
CASE	International Centre for Application of Solar Energy	IGO	intergovernmental organization
CFC	Common Fund for Commodities	IHRD	industrial human resources development
CFCs	chlorofluorocarbons	ILO	International Labour Organization
CFD	Country Programmes and Funds Mobilization Division of UNIDO	IMF	International Monetary Fund
CIS	Commonwealth of Independent States	INTIB	Industrial and Technological Information Bank
COMESA	Common Market for Eastern and Southern Africa	IPS	Investment Promotion Service
COMFAR	Computer Model for Feasibility Analysis and Reporting	ISED	Industrial Sectors and Environment Division of UNIDO
<b>E</b>		ISI	International Statistical Institute
ECA	Economic Commission for Africa	ISIC	International Standard Industrial Classification
ECDC	economic cooperation among developing countries	ISO	International Organization for Standardization
ECE	Economic Commission for Europe	ITMIN	Industrial Technology and Market Information Network
ECLAC	Economic Commission for Latin America and the Caribbean	ITPD	Investment and Technology Promotion Division of UNIDO
EFQM	European Foundation for Quality Management	ITPI	Investment and Technology Promotion Initiative
EPZ	export processing zone	<b>J</b>	
ESCAP	Economic and Social Commission for Asia and the Pacific	JIU	Joint Inspection Unit
ESID	ecologically sustainable industrial development	JPO	Junior Professional Officer
<b>F</b>		<b>L</b>	
FAO	Food and Agriculture Organization of the United Nations	LDC	least developed country
FARM	Farmer-Centered Agricultural Resource Management Programme	<b>M</b>	
FDI	foreign direct investment	MERCOSUR	Common Market of the Southern Cone
<b>G</b>		MIGA	Multilateral Investment Guarantee Agency
GDP	gross domestic product	MP	Montreal Protocol
GEF	Global Environment Facility	MVA	manufacturing value added
GEPLACEA	Latin American and Caribbean Sugar Exporting countries	<b>N</b>	
GNP	gross national product	NALFIS	national Africa leather and footwear industry scheme
GRIP	Graduate Resources Integration Programme	NCPC	national cleaner production centre
<b>H</b>		NGLS	United Nations Non-Governmental Liaison Service
HABITAT II	Second United Nations Conference on Human Settlements	NGO	non-governmental organization
HACCP	hazard analysis and critical control points	NIS	Newly Independent States of the former Soviet Union
HEPD	Human Resource, Enterprise and Private Sector Development Division of UNIDO	NISP	National Industrial Statistics Programme
		<b>O</b>	
		OAS	Organization for American States
		OAU	Organization of African Unity
		ODA	official development assistance
		OECD	Organisation for Economic Cooperation and Development



OOPP	objectives-oriented project planning	<b>T</b>	
<b>P</b>		TC	technical cooperation
PHARE	Assistance for Economic Restructuring in the Countries of Central and Eastern Europe	TCDC	technical cooperation among developing countries
PPRC	Programme and Project Review Committee	TQM	total quality management
<b>Q</b>		TSS-1	technical support services at the programme level
QSAR	Quality System Assurance Recognition	TSS-2	technical support services at the project level
<b>R</b>		<b>U</b>	
R and D	research and development	UCD	UNIDO Country Director
RALFIS	regional Africa leather and footwear industry scheme	UNCTAD	United Nations Conference on Trade and Development
RB	regular budget	UNDCP	United Nations International Drug Control Programme
RENAPAP	Regional Network on Pesticides for Asia and the Pacific	UNDP	United Nations Development Programme
RIDA	regional industrial development agency	UNEP	United Nations Environment Programme
RPD	Research and Publications Division of UNIDO	UNFCCC	United Nations Framework Convention on Climate Change
<b>S</b>		UNIDOSS	UNIDO Industrial Subcontracting System
SBA	strategic business alliance	USAID	United States Agency for International Development
SEZ	special economic zone		
SME	small and medium enterprise	<b>W</b>	
SMI	small and medium industry	WHO	World Health Organization
SPX	subcontracting and partnership exchange		