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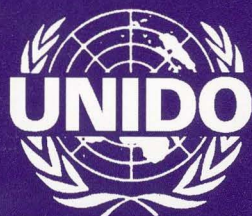
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**Industrial Development Board
Sixteenth session, 1996**

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Twelfth session, 1996**



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MESSAGE FROM THE DIRECTOR-GENERAL
1995 - REFORM AT WORK

For all the progress they have achieved in industrialization, most developing countries and countries in transition continue to face severe and complex challenges. These challenges are compounded by competitive pressures and technological changes that threaten to widen the gap between advantaged and disadvantaged nations. And while we have seen some developing regions progress in terms of participation in the global economy, others, most notably the least developed countries, have fallen further behind and continue to be in urgent need of international assistance.

UNIDO has responded to the changes in industrial reality and support requirements by re-examining its priorities and introducing major internal reforms. In this process, UNIDO has been in the vanguard of reform, leading the way in the United Nations system, and now stands ready to meet the demands of developing countries in support of their industrialization. The process of industrialization remains basic to economic modernization. Although this process is increasingly the preserve of market forces, Governments still play an important role in furthering sustainable industrial development. The Organization's Mission Statement, as developed in 1995, emphasizes UNIDO's role as a catalyst seeking to harness the joint forces of Government and the private sector. The overall aims are to foster competitive industrial production, develop international industrial partnerships and promote socially equitable and environmentally sustainable industrial development.

We at UNIDO are fully committed to these goals and, in a process of focusing our work, have defined new thematic priorities around which services to Member States will be consolidated. In the future, Member States will be able to closely follow how we progress in meeting these priorities. With the thematic priorities defined by the middle of 1995, we proceeded in the second half of the year to the re-engineering of key managerial and administrative processes, the aim being to improve the effectiveness and efficiency of delivery systems while strengthening monitoring, reporting and communication functions. This work was undertaken jointly with external management consultants under active involvement of a large number of UNIDO staff.

The reforms - while not introduced to combat budgetary pressures - gave UNIDO the flexibility to cope with changing resource scenarios that suddenly emerged in 1995. Due in great part to these process improvements, the Organization was able to face a financial challenge of unprecedented proportions caused by the non-payment of assessed contributions by the United States of America in 1995 and to finish the year with a positive cash balance.

The efforts at cost cutting and management reform have allowed us to present a revised budget and related contingency plans for the coming biennium, taking into account the effective withdrawal of our largest contributor by the end of 1996, with a real reduction of approximately 25 percent over the 1994-1995 biennium. UNIDO was able to introduce such drastic budgetary reductions without sacrificing the Organization's ability to deliver services to its Member States.

In spite of budgetary cutbacks in 1995, UNIDO reversed the trend of declining technical cooperation delivery since 1990, with delivery increasing 7 per cent over the previous year to \$108.5 million. At the same time, the sources of project funding were further diversified, an essential step following the drastic decline in UNDP funding in recent years.

Our efforts have not gone unnoticed. The re-emergence of UNIDO as a relevant, efficient and indispensable specialized agency supporting industrial development has been widely acknowledged in important global and regional fora. This support was reaffirmed at the sixth session of the General Conference of UNIDO in December 1995 in Vienna, which endorsed the reform results and emphasized the role of UNIDO as:

- A global forum for industrial development matters;
- A provider of specialized, integrated services to Governments, institutions and enterprises in recipient countries;
- A central coordinating agency within the United Nations system in the field of industry.

While we are proud of last year's achievements in terms of increased efficiency of staff, stronger personnel management, improved programme management and administrative streamlining, these results are not covered in the present document but are dealt with in greater detail in other documents (GC.6/30 and Add.1; IDB.16/7). Suffice it to say that the organizational changes at UNIDO have been enormous, providing a strong base for us to continue progressing in the years to come.

This Annual Report concentrates on the substantive activities of the Organization. It addresses the explicit requests of Member States to improve the quality of the report, both in terms of form and content - a process of improvement already evident in the 1994 report. The format has been redesigned in accordance with General Conference resolution GC.6/Res.2. In keeping with this resolution, this report provides:

- Aggregate statistical information on technical cooperation projects;
- A presentation of selected new, ongoing and completed technical cooperation programmes and projects, supplemented by a complete project list in Addendum 2;
- An elaboration of the work undertaken and initiated under UNIDO's global forum function.

This new approach - responding to the request in GC.6/Res.2 to avoid the presentation of overlapping information and provide a consolidated report - eliminates the need to present separate output tables for each organizational unit, as previously provided in a somewhat fragmented format in the programme performance report. The emphasis in this report lies on pointed, brief descriptions of technical cooperation activities in their thematic context. Other dimensions of UNIDO's work - including summaries of selected high-profile meetings - are highlighted under the global forum function.

The year 1995 was one of rapid change and hard decisions. It was also a year of challenges met. UNIDO is a redirected organization: flatter, slimmer, more efficient and quicker to respond to the needs of our Member States. As these demands increase, we at UNIDO will continue to meet our important responsibility of providing specialized support to industrial development.


Mauricio de Maria y Campos

CHAPTER I

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

Overview

1. In 1995, world industrial activity grew for the third consecutive year since the recession in the early 1990s. Growth was, however, weaker with manufacturing value added (MVA) increasing at 3.8 per cent compared with 4.8 per cent in 1994. The slower growth was in line with global GDP growth, which slowed from 3.0 per cent in 1994 to 2.7 per cent in 1995. Global GDP growth was dragged down mainly by the poorer performance of the industrialized countries, which account for more than three quarters of global MVA.

2. The pace of MVA growth in the industrialized countries slowed from 4.6 per cent in 1994 to 3.4 per cent in 1995 due mainly to lower demand for industrial goods. This was partly the result of the sharp rise in interest rates in 1994 that had dampened consumption and investment demands. The slower MVA growth was also due to the marked appreciation of key currencies, notably those of the major economies such as Japan and Germany. The appreciation of these key currencies had an adverse impact on the international competitiveness and export performance of these countries.

3. The developing countries, as a group in 1995, recorded the highest rate of industrial growth. MVA grew at a buoyant rate of 6.7 per cent, almost twice that of industrialized countries, although slightly lower than that achieved in 1994. Growth was largely propelled by high investment rates from both domestic and foreign sources. Higher domestic and regional demand, boosted by several years of robust economic growth, also contributed to the strong growth and the higher resilience of the developing regions. As a result of their stronger growth compared to industrialized countries, the developing countries' share of world MVA rose to about 20 per cent in 1995.

Regional trends

4. While many of the developing regions recorded higher growth in 1995 than in 1994, growth performance was unevenly distributed. Most of the Asian countries continued to display high, albeit moderating, MVA growth, while Latin America and the Caribbean as a whole slumped into recession. Sub-Saharan Africa, on the other hand, managed to display a marginal improvement in growth, but its aggregate performance was still far lower than that of the Asian countries.

Latin America and the Caribbean hit by current account deficit problems

5. Latin America and the Caribbean recorded negative MVA growth of 0.8 per cent during 1995 compared with significant growth of 6.0 per cent in 1994. Deteriorating current account deficits and declining savings rates in major countries of the region raised concern over the ability of those countries to sustain long-term growth. That adversely affected the confidence of international investors and led to a sharp reversal of capital flows in the early part of the year, which inevitably affected industrial activities in those countries.

Figure 1. Trends of World Manufacturing Value Added, 1970-1995

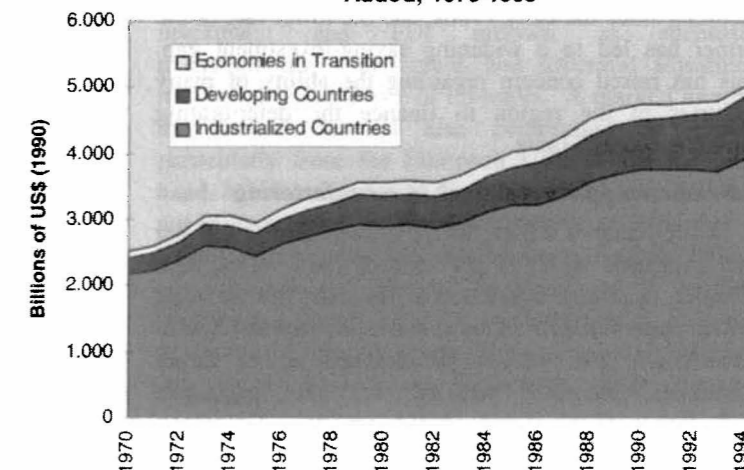
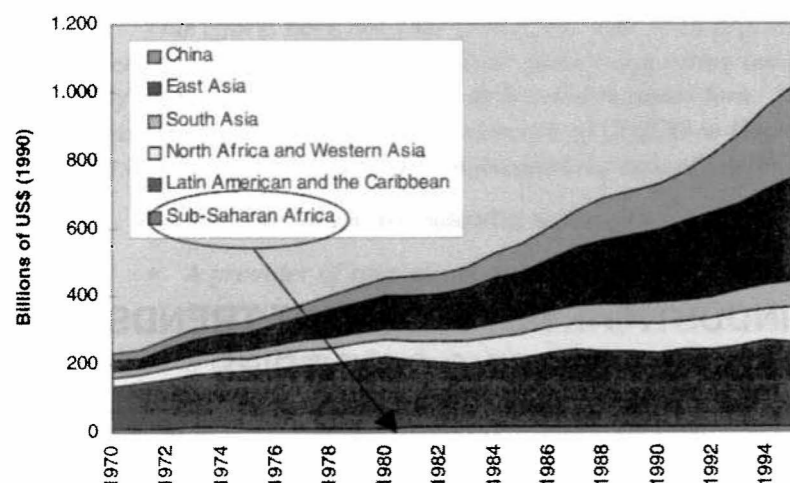


Figure 2. Manufacturing Value Added Trends of Developing Regions, 1970-1995



6. As a result, Mexico's MVA growth plunged to -7.5 per cent in 1995 from 4.8 per cent in 1994. Its financial crisis prompted the authorities to adopt a bold stabilization programme aimed at containing inflation, fostering domestic savings and reducing external deficits. Those measures led to an improvement in investor confidence towards the end of the year. Argentina, the second largest industrial producer in the region after Brazil, was also badly affected by the crisis. Its MVA growth plummeted from a buoyant 9.4 per cent in 1994 to -7.6 per cent in 1995. In Brazil, which accounts for close to 30 per cent of the region's MVA share, growth also slowed to 3.0 per cent from 6.3 per cent in 1994. On the other hand, strong policy fundamentals helped Chile to successfully withstand the effects of the crisis without significant impact on its growth performance. MVA grew at 4.4 per cent in 1995 as against 2.6 per cent in 1994.

7. As a whole, the region has been less successful in coping with competitive challenges than East Asia. Its share in world MVA has declined from a peak of about 6.0 per cent in 1980 to about 4.8 per cent in 1995. The region has also lost a considerable part of its shares of world FDI inflows to East and South-East Asia. The region's domestic saving and investment rates have been declining since the early 1980s, and the lower rate of the former has led to a widening saving-investment gap. This has raised concern regarding the ability of many countries in the region to finance the deteriorating current account deficits.

Sub-Saharan Africa still weak in manufacturing

8. In sub-Saharan Africa, MVA growth rose to 1.6 per cent compared with 0.4 per cent in 1994. That rate, however, was still much lower than the double digit growth experienced in many countries in East and South-East Asia. The weaker performance of the larger economies weighed heavily on the aggregate performance of the region. MVA growth in Cameroon

and Nigeria remained negative while that of Zimbabwe dropped sharply from 8.3 per cent in 1994 to 2.3 per cent a year later. Only a few countries such as those in the CFA franc zone and Kenya have been able to sustain growth at relatively robust rates and attract FDI in recent years. These are also the countries that have been most successful in achieving macroeconomic stability by strengthening economic policies and overall economic reform. Kenya and Côte d'Ivoire, for example, registered MVA growth of 6.8 and 7.8 per cent in 1995 compared with 5.8 and 3.0 per cent respectively in 1994.

9. The region, where two-thirds of the world's LDCs are located, is still characterized by a weak manufacturing base. During the past decade, the region's share in world MVA has dropped from 0.4 per cent to 0.3 per cent. The region has not made much headway even in labour-intensive or resource-based industries. Its share of world MVA in apparel is less than 1.0 per cent, while the combined share of leather and fur products and footwear is less than 0.5 per cent. Domestic investment rates are not only the lowest among developing countries, but they have been declining over the past decade. In addition, the region has not been able to benefit from the recent surge in global FDI flows to developing countries, accounting for an average share of about 1.3 per cent during the 1990s.

10. The region's weak performance has a range of causes. Among these must be included: low levels of savings, policy choices on trade and the role of markets, poor infrastructure, a lack of skilled human resources and, in some instances, political instability. In addition to macroeconomic management, the challenges facing African decision-makers include a refocusing of the role of the State on the provision of public goods, such as education and general infrastructure (while seeking to attract foreign private investment in the latter), fostering the efficient operation of markets, promoting foreign direct investment and building a broad array of economic, social and political institutions.

North Africa and Western Asia staged a strong rebound

11. Industrial performance in both North Africa and Western Asia improved in 1995 thanks to regional stability and appropriate macroeconomic policies. MVA grew at 3.9 per cent in North Africa compared with 1.8 per cent in 1994. In Western Asia, MVA recovered strongly from -2.8 per cent in 1994 to 6.3 per cent in 1995. In Egypt, the largest economy in North Africa, MVA grew at 4.3 per cent compared with 2.8 per cent in 1994. Morocco and Tunisia also registered better growth in 1995. Similarly, Turkey, the largest manufacturer in

Western Asia, staged a dramatic recovery with MVA growing from -8.4 per cent in 1994 to 7.8 per cent in 1995. Compared with other countries in the region, Turkey has achieved closer integration into the global economy. Iran, on the other hand, recorded a drop in its growth rate of 3.5 per cent in 1995 compared with 4.5 per cent in 1994. In overall terms, the region - in particular, Western Asia - stands to benefit from new trade opportunities with newly independent neighbours in Central Asia.

South Asia benefits from recent structural adjustment efforts

12. In South Asia, deregulation and structural adjustment efforts in major countries of the region have helped to sustain growth at above 7.5 per cent in the region in recent years. India, in particular, enjoyed a significant surge in manufacturing exports and FDI inflows: its MVA grew at 8 per cent in 1995 compared with 8.5 per cent in 1994. Pakistan also contributed to the region's growth performance, with MVA growth improving from 2.7 per cent in 1994 to 4.4 per cent in 1995.

13. The region is now faced with the problems of rising inflationary pressures, infrastructure bottlenecks and current account deficits. Investment rates remained low, albeit stable, at around 20 per cent of GDP despite a recent surge in FDI which generally formed a small proportion of total investment. Amidst a declining trend in saving rates, the main challenge of the region is to sustain growth by stimulating saving and investment and reducing infrastructure bottlenecks. The region is still highly dependent on labour-intensive industries. It needs to broaden as well as deepen its industrial structure and upgrade to higher-technology industries. Investment in the development of technological capabilities and human resources are essential.

East and South-East Asia as main engine of growth

14. East and South-East Asia, including China, continued to register the strongest MVA growth in 1995 with double digit growth of 10.7 per cent. This impressive growth raised the region's share in world MVA to 11.0 per cent in 1995, from 10.3 per cent in 1994; it represents slightly more than half of the developing countries' combined MVA. Growth was fueled by a strong demand for both consumption and investment goods from domestic as well as regional markets, amidst a lower demand from the traditional industrialized markets. The marked growth in intra-regional trade has led to higher resilience of the region in responding to external factors. Investment rates continued to surge and sharp inflows of FDI contributed further to the strong pace of investment.

15. After several years of strong growth, overheating problems have emerged in China and most of the ASEAN countries. Inflationary pressure and persistent

current account deficits are the major concerns as high investment rates stoke up high import demand for capital goods and other industrial production inputs. Meanwhile, rising income has led to higher demand for imported consumption goods which adds further pressure on current account deficits. Many countries in the region undertook considerable efforts to curb demand by tightening monetary policy so as to reduce these overheating problems. Nevertheless, growth remained buoyant in many of these countries. China, for example, continued to record double digit growth at 12.1 per cent. Indonesia, Malaysia and Thailand turned in equally impressive growth performances despite monetary tightening. Growth remained stable at 11.0 per cent in the Republic of Korea while Singapore recorded a lower growth of 9.6 per cent compared to 12.9 per cent in 1994.

16. The region has been the centre of attraction for FDI in recent years, accounting for more than 20 per cent of the global FDI inflows. Political stability, strong economic fundamentals, relatively well developed infrastructure and the availability of a pool of highly qualified workforce have combined to contribute to this attractiveness. The high saving rate of the region, at more than 30 per cent of GDP, has been a major determinant of growth. Nevertheless, the key challenge of the region at present is to bring growth down to a more sustainable level without causing too much fiscal imbalance. Higher investment is also necessary to accelerate the development of infrastructure and technological capabilities.

Economic recovery in Central and Eastern Europe

17. Signs of recovery were evident in the economies in transition of central and eastern Europe and the former Soviet Union during 1995. The aggregate negative MVA growth of these economies was reduced by more than half from -8.8 per cent in 1994 to -4.1 per cent in 1995. Their individual performance, however, depended significantly on the stage they had reached in their reform programmes. Early reformers with sound macroeconomic policies such as Albania, the Czech Republic, Hungary and Poland recorded buoyant MVA growth. They enjoyed rapid increase in productive investment and FDI inflows, as successful macroeconomic stabilization and structural adjustment restored the confidence of investors. A marked increase in external demand also contributed to growth, particularly from the European Union. On the other hand, MVA continued to decline in countries which had not made as much progress in economic reforms such as Belarus, the Russian Federation and Ukraine. Those countries are still plagued by problems of incipient institutional frameworks for market-oriented industrial development, declining investment rates, high inflation, large fiscal imbalances and major structural weaknesses.

Prospects and challenges

18. 1995 was generally a year of strong economic and industrial growth for most of the developing regions. At the same time, increasing liberalization and globalization of the world economy is expected to bring new opportunities for developing countries which they will have to seize through appropriate industrial strategies and policies. Failure to do so, particularly by the LDCs, would perpetuate the widening gap existing both between industrialized and developing countries and among developing countries themselves.

19. The prerequisites for successful integration into the global economy are the availability of an appropriate policy framework, efficient markets, adequate infrastructure, a well-trained and educated labour force and the development of a range of supporting institutions. The main challenge facing developing country policy-makers in the coming decade is therefore the development of such framework and capabilities so as to capitalize on the vast potential of the global changes and sustain the growth momentum.

20. The globalization process and rapid technological developments have changed the nature of competition considerably. While new generic technologies are permeating all sectors of industry, the adoption of new labour-saving technologies and responses to competitive pressures in the industrialized countries have contributed to growing unemployment among low-skilled labour in those countries. This may pose the threat of a resurgence of protectionism in industrialized countries.

21. Developing countries are generally weak in terms of technological capabilities compared with industrialized countries. It is therefore important for developing countries to invest not only in building productive capacities, but also in developing technological capabilities and human resources. This will require not only support by the international community but also increased domestic savings and investment rates, all the more so as those rates at present show a declining tendency in many developing countries.

CHAPTER II UNIDO REFORM: THE MAIN DIMENSIONS

1. The entire United Nations system is engaged in a thorough reform process as an effective response to the challenge of dwindling financial resources. Major issues of this reform have been the need to attain sharper focus and greater impact of programmes as well as to balance relief with development support.

2. The year 1995 saw the implementation of the main elements of UNIDO reform, which will be further refined and completed in 1996. The reform process of UNIDO was initiated at an early stage when no particular financial constraints for the Organization were anticipated. It was prompted by the perceived need to respond to changing patterns of demand for the services of the Organization and was thus, from the outset, driven primarily by substantive and efficiency considerations. At the same time, the basic postulates of the reform - the need to define a sharper substantive focus, to adjust the organizational structure accordingly, and to enhance process efficiency - have laid the foundation for a more effective and leaner UNIDO that is better able to respond to different scenarios of development and resource availability.

3. UNIDO reform has followed a logical sequence: from the redefinition of key objectives and programmes to the redesign of mechanisms to deliver quality services, and finally to savings in staff and non-staff resources. In this process, UNIDO has been at the forefront of reform efforts in the United Nations system.

Setting priorities

4. A central feature of the UNIDO reform process has been the prioritization of services. This prioritization has been based on analyses of the current and future needs and support requirements of developing countries and countries with economies in transition. Accordingly, the UNIDO work programme is now focused along three dimensions:

Geographical focus

5. While responding - in accordance with the principle of universality - to support requirements in all developing regions and in the economies in transition, the special emphasis of UNIDO technical cooperation services are the countries in Africa and the least developed countries.

Sectoral focus

6. UNIDO has accorded high priority status to a limited number of industrial subsectors (less than 50 per cent of the total number of these sectors) on which the build-up of core staff expertise and the proactive programming of support services is concentrated. Within the sectoral Branches, the following industrial subsectors will receive priority attention in the future:

- Food processing, leather, textiles and wood processing within agro-based industries;
- Metalworking and machine tools (with emphasis on agricultural machinery) within engineering industries;
- Biotechnology, water management, medicinal plants, building materials and organic chemicals within chemical industries.

7. A large number of industrial subsectors have been assigned low priority while others have been classified as non-priority subsectors without specific coverage by UNIDO.

Thematic focus

8. UNIDO has adopted seven thematic priorities as the cross-organizational focus for the 1996-1997 biennium. They will provide the overall direction towards which all substantive units of UNIDO will shift and focus their programming, conceptual and subsequent implementation work. The seven thematic priorities respond to identified demand for integrated, multidisciplinary services in support of industrial

development and draw on the core expertise of the Organization. They comprise:

- Strategies, policies and institution-building for global economic integration
- Environment and energy
- Small and medium enterprises: Policies, networking and basic technical support
- Innovation, productivity and quality for international competitiveness
- Industrial information, investment and technology promotion
- Rural industrial development
- Africa and LDCs: Linking industry and agriculture

9. Each of these seven thematic priorities has been operationalized by UNIDO in terms of the key issues faced by developing countries, the expertise available at UNIDO, the required cross-organizational cooperation and, in particular, the focus on a limited number of core programmes to be implemented in the 1996-1997 biennium.

10. Specifically, six high-impact programmes were developed in 1995 based on the following criteria:

- Respond to expressed priority demand of Member States
- Focus on and specify support services under the seven thematic priorities
- Integrate analytical work, policy advice and institutional support
- Put into effect the comparative advantage of UNIDO in the United Nations system
- Enable and foster cross-divisional teamwork within UNIDO
- Involve the private sector both as beneficiary and counterpart.

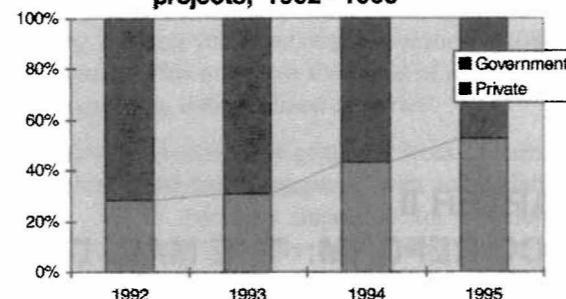
11. These high-impact programmes are described in chapter III.B. of the present report in their thematic context.

Private sector involvement

12. The growing importance of the private sector as a driving force in 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. UNIDO has endeavoured therefore, to ensure that not only its services ultimately benefit the private sector - which applies to the great majority of technical cooperation projects - but also involve private sector entities, particularly private sector institutions and associations, more directly as project counterparts.

13. Accordingly, the importance of private sector organizations as counterparts of UNIDO projects increased from slightly more than one quarter in 1992 to more than 50 per cent in 1995 (figure 3).

Figure 3. Counterparts of UNIDO projects, 1992 - 1995



Management reform

14. As an integral part of the reform process and with support from an external management consultant, UNIDO has reviewed and, where appropriate, re-engineered virtually all its managerial and administrative processes and procedures. Major achievements comprise:

- The strengthening of key management principles, above all introducing clear accountability for delegated responsibilities, and their application in various core processes;
- The introduction of new reporting mechanisms for monitoring and control;
- The conceptualization of a revised project cycle management approach, fully aligned with the new substantive focus, giving particular attention to improving the efficiency, effectiveness, quality and timely delivery of services;
- The streamlining of administrative processes in areas such as travel, consultancies, monitoring mechanisms, personnel management, financial management and communications - resulting in significant cost reductions;
- On the basis of analytical surveys, the redefinition of key functions of and services to be provided by UNIDO field offices.

15. An area in which managerial reform is critically linked to the substantive focus of UNIDO is the management of UNIDO services (project cycle management). This issue has been under close scrutiny throughout the reform process. In April 1994, UNIDO issued new guidelines introducing transparent procedures, decentralized quality assurance, a coherent programming framework, a strong emphasis on team-building, and an early screening process in developing UNIDO services. These new guidelines were reviewed after one year of experience. While the basic new principles introduced were found to be valid, a number

of adjustments were required in order to align the guidelines with the new focus on thematic priorities and to develop large, integrated UNIDO support programmes. The revised guidelines will also streamline some procedures found to be too cumbersome, and strengthen the functions of substantive project managers in mobilizing inputs required for project implementation.

Cost reductions

16. The reform process has enabled the introduction of a streamlined organizational structure by reducing the number of Divisions from eight to six and has improved cost-efficiency. Cost reductions have, in particular, been achieved in the areas of administration and operational support. As figure 3 indicates, these costs have been significantly decreased over the reform period. Included under this heading are general operating costs, supplies and material, acquisition of equipment, electronic data-processing and some joint service costs with other United Nations agencies.

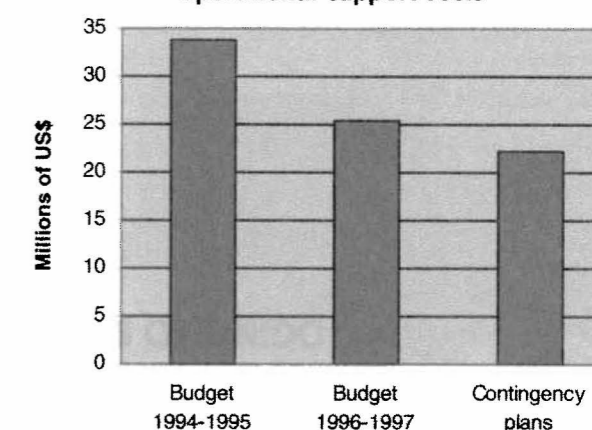
17. In addition, the reform also resulted in reduced costs in 1995 under conference servicing, meetings, printing, travel, and consultancies. The following box provides specific examples.

Example expenditure reductions in 1995 (in thousands of US\$):

| | |
|-------------------------------|-------|
| Temporary assistance/overtime | 450 |
| Temporary posts | 400 |
| Language teachers/training | 100 |
| Travel savings | 450 |
| General operating costs | 2,200 |
| Supplies and materials | 300 |
| Equipment | 400 |
| Printing | 500 |
| Conference Services | 2,000 |
| Consultancies | 450 |
| Ad-hoc meetings | 400 |

18. The total staff of UNIDO fell from 1,174 in January 1994 to 965 at the end of 1995 while the ratio of General Service to Professional staff decreased from 1:4 in 1992-1993 to 1:2 based on the productivity gains from re-engineered administrative processes and related adjustments in budgetary posts. New management principles and procedures have been introduced to accelerate decision-making and increase empowerment, accountability, transparency and effectiveness. UNIDO also introduced changes of a much broader cultural type in the areas of staff performance evaluation, staff development and training.

Figure 4. Administration and operational support costs



19. All of these reforms have enabled UNIDO to maintain its key services despite the announced withdrawal of the United States of America from the Organization and non-payment of its assessed contributions during the year. In spite of an overall 25 per cent budgetary shortfall, there has been no reduction in the delivery capacity of key substantive services. Indeed, under these stringent circumstances, UNIDO was able to maintain and even increase its delivery of technical cooperation as compared to 1994.

20. The far-reaching reform of UNIDO was commended by the sixth session of the General Conference in December 1995 which in resolution GC.6/Res.1 supported the role of UNIDO:

- To serve as a global forum to exchange information, analysis and advice on industrial policies and institutions within the field of development;
- To provide integrated services to Governments, institutions and enterprises in recipient countries for the design and implementation of industrial subsectors, the development of selected industrial subsectors, private sector development, the development and transfer of clean technologies, industrial partnerships and investments, and development of human resources in line with the identified priorities of the Organization;
- To function as a central coordinating agency within the United Nations system in the field of industry, for supporting the endeavours of developing countries to achieve sustainable development.

CHAPTER III

TECHNICAL COOPERATION PROGRAMMES OF UNIDO: 1995 ACHIEVEMENTS

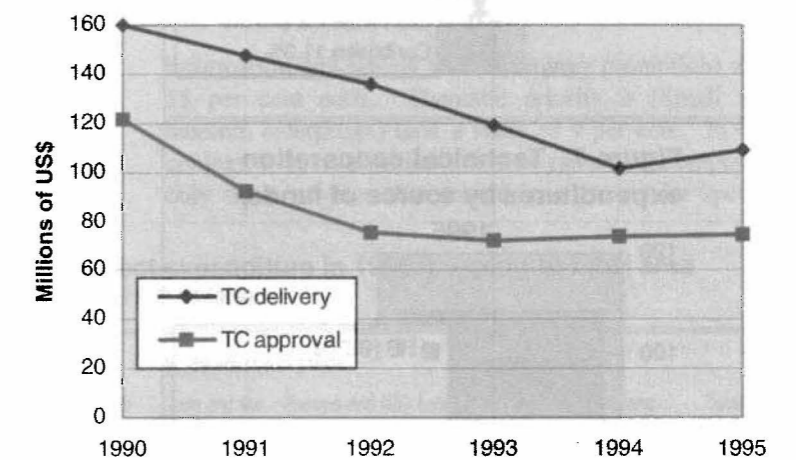
1. This chapter reviews the performance of UNIDO in providing technical cooperation services to developing countries and countries in transition. The first section presents an aggregate statistical analysis of technical cooperation delivery in 1995 in terms of key dimensions such as regional breakdown, sources of funds, sectoral distribution and thematic context. This is followed in section B by a presentation of selected newly approved projects, progress made in ongoing projects and lessons learned from completed technical cooperation projects which are grouped in accordance with the seven new thematic priorities of UNIDO. (For a complete list of all newly approved, ongoing and completed projects in 1995, the reader is referred to addendum 2 to the present report.) Sections C to E of this chapter provide a summary account of the Organization's 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 1995, total technical cooperation delivery by UNIDO amounted to \$108.5 million. In a year in which the Organization was going through a major reform process with the active participation of a large number of staff, this was a remarkable achievement. It represented an increase of 7 per cent over the 1994 delivery figure and, at the same time, a reversal of a previous trend of declining technical cooperation volumes. Likewise, technical cooperation approvals went up to reach \$74.7 million thus continuing a positive trend that had begun already in 1994 (see figure 5).

3. A look at the regional breakdown of technical cooperation expenditures reveals the leading role of African countries as recipients of UNIDO services.

Figure 5. Technical cooperation delivery and approval, 1990 - 1995



Excluding global and interregional projects, their share of the total went up to 42 per cent in 1995, following 39 per cent in 1994 (see figure 6). Asia and the Pacific was the second most important recipient region accounting for 29 per cent of total technical cooperation delivery.

4. The source of funds distribution (see figure 7) clearly shows a further significant reduction of funds contributed by UNDP which - following a share of 26 per cent in the previous year - accounted for only 17 per cent of extrabudgetary resources in 1995 implementation. (For a trend analysis of UNDP-IPF funding, see also chapter VI.) The most rapidly growing new source of funds was the Multilateral Fund for the Implementation of the Montreal Protocol which - based on intense earlier programme development efforts - in 1995 contributed 15 per cent to total technical cooperation expenditures.

5. In terms of project components, figure 8 shows that, as in previous years, UNIDO technical cooperation services are primarily implemented in the form of project personnel (49 per cent) while, on the other hand, the equipment component - accounting for 16 per cent - is relatively low.

Figure 6. Technical cooperation expenditures by region, 1995
(excluding global / interregional projects)

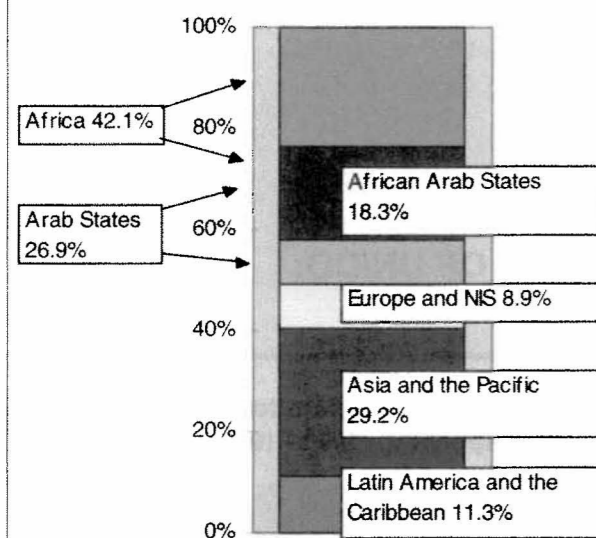
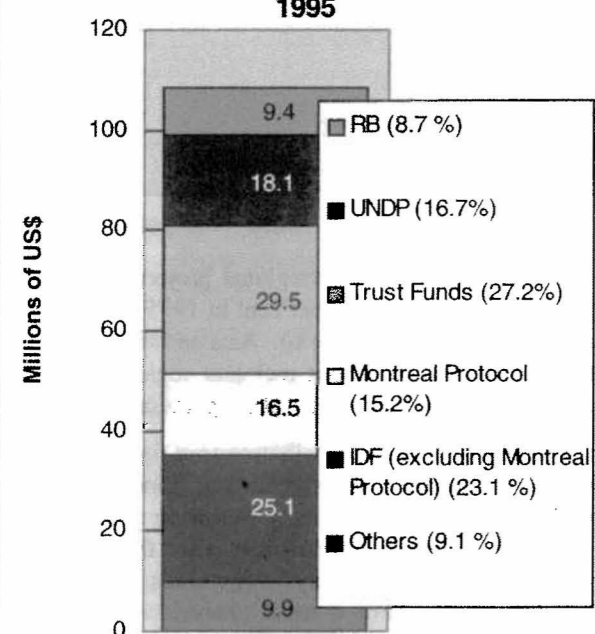


Figure 7. Technical cooperation expenditures by source of funds, 1995



6. Figure 9 provides a breakdown of technical cooperation expenditures by sector of activity. From the chart, it emerges that support provided to the development of specific subsectors of industry continued to be the mainstay of UNIDO programmes accounting for 48 per cent of the total. More specifically, 21 per cent of total expenditures fell under chemical industries, 16 per cent under engineering and metallurgical industries, and 11 per cent under agro-based industries. Promotional activities related to investment and technology were responsible for 29 per cent of technical

Figure 8. Technical cooperation expenditures by project component, 1995

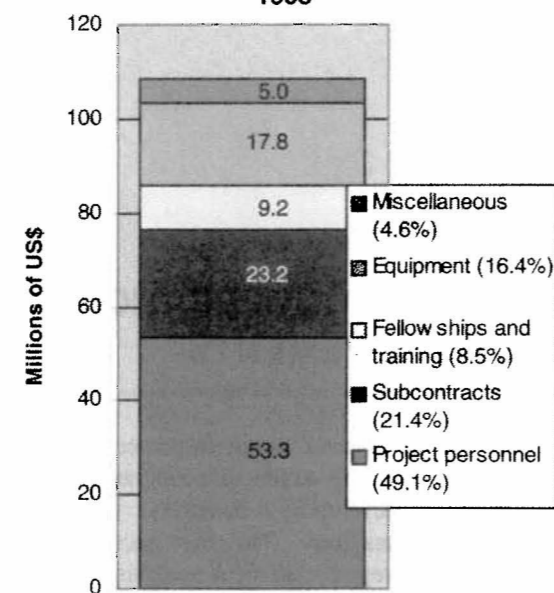
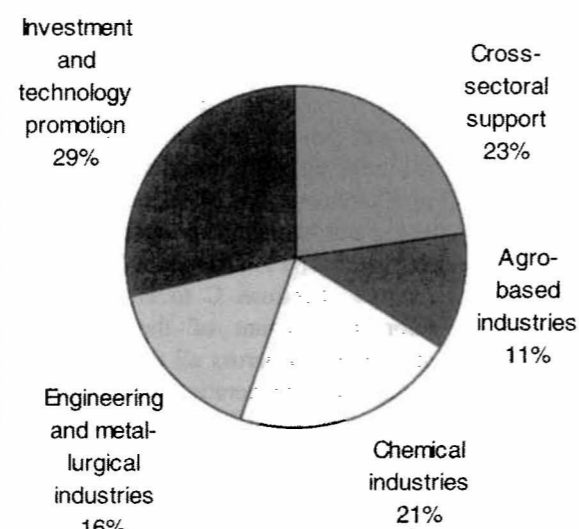


Figure 9. Technical cooperation expenditures by sector, 1995



cooperation expenditures while other cross-sectoral support areas (encompassing industrial policy advice, private sector development, small and medium industry support, enterprise development and human resources development) accounted for slightly less than one quarter.

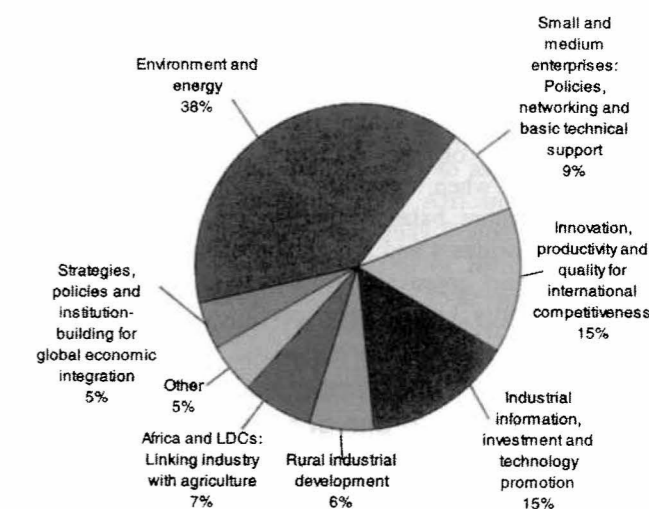
New approvals by thematic priority

7. As explained in chapter II, UNIDO has developed seven thematic priorities that now constitute the focus for the Organization's programme and project

development efforts. These priorities - while formally to be applied only as of 1996 - were first presented to the Industrial Development Board at its fourteenth session (see document IDB.14/13) and were elaborated in the course of 1995. In that process, UNIDO programmes were gradually geared in 1995 towards responding to the newly established priorities. In figure 10, information is thus provided, for the first time, on the distribution of newly approved technical cooperation projects in accordance with the seven thematic priorities. This information will be a regular feature in future annual reports and will be further refined in the course of time.

8. A closer look at figure 10 reveals the following picture. During the year under review, in value terms, 95 per cent of UNIDO technical cooperation approvals fell within the seven thematic priorities. At the same time, in terms of numbers of projects, 16 per cent were not part of the thematic priorities which clearly indicates that the non-priority projects were significantly smaller than the average UNIDO project size. Within the seven priorities, the largest share with 39 per cent was accounted for by thematic priority 2 (Environment and energy), followed by thematic priority 4 (Innovation, productivity and quality for international competitiveness) and thematic priority 5 (Industrial

Figure 10. Technical cooperation approvals by thematic priority and percentage, 1995



information, investment and technology promotion) with 15 per cent each. Thematic priority 3 (Small and medium enterprises) took a share of 9 per cent. In this context, it bears mention that this priority encompasses only those projects that are designed to render special

Table 1. Technical cooperation activities: project expenditure in 1995, by geographical area
(In thousands of US dollars)

| | A. By source of funds | | | | | | | | | | | | | | |
|--|-------------------------|-------------|------------------------|----------------------|----------------|-----------------------------|--------------------------|-------|-------|------|-------|------|--------|------|---------|
| | Africa a/ | Arab States | African Arab States b/ | Asia and the Pacific | Europe and NIS | Latin America and Caribbean | Global and interregional | Total | | | | | | | |
| | % | % | % | % | % | % | % | % | | | | | | | |
| UNIDO regular budget | | | | | | | | | | | | | | | |
| RP | 90 | 0.3 | 606 | 2.9 | (4) | 0.0 | 671 | 2.9 | 617 | 8.8 | 458 | 5.2 | 2,979 | 9.8 | 5,417 |
| IDDA | 3,908 | 11.9 | 105 | 0.5 | (36) | 0.3 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 3,978 |
| UNDP/IPF cash counterpart and special measures | 4,496 | 13.7 | 2,178 | 10.4 | (87) | 0.6 | 4,105 | 18.0 | 2,167 | 31.0 | 781 | 8.9 | 200 | 0.7 | 13,840 |
| UNDP/SIS | 1,315 | 4.0 | 228 | 1.1 | (73) | 0.5 | 943 | 4.1 | 961 | 13.7 | 322 | 3.7 | 0 | 0.0 | 3,696 |
| UNDP-administered trust funds | 464 | 1.4 | 0 | 0.0 | 0 | 0.0 | 39 | 0.2 | 34 | 0.5 | 0 | 0.0 | 0 | 0.0 | 537 |
| Self-financed trust funds | 7,066 | 21.5 | 6,476 | 30.8 | (6,193) | 43.5 | (49) | (0.2) | 107 | 1.5 | 1,289 | 14.7 | 67 | 0.2 | 8,763 |
| Third party-financed trust funds | 1,030 | 3.1 | 2 | 0.0 | 0 | 0.0 | 1,212 | 5.3 | 1,597 | 22.8 | 709 | 8.1 | 2,118 | 7.0 | 6,668 |
| Other trust funds | 298 | 0.9 | 298 | 1.4 | (298) | 2.1 | 384 | 1.7 | 48 | 0.7 | 349 | 4.0 | 12,950 | 42.7 | 14,029 |
| IDF c/ | 12,913 | 39.3 | 10,837 | 51.6 | (7,314) | 51.4 | 9,417 | 41.4 | 823 | 11.8 | 3,987 | 45.5 | 11,002 | 36.3 | 41,665 |
| UNDCP | 426 | 1.3 | 230 | 1.1 | (230) | 1.6 | 366 | 1.6 | 403 | 5.8 | 688 | 7.9 | 239 | 0.8 | 2,122 |
| Non-UNIDO funds | 891 | 2.7 | 60 | 0.3 | (0) | 0.0 | 5,679 | 24.9 | 238 | 3.4 | 176 | 2.0 | 752 | 2.5 | 7,796 |
| TOTAL | 32,898 | | 21,021 | | (14,236) | | 22,767 | | 6,995 | | 8,759 | | 30,307 | | 108,511 |
| | B. By project component | | | | | | | | | | | | | | |
| | Africa a/ | Arab States | African Arab States b/ | Asia and the Pacific | Europe and NIS | Latin America and Caribbean | Global and interregional | Total | | | | | | | |
| | % | % | % | % | % | % | % | % | | | | | | | |
| Project personnel | 16,606 | 50.5 | 8,895 | 42.3 | (6,629) | 46.6 | 8,066 | 35.4 | 4,229 | 60.5 | 4,399 | 50.2 | 17,695 | 58.4 | 53,260 |
| Subcontracts | 9,513 | 28.9 | 10,130 | 48.2 | (6,885) | 48.4 | 6,567 | 28.8 | 809 | 11.6 | 904 | 10.3 | 2,182 | 7.2 | 23,218 |
| Fellowships and training | 2,022 | 6.1 | 418 | 2.0 | (237) | 1.7 | 2,881 | 12.7 | 610 | 8.7 | 256 | 2.9 | 3,291 | 10.9 | 9,241 |
| Equipment | 3,660 | 11.1 | 1,293 | 6.2 | (396) | 2.8 | 4,653 | 20.4 | 1,160 | 16.6 | 2,435 | 27.8 | 5,033 | 16.6 | 17,838 |
| Miscellaneous | 1,098 | 3.3 | 285 | 1.4 | (89) | 0.6 | 600 | 2.6 | 187 | 2.7 | 765 | 8.7 | 2,107 | 7.0 | 4,953 |
| TOTAL | 32,898 | | 21,021 | | (14,236) | | 22,767 | | 6,995 | | 8,759 | | 30,307 | | 108,511 |

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/ Includes Montreal Protocol.

cross-sectoral support to SME promotion - while at the same time the vast majority of all UNIDO activities indeed address the needs of SMEs.

9. It is noteworthy that thematic priority 2 accounted for a much smaller share (only 23 per cent) in terms of project numbers. This is explained above all by the large size of most of the Montreal Protocol projects. Accordingly, when excluding all Montreal Protocol projects, a more balanced pattern emerges in which thematic priorities 4 and 5 each contributed 22 per cent to total project approvals in value terms, followed by thematic priority 3 with 13 per cent.

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

10. In accordance with General Conference resolution GC.6/Res.2, the following sections of this chapter provide a description of selected UNIDO technical cooperation programmes and projects grouped under the new thematic priorities. Included are summary narratives on the objectives of newly approved projects, on progress achieved in projects under implementation in 1995 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 projects described are samples, and the presentation of projects is not intended to be comprehensive. In their totality, the projects provide a balanced and representative picture of the range and type of UNIDO technical cooperation. A complete list of new, ongoing and completed projects for 1995 is contained in addendum 2 of the Annual Report, 1995.

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

11. For a decade and more, the world economy has experienced an ongoing process of globalization of economic activities. The liberalization of national and international trading environments, the growth in foreign direct investment, simultaneous and rapid technological change, and the emergence of new forms of inter-firm cooperation have all contributed to an increasingly integrated international system of production. This process of globalization creates enormous challenges for much of the developing world. Indeed, it is already clear that the impact of globalization varies greatly between regions and countries. It is perhaps fair to say that the international distribution of wealth and poverty will reflect to a large degree the ability to actively participate in this globalization process.

New projects

UNIDO's High-impact Programme 1 - Integrated advisory services for industrial policy formulation and competitiveness strategies

12. Work began during 1995 on the design of this high-impact programme that targeted the following group of recipient countries: Cambodia, Myanmar, the Lao People's Democratic Republic, and Viet Nam. Malaysia and Thailand will act as partner countries in the programme. Thailand has provided the physical premises for the programme and is a source of expertise, training facilities and potential investment. The objectives of the programme are to expand income, employment and exports from manufacturing by raising manufacturing productivity. Productivity gains are to be had through an increased participation of private entrepreneurs in manufacturing, improved governance, and the formulation of appropriate policies and business plans. The services to be delivered through the programme are of three sorts: (a) direct assistance or advisory services in the formulation of industrial policies and strategies; (b) assistance in the mobilization of external resources, both for technical cooperation and private investment, thereby contributing to the implementation of policies and strategies, and (c) capacity-building to ensure the sustainability of the programme's achievements. The programme will draw on experience gained in the industrial strategy project started in Viet Nam (see below).

Medium-term industrial strategy - Viet Nam

Budget: \$1,294,000¹
Funded by: UNIDO, UNDP, and the Governments of Japan, the Republic of Korea and Sweden

13. Viet Nam, a South-East Asian economy in transition, faces strong competition in one of the world's most economically dynamic regions. Recognizing the need to liberalize its economy, Viet Nam approached UNIDO in 1994 for help in formulating industrial strategy. Characterized by a fairly diversified industrial base, abundant raw materials, skilled workers and low wages, Viet Nam is likely to succeed in building a strong private sector. However, there are serious shortages of industrial managers, no reliable statistics on manufacturing and important economic constraints. This project is expected to result in the preparation of an industrial strategy, an involvement of the private sector in this process, an analysis of subsectoral linkages in industry as well as consistent industrial statistics. A computable general equilibrium model (CGE) will be used to simulate alternative policy scenarios. The analysis, using the CGE model, will complement a recent ASEAN study on regional economic integration.

¹ This budget comprises funds from three projects.

Support programme for industrial development of the Sumgait region of Azerbaijan (Phase 1)

Budget: \$327,000
Funded by: UNDP

14. Azerbaijan is facing a difficult and historic transformation from an economy based on central planning to a competition-based market economy. At the same time, the Government is seeking to ensure that the development opportunities afforded by the country's vast oil reserves will generate value added among other local industries and create a sustainable and equitable form of development to the benefit of all citizens.

15. The first step the Government is taking is the rehabilitation of Azerbaijan's major industrial area, the Sumgait region. This region was first developed as a centre for heavy industry to service the whole of the former Soviet Union, but lost its markets as previous economic ties were broken, and a severe recession ensued. The Government of Azerbaijan requested UNIDO assistance in the formulation of an industrial development strategy and support programme for the Sumgait region.

16. The primary objective of the project is to facilitate the creation of an environment conducive to industrial development through foreign direct investment, while at the same time satisfying the needs of domestic investors. It is intended that the experience gained in rehabilitating the Sumgait region will serve as a model and a catalyst for the whole economy of Azerbaijan, thereby expediting transition to a market economy in other areas and sectors. The UNIDO team made a careful analysis of the industrial potential of the region. The establishment of a special economic zone (SEZ) was recommended to permit a quick and unbureaucratic change in policies and in the legal and regulatory framework. Detailed recommendations have been made with respect to required changes at the policy, institutional and enterprise levels. The Government immediately reacted positively to the proposal to establish a SEZ Agency.

17. The Agency, which has now been established with an appropriate corporate structure, will provide funding on behalf of the Government, act as a one-stop-shop for investors, implement programmes for investment promotion and enterprise restructuring and coordinate the work of assistance organizations. In autumn 1996, a major Industrial Forum will be held in the Sumgait region to present to potential investors from around the world the new business environment and opportunities.

Development of an integrated support programme for agro-industry in the framework of the Uruguay Round Agreements

Budget: \$178,000
Funded by: The Industrial Development Decade for Africa (IDDA)²

18. The objective of this project is to assist, through a study, the Governments of eight African countries in assessing the impact of the Uruguay Round Agreements on the export supply capabilities of their agro-based industries. The project covers the following countries: Benin, Côte d'Ivoire, Guinea, Mali, Mauritania, Niger, Senegal, and Togo. Under the project, a subregional seminar was held at Dakar, Senegal, in December 1995. More than 20 persons from eight beneficiary countries attended the seminar to review and discuss the findings and recommendations of the diagnostic studies.

Restructuring and revitalizing the Kaliningrad region of the Russian Federation (Phase 1A)

Budget: \$380,784
Funded by: The Governments of Denmark, Finland, Norway and Sweden

19. This project was designed to address the situation in the Kaliningrad region that privatization had not advanced to the extent hoped for. Many enterprises had experienced major falls in output, obsolescence of equipment, lack of raw materials, and inadequate access to working capital and investment funds. Many firms had no strategy for restructuring and appeared incapable of reversing the general downward trend. At the time, the Kaliningrad administration did not possess the capacity to formulate a regional strategy for industrial restructuring. Together with local institutions, the project elaborated a strategy aimed at accelerating industrial restructuring, encouraging entrepreneurship, supporting the development of small and medium enterprises, and making best use of the technological experience and capability of the region.

20. The project team proposed that a single regional development agency be responsible for the restructuring policy. Links have been formed with local educational institutions for the development of management programmes with local firms. An Association of Business Consultants has been established and will assist in upgrading management advisory skills among local firms. The work of the project has been guided by a steering committee composed of representatives from the Kaliningrad Administration, donor countries and UNIDO.

² This project is an IDDA supplementary activity and for this reason does not appear in addendum 2 of the Annual Report, 1995.

Ongoing projects**Assistance to the PTA (COMESA) countries in rehabilitating their metallurgical industries with special regard to the iron and steel sector**

Budget: \$688,000

Funded by: Government of Austria

21. The aim of the project is to assist the PTA Secretariat in preparing, promoting and implementing a programme for the development of the metallurgical industries, and particularly the iron and steel sector, in PTA Member States. The project is also intended to facilitate cooperation among the countries of the Common Market for Eastern and Southern Africa (COMESA), the largest subregional economic grouping in Africa. The quarterly publication "Journal on Industry and Energy in COMESA" was launched in 1995, with two volumes distributed during the year. Available information on 26 steel plants and over 300 metal fabrication and allied engineering companies were compiled into a directory at the COMESA Secretariat, and a register of experts assembled. A research programme was initiated at the University of Zimbabwe's Metallurgical Engineering Department to evaluate the suitability of iron ores and coals from COMESA countries for the production of sponge iron. Reports were prepared on the supply and demand for scrap in individual COMESA countries, with this work to be consolidated into a single regional report. Preparations were made in 1995 for training activities, to be organized at the Ziscosteel Training Centre in Zimbabwe, for general and senior managers from steel companies in Ethiopia, Kenya, Uganda, United Republic of Tanzania, and Zimbabwe.

Intelligent decision support system for the formulation of competitiveness strategies

Budget: \$305,837

Funded by: UNIDO regular budget, and the Governments of India and Mexico

22. The aim of the project is to develop a software package called *CompStrat*, with accompanying manuals. *CompStrat* represents a tool for enterprise-level strategy formulation. Research and development work for the software was undertaken by professional institutes in India and Mexico. In September 1995, UNIDO began expanding the scope of *CompStrat* to allow for policy simulation and monitoring. *CompStrat* is thus expected to be usable at both firm and sectoral levels. It is expected that the use of this tool will assist considerably the flow of information between enterprises and policy-makers. Two applications of the software are scheduled for 1996, in India and Mexico.

Completed projects**Regional symposium/workshop on the implications of the North American Free Trade Agreement (NAFTA) for CARICOM Industry, Port of Spain, Trinidad and Tobago**

Budget: \$83,700

Funded by: UNIDO regular budget

23. The project organized a two-day workshop on NAFTA that was moderated by a senior representative of the Institute for International Economics, Washington, D.C. The aim of the workshop was to review the implications of NAFTA for CARICOM industry, trade and investment, and to raise awareness of the challenges NAFTA poses to the competitiveness of regional manufacturing and industrial services. Reviews were prepared of the current state of CARICOM industry and of the impact of NAFTA on individual countries and branches of manufacturing. Policy recommendations were also formulated. Representatives of thirteen CARICOM member States attended the workshop. Speakers representing the private sector in NAFTA countries also attended, providing first-hand experience of various aspects NAFTA implementation.

Preparation of the basic framework for a programme to apply the strategic management in industrial development (SMID) approach in Kenya, Uganda and the United Republic of Tanzania³

Budget: \$95,000

Funded by: The Industrial Development Decade for Africa (IDDA)

24. It has frequently been found that Governments elaborate industrial policies and strategies without involving the private sector, and with little detailed knowledge of the constraints facing private entrepreneurs. For the three African countries targeted by the project, UNIDO provided policy advice on applying the interactive policy formulation approach (SMID). In all three countries, the project had a capacity-building component related mainly to the strengthening of the Ministries of Industry. In Kenya, the project provided a substantive contribution to the elaboration of a government policy paper and to the formulation of a new vision of industrial development to the year 2020.

2. Environment and energy

25. 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

³ This project was a subcomponent of the project "Follow-up to industrial sector programme review missions in Africa".

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**UNIDO's High-impact programme 4 - Introducing new technologies for abatement of global mercury pollution**

26. Work was initiated during 1995 on the design of this high-impact programme. The release of mercury into the environment from artisanal and small-scale mineral processing - mainly gold mining - causes deaths among men, women and children as well as a permanently ruined habitat in wide areas of many African countries. This programme would largely eliminate these effects through training and the application of new technologies, as well as through the introduction of appropriate policies and support institutions. The programme is to be implemented in Ethiopia, Mozambique, United Republic of Tanzania and Zimbabwe. The achievement of sustainability is highly probable given that the technologies to be introduced will yield greater financial returns for miners than those used previously, in addition to eliminating mercury pollution. The programme will also have an important gender component given the significant numbers of women active in the artisanal mining of gold.

Implications for industry in developing countries of voluntary international quality and environmental management systems

Budget: \$94,194

Funded by: UNIDO regular budget

27. To date, the project has produced the survey "Trade implications of international standards and environmental management systems" as well as the paper "Environmental management systems and eco-labelling: Potential adverse effects on the trade of developing countries". The latter paper was presented to the ISO/CASCO workshop on conformity assessment for environmental management, held in Geneva in June 1995. An expert group meeting was also organized with the title "The potential effects of ISO 9000 and ISO 14000 (draft international standard) series and environmental labelling on the trade of developing countries". This meeting was held in Vienna in October 1995.

Impact of greenhouse gas emissions mitigation measures on industrial and economic development in developing countries (Phase 1)

Budget: \$156,350

Funded by: IDF

28. Following a request from the Group of 77, this project aims at developing a computer-based package to enable developing countries to determine the impacts on their industrial and economic development of a range of possible measures they may choose to undertake to reduce greenhouse gas emissions, including the introduction of efficient, low-energy industrial technologies and fuel switching.

Ongoing projects**Industrial pollution control management - Nepal**

Budget: \$650,914

Funded by: UNDP

29. This project has thus far strengthened institutional capabilities within the Ministry of Industry to develop and implement an industrial pollution control policy. At the same time, the project has formulated regulations and industry-specific discharge standards for air and water, as well as related guidelines for industry. In 1995, the scope and budget of the project were increased to include practical demonstrations of cleaner industrial production.

Waste minimization demonstration and policy advice in Ecuador

Budget: \$111,100

Funded by: UNDP, under a TSS-1 arrangement

30. The purpose of this project is to provide advice on promoting industrial eco-efficiency and competitiveness for Ecuador's Presidential Environmental Advisory Commission, the Ministry of Industry and the Chamber of Industry. In 1995, the project sought to demonstrate, in a selected subsector, that waste minimization is possible in the short term and that it has financial as well as environmental advantages. The subsector chosen for this purpose was shrimp processing. A two-day clean-production workshop was convened for technical managers of the major shrimp-packing companies. Six plants were visited, at each of which a review was performed of the entire process of shrimp transportation, freezing and packing. Detailed mass and energy balance sheets and diagrams were prepared. These analyses will be used to formulate specific recommendations for shrimp packers that will allow a reduction in the use of ice, water and electricity. Policies are also to be recommended at the government level that would encourage eco-efficiency along with industrial competitiveness.

Programme for ecologically sustainable industrial development - Morocco

Budget: \$454,500

Funded by: Government of Belgium

31. This project is developing mechanisms for the efficient use of natural resources and the introduction of low and non-waste industrial technologies. The first phase of the project established a joint coordination committee responsible for overseeing the programme, preparing and implementing study tours and training in Europe, and determining future environmental activities in the industrial field. The coordination committee brought together representatives of the Ministry of Industry, the Ministry of the Environment and the private sector. A plan of action was prepared along with some 20 project proposals addressing legislative, technical, training and financial aspects of environmentally sustainable industrial development, as well as awareness raising. Further work will be oriented to the plant level.

Industrial pollution reduction programme in Sri Lanka

Budget: \$2,155,261

Funded by: UNDP

32. The immediate objective of the project is to promote the acceptance and application of cost-effective pollution prevention and abatement measures in Sri Lankan industry. The project assists on a range of policy, legislative and coordination issues, provides advisory services, and supports demonstration activities. A mobile laboratory has been supplied to the Central Environmental Authority (CEA) to enhance its capacity in monitoring industrial pollution. Training of CEA staff has also begun. Detailed waste audits are being carried out in the textile and metal finishing industries. The outcomes of these audits will permit the setting of priorities among cleaner production options, and thus establish an agenda for demonstration work. Equipment has also been installed at a distillery to demonstrate energy efficient distillation technology, which has also resulted in improvements to product quality. Bench scale tests have likewise been undertaken to help in the selection of wastewater treatment technology.

Action programme on industrial pollution and control - Philippines

Budget: \$80,800

Funded by: UNDP, under a TSS-1 arrangement

33. This project entails a study with four aims: (a) to identify the quantitative and qualitative relationship between particular industrial policies and the environment; (b) to analyse the causes of any adverse impacts of industrial policy on the environment; (c) to formulate complementary measures that could mitigate environmental damage and enhance beneficial effects, and (d) to devise follow-up systems to assess whether those complementary measures have successful mitigation effects.

National Cleaner Production Centres programme

34. Throughout 1995, work continued on the joint UNIDO/UNEP National Cleaner Production Centres (NCPCs) programme. This programme, which is executed by UNIDO, aims to promote application of the concept of cleaner industrial production in developing countries and economies in transition. Numerous developing countries have expressed strong interest in establishing NCPCs. Initially, solicitations were received from 39 institutions in 25 countries. UNIDO/UNEP short-listed 9 candidate institutions and conducted objectives-oriented project planning workshops in seven of the countries. Representatives from each host institution attended a one-month training programme in Europe.

35. To date, the programme has established NCPCs in Brazil, China, the Czech Republic, India, Mexico, Slovakia, Tunisia, United Republic of Tanzania and Zimbabwe. More centres are planned. The Centres are headed by a national director who creates a network in the country of people and organizations with knowledge of cleaner industrial production. The Centres also seek to initiate application of the concept in companies. The Centres employ four principal means of reaching their goals: demonstration projects (the key undertaking of each Centre); training; the dissemination of information; and assistance to policy-makers. All the Centres are being connected to the Internet to give them access to UNIDO pages, and other sites, containing information on cleaner industrial production, as well as the NCPC programme homepage. A system of counterpart institution arrangements has also been initiated. Under this arrangement, a long-term agreement is arrived at between UNIDO and an institute in a developed country for support of a particular NCPC. For example, the NCPC in India is to receive assistance from the Danish Technological Institute, and the NCPC in Zimbabwe has been matched with IVAM and the Erasmus University in the Netherlands.

36. Each Centre is funded for an initial period of three years, which can be extended for an additional two years. The main sponsors of the programme are Austria and the Netherlands. The Centre in Brazil is financed through a self-funded trust fund and the Centre in Tunisia is funded by UNIDO. UNIDO and UNEP meet frequently to review the progress of the programme, with the last meeting held in September 1995.

37. The following is a synopsis of selected activities performed at various NCPCs during 1995. Activities at the Brazilian NCPC began in 1995. Both the director and deputy of this NCPC participated in a workshop on Environmental Management Systems at Graz, Austria, in November 1995, and attended the UNIDO-NGO Forum on Cleaner Industrial Production in Vienna in December 1995. The activities of the NCPC in China began in late 1995, with the first training workshop on Cleaner

Production for Advanced Enterprises held in December 1995. The NCPC of the Czech Republic became operational in January 1995. Cooperation with the counterpart institution STENUM, Austria, began in March 1995. Three demonstration projects, as well as other demonstration activities, were organized in various regions during the year. The director of the Czech NCPC also delivered a paper at the OECD Symposium on Cleaner Production and Waste Management, held in Paris in September 1995. The Indian NCPC began operations in July 1995. Five workshops held in 1995 attracted more than 200 participants. The work of the Mexican NCPC commenced in December 1995. The NCPC in Slovakia began operations in February 1995, and workshops were held in April and September. Three introductory seminars on cleaner industrial production were also organized by the Centre for participants from industry, the service sector, municipalities and research and development institutions. The NCPC likewise assisted policy formulation, the results of which were included in the document "Industrial Policy in the Slovak Republic". This document was approved by the Government in September 1995. The NCPC in the United Republic of Tanzania was scheduled to begin work in early 1996. The Tunisian Centre de Production Plus Propre Tunisien (otherwise known as CP3) was established with the assistance of USAID in 1993, although budgetary constraints meant that support from this source was to be withdrawn in April 1996. The UNIDO NCPC programme agreed to support the Centre for a transitional period of one year, primarily to assist sustainability. The NCPC in Zimbabwe began activities in April 1995. The counterpart institution, IVAM, of the Netherlands, was subcontracted to field the first mission in August 1995. Preparations were initiated for the first in-plant demonstrations.

The Montreal Protocol programme

38. The Montreal Protocol (MP), the landmark Protocol for the phase-out of ozone-depleting substances (ODSs) was adopted at Montreal, Canada, on 16 September 1987, and entered into force on 1 January 1989. The Protocol consists of 20 articles and a comprehensive schedule for phasing out the production, use, exportation and importation of ODSs.

39. The phase-out schedule calls for a 50 per cent reduction of chlorofluorocarbons (CFCs) produced and consumed by the year 2000 as well as control measures on the manufacture of, and trade in, ODSs. A ten-year grace period was granted to developing countries to enable them to find ways of implementing the Protocol. With evidence emerging of a rapid deterioration of the ozone layer, the phase-out schedule for developed countries was subsequently revised to 31 December 1995.

40. The Multilateral Fund of the Montreal Protocol was established to assist developing countries in achieving an early phase-out of ODSs through technology transfer, technical support, training and demonstration activities and conversion of existing production equipment. Multilateral Fund activities are implemented through four agencies: UNEP, UNDP, UNIDO and the World Bank.

41. The UNIDO Montreal Protocol operations team of professionals provides the following services in the proportions called for by each case: preparation of national country programmes; identification of state-of-the-art non-ODS production technology; technical assistance to industry and Government; transfer of clean ODS technology; training and education; assistance with investment projects from identification and appraisal through to follow-up consultations after project completion; policy advice on ODS reduction strategies; economic and financial analysis of the costs and benefits of different ODS phase-out technologies; institution building; assisting the funding process.

42. During 1995, implementation began on three Montreal Protocol projects with a combined budget of \$5,976,420. Implementation continued in 1995 of six further projects with a combined budget of \$23,036,963. Three projects were completed during 1995 with a combined budget of \$1,924,724. Nearly all of the projects initiated, ongoing or completed during 1995 involved investments.

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

Budget: \$106,000

Funded by: UNDP, under a TSS-1 arrangement

43. After analysing 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 environmental quality.

Completed projects**Industry-related environmental issues, including regulations, management and planning - United Arab Emirates**

Budget: \$48,000

Funded by: UNDP, under a TSS-1 arrangement

44. This project provided the first comprehensive overview of industrial pollution in the United Arab Emirates and the existing emirate/federal institutional capacity to respond to pollution. The study prepared a comprehensive programme of activities and services to be provided by the Federal Environmental Agency

(established only in 1993) for individual emirates in order to facilitate proper management of industrial environmental problems.

Study of cleaner production techniques and technologies covering clusters of small-scale industries in selected areas - India⁴

Budget: \$298,107

Funded by: UNDP

45. Waste reduction demonstration projects were initiated in four pulp and paper mills, four textile dyeing and finishing mills and four pesticide formulation plants. During the project's 16 month life-span, waste minimization teams implemented over 200 pollution prevention options. Collectively, the 12 companies involved in the project spent the equivalent of \$300,000 on implementing the measures suggested, but saved around \$3,000,000 in raw materials and waste-water treatment costs. The pulp and paper and textile mills cut their organic pollutant load by about 30 per cent, and the pesticide formulation plants reduced significantly their toxic air emissions. UNIDO also arranged for the production of an information package on the project, which includes a report of the experiences gained, guidelines for waste minimization in small-scale industries and a video film on the Indian experience entitled "From waste to profit".

Advisory assistance on reducing air pollution caused by a copper refinery at Shanghai, China

Budget: \$60,000

Funded by: UNDP

46. Prior to the project the Shanghai Smelter was adversely affecting the health both of workers and of the general public owing to emissions of lead, lead oxide, carbon monoxide, particulates and volatile organic matter. UNIDO advised on short- and long-term measures to reduce air pollution from the plant. Recommendations were also made on improving industrial hygiene and the safety of the workforce. Through study tours to Finland, Italy, Switzerland and the United States of America, two senior experts from the Shanghai Smelter acquired knowledge and experience of the cleaner production methods in copper refining used abroad.

UNIDO/World Bank Industrial Pollution Guidelines

Budget: \$177,000

Funded by: The Government of Norway

47. This project resulted in the preparation of ten pollution prevention and abatement guidelines - each of approximately 25 pages in length - for the following industrial subsectors: iron and steel, copper and nickel,

aluminum, pulp and paper, cane sugar, electronics, pesticide formulation, pesticide synthesis, fertilizers, and petroleum refining. These guidelines will facilitate the presentation to industry of state-of-the-art information on pollution prevention and abatement, while helping to strengthen the capacity of the agencies involved to integrate environmental considerations into the design of technical cooperation projects. An important contribution to this project was also received from UNEP.

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

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

UNIDO's high-impact programme 2 - Global network for the promotion of competitive and innovative small and medium industrial enterprises

49. During 1995, the design and promotion of this high impact programme was initiated. The programme aims to develop a sustainable national capacity in the countries assisted to provide services and information needed to improve the competitiveness of the SME sector. The programme covers 20 countries from all the developing regions. In addition to the provision of training, information, networking services and other forms of technical cooperation, UNIDO will concentrate in this programme on developing innovative strategies and approaches for addressing the requirements of SME development.

SME programme for Central Europe

Budget: \$126,250

Funded by: UNIDO regular budget

50. This project involves a comparative analysis of current SME strategies, policies and programmes undertaken in six Central European Initiative (CEI)⁵ countries: the Czech Republic, Hungary, Poland, Romania, Slovakia and Slovenia. The purpose of the study is, *inter alia*, to provide a framework for complementary and collaborative research and support. Recommendations have also been made with respect to monitoring of the SME sector and its needs, benchmarking of progress against European Union norms, and improved channels of communication between governments and associations representing SMEs at regional, national and local levels. Proposals were also developed for possible follow-up activities, including workshops on key issues highlighted by survey work. The results of the study will be published during 1996.

Small and medium industry development and informal sector promotion - Lesotho

Budget: \$805,406

Funded by: UNDP

51. This project is a part of the UNDP/Government of Lesotho programme on employment promotion and aims at increasing non-farm income and employment opportunities throughout the country. The focus of activities during 1995 has been on capacity-building for public and private institutions, including NGOs, to allow these to play a dynamic role in employment creation in the private sector. A broad range of activities is being undertaken to this end, including database creation, policy advice, industry surveys and workshops.

Assessment of the potentials for development of SME clusters in selected industrial subsectors in Costa Rica, El Salvador and Guatemala

Budget: \$43,406

Funded by: UNIDO regular budget

52. This project aims to identify and assess the required conditions and the actions to be taken for the design and implementation of national and regional strategies for the organization and development of sectoral clusters of SMEs. Three seminars have been held on this subject, one in each country involved. The seminars were preceded by a survey and review in each country of the SME sector, the ongoing SME programmes and the institutions and associations addressing SME

⁵ The Central European Initiative was established in 1989. Membership currently comprises Austria, Bosnia and Herzegovina, Croatia, Czech Republic, Hungary, Italy, Poland, Romania, Slovakia, Slovenia, and The former Yugoslav Republic of Macedonia.

requirements. The findings of these surveys were analysed during the seminars with representatives of local associations of entrepreneurs, national authorities and SME institutions. The objectives-oriented project planning (OOPP) methodology and the experience of a trained OOPP moderator were employed in these seminars. In this participatory manner the elaboration of workplans was begun.

Ongoing projects

Programme of support to the development of small and medium enterprises - Madagascar

Budget: \$1,193,825

Funded by: UNDP

53. The project focuses on fostering cooperation between firms in the main industrial subsectors while strengthening the Export Processing Zone Development Authority and other counterpart institutions. The project has established a grouping of producers of essential oils, and supported the formation of enterprise associations in the wood, metal working and food subsectors. Through the organization of seminars and support to the creation of common services the project is fostering cooperation among firms with a view to raising productivity. The project reaches a large number of small and medium enterprises and it is expected that activities will continue as part of the new UNDP-led private sector development programme.

Regional programme for the development of industrial subcontracting in Latin America⁶

Budget: \$1,989,077

Funded by: The Governments of Italy and Switzerland (each supporting one project under this programme)

54. The objective of this programme, which comprises two projects, is to establish a regional system of industrial subcontracting covering the following countries: Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Cuba, Ecuador, Guatemala, Mexico, Paraguay, Peru, Uruguay and Venezuela. To do this, the project has undertaken the following principal activities: (a) the design and development of standard technical, economic, commercial, informatics and legal instruments necessary for the establishment of a regional system of subcontracting; (b) giving assistance to national counterpart institutions in establishing subcontracting and partnership exchanges (SPX); and (c) setting up a regional network of computerized SPXs.

55. To date, 28 SPXs have been established and industrial surveys on subcontracting capacities have been

⁶ Includes the project "Expansion of the regional programme for the development of subcontracting in Latin America to five additional countries."

completed. Data collected early in the programme indicated that an average of 80 per cent of firms registered with the SPXs had been offered subcontracting work. The UNIDOSS software developed by UNIDO has been transferred to all 14 participating countries. Regional training seminars have been organized, as has a biannual Latin American subcontracting exhibition - Subcontrata Latinoamericana - eight sessions of which have been held so far, with two of these held during 1995 (in Chile and Paraguay).

56. Surveys have been undertaken on the legal, tax and customs problems encountered in international subcontracting operations, and model contracts for subcontracting agreements have been drafted. An analysis has likewise been conducted of legislative measures and incentives to encourage international subcontracting. A Regional Coordinating Committee has been established that is responsible for coordination among countries, decision-making on regional activities and implementation of selected activities. The 14 national delegations to the programme also adopted the UNIDO proposal for the creation of a "Latin American Association of Subcontracting Exchanges" (ALABSUB). ALABSUB is presently acting as a regional counterpart association to the AL-INVEST programme, funded by the European Union, for the promotion of industrial cooperation between Latin American and European enterprises.

Comparative study of the promotional framework for the development of small-scale industry in India and selected South-East Asian countries with special emphasis on industrial subcontracting⁷

Budget: \$160,000
Funded by: UNDP, under a TSS-1 arrangement

57. Liberalization of the Indian economy has led to rapid growth in a number of industrial subsectors. In this process, large enterprises rely increasingly on external sources for components and sub-assemblies. Firms are thus able to concentrate on their core competencies and thereby increase productivity and competitiveness. This project aims to assist the Government of India in reviewing the policy and institutional framework for subcontracting as well as actual business practices. In so doing, UNIDO commissioned a series of studies on this form of industrial partnership, drawing lessons from the experiences of other countries, developing and developed (including Malaysia, Republic of Korea, Japan, countries of the European Union and the United States of America). Recommendations were formulated on the following subjects: the SME support framework; financial and fiscal issues; the respective roles of the private and public sectors; subcontracting promotion centres; codes of conduct and standardized

⁷ The project was operationally completed, although project administration continued into 1996.

subcontracting agreements. A workshop on industrial subcontracting in June 1996 was to follow preparation of the study material.

4. Innovation, productivity and quality for international competitiveness

58. 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 resource development, information and data systems, venture capital financing, as well as metrology, standardization and testing, management and engineering consulting.

New projects

UNIDO's high-impact programme 3 - The UNIDO quality programme: An application to the food-processing sector of seven sub-Saharan African countries

59. During 1995 work began on the design of this high-impact programme. Prevention of food contamination and infection is key to food safety, and is directly linked to the quality of manufactured food products and the monitoring of quality standards. Through the introduction of a total quality management system and the building up of capacity to manage the system and monitor quality, the basis for an effective food safety programme will be established. The programme should rapidly bring about measurable improvements in food safety.

60. The programme will be implemented in Ethiopia, Kenya, Malawi, Mozambique, Uganda, Zambia and Zimbabwe. Selected counterpart bodies, together with UNIDO, will survey the local industries to identify key priorities. Assistance will then be provided using national experts from local institutions supported by international specialists. Intensive training will be given at the participating enterprises and at their suppliers. Specialized UNIDO staff will assist the enterprises in fields related mainly to food safety standards and management techniques for continuous improvement. In addition, the programme will ensure the presence in each country of testing facilities through the procurement of critical equipment and training of technicians and inspectors.

UNIDO's high-impact programme 6 - The UNIDO seal for accreditation schemes - Establishment of an international scheme of mutual recognition agreements

61. The publication of the ISO 9000 series in 1987 marked a new era of international harmonization in industrial quality management. The result of the implementation of ISO 9000 has been an improvement of quality capabilities in a large number of commercial, mainly industrial, organizations. The critical issue today, however, is to ensure that certification schemes (and certificates) are compatible and mutually accepted across frontiers, thus eventually eliminating potential technical barriers to trade.

62. Within many developing countries there are local organizations that issue a wide range of certificates. However, to date, the acceptance among countries of the registration results of other countries has been difficult. The process of setting up recognition schemes has been slow among European countries and stagnant in the rest of the world. The result is a limitation on trade, mainly for those countries not in a position to develop mutual recognition agreements at regional and international levels and thus having certificates without international recognition. This programme would take a major step towards rectifying the situation described above by establishing an international scheme of mutual recognition agreements (MRAs) while assisting in the negotiation and implementation of MRAs. The programme's target beneficiaries would be accreditation bodies and enterprises in developing countries. Through MRAs, accreditation bodies would have a common standards system, thus fostering trade, as well as industrial partnerships and subcontracting arrangements among enterprises of the countries concerned.

Support programme for privatization in Yemen

Budget: \$966,350
Funded by: UNDP

63. The privatization of public enterprises is a major component of economic reforms in Yemen. To assist this process, the current project - which is designed to complement activities of the World Bank - will undertake the following: the design of a privatization and restructuring strategy for the implementation of a broad reform programme in public enterprises; training of public officials and of managers from selected enterprises; the design of measures to address social implications of privatization, including retraining and reskilling programmes and small-scale enterprise development; and support in the strengthening of an institutional framework capable of directing and implementing privatization and enterprise restructuring in the future. During 1995, counterparts were identified and sent to Vienna and the United States of America for briefing and training. Counterparts also visited Slovakia to explore the privatization process there, the method of

which bears directly on the Yemeni case (a voucher system with emphasis on management buyouts).

Immediate assistance to the Institute for Tropical Technology in Viet Nam in the field of sea corrosion

Budget: \$81,000
Funded by: UNDP

64. The project is designed to assist the Institute for Tropical Technology in Viet Nam (ITTV) in resolving two main issues: (a) difficulties experienced by ITTV in providing consultancy services in corrosion prevention to a rapidly modernizing industry, and (b) the need to improve that institute's utilization of existing equipment. The project will provide expert services and organize a twinning arrangement to enhance ITTV's consulting operations. The operation of the laboratories will be improved by upgrading selected equipment and providing expert services in the area of calibration.

Ongoing projects

Establishing capabilities of the National Measurement and Calibration Laboratory - Saudi Arabia

Budget: \$1,228,393
Funded by: UNDP

65. This project is the fourth phase of a longer-term programme. To date, the National Measurement and Calibration Laboratory was established with fully operational facilities in eight selected areas of metrology. The Laboratory provides services to industry in Saudi Arabia and the other Gulf Cooperation Council (GCC) countries (Bahrain, Kuwait, Oman, Qatar and United Arab Emirates). The Laboratory will function as part of the Standardization and Metrology Organization for the GCC countries. The Laboratory affords all the facilities required for application of the ISO 9000 series of standards through the provision of calibration services.

Application of modern technologies and management systems to improve SENAI/CETIQT and the Brazilian textile and apparel industry

Budget: \$2,051,198
Funded by: Self-financed

66. The project has undertaken a broad range of activities to strengthen the SENAI/CETIQT (Serviço Nacional de Aprendizagem Industrial/Centro de Tecnologia da Indústria Química e Têxtil) International Technical Assistance Unit (ITAU). This will allow SENAI/CETIQT to provide high-level training and technical cooperation to the Brazilian textile and apparel industry as regards textile computer applications (CAD/CAM, CCM, dyehouse automation, process optimization, etc.) as well as in total quality systems. UNIDO staff have been directly involved in transferring know-how to the assisted institutions.

Development and promotion of a quality awareness campaign in Hungary

Budget: \$115,000

Funded by: UNDP

67. The project aims to strengthen the Hungarian Quality Development Centre for Industry and Trade to allow it to assist the Ministry of Trade and Industry in developing and implementing a quality awareness campaign. To facilitate this campaign, several training brochures, case studies and short video films were prepared. Senior managers of the companies in which demonstrations were undertaken considered that the application of the UNIDO quality management system had significantly improved their production operations.

Completed projects**Support to the Privatization Programme - Peru (phases I and II)⁸**

Budget: \$450,000

Funded by: The Government of Japan

68. The project provided assistance to COPRI - the privatization agency that operates under the Ministry of Industry, Trade, Tourism and Integration - as well as COPRI's technical committees. The first phase of the project addressed privatization issues surrounding the divestment of one large enterprise. The Government of Peru requested the continuation of this work for other firms. Overall, the objectives of the two phases of the project were: to assist the privatization of six state-owned enterprises; support the Government to determine the modalities of privatization and to prepare a privatization workplan; and make recommendations on specific policy issues. The project has been an example of the advantages to be had in the marriage of UNIDO technical expertise (such as in chemicals and pulp and paper in the first phase of the project) with expertise in the privatization field. Advice was also given on such topics as: the establishment of an entrepreneurship development programme; debt-for-asset swaps with a view to enhancing investor interest; environmental issues; and public awareness programmes.

Technology transfer for the design, development and manufacture of dies and moulds - Viet Nam

Budget: \$1,710,784

Funded by: UNDP

69. The making of dies and moulds is a fundamental aspect of industrial development, with the skills and capabilities of this industry being reflected directly in the quality of final products in a range of subsectors. In Viet Nam, die and mould making suffered numerous problems. Design deficiencies gave rise to raw material

⁸ The project was operationally completed, although project administration continued into 1996.

wastage while deficient production processes caused the dies and moulds to have short service lives. At the heart of these problems were the lack of die and mould design skills and technology, a general lack of know-how in manufacturing and the lack of precision machining facilities. In response, UNIDO equipped the Institute for Machine Tools and Instruments (IMI) with precision equipment unique in the country. IMI acts as a service institution, helping the propagation, *inter alia*, of die and mould technologies throughout industry. IMI aims to recover all operational expenses through contract fees and service charges. In addition to equipping IMI, UNIDO fielded a number of consultants and specialists, and a highly experienced Chief Technical Adviser, to give advice in such fields as metal product die design, plastics mould design, computer numerically controlled (CNC) machine programming and operating, surface treatment and quality control. A total of 28 engineers from IMI undertook study tours to leading institutions abroad. A project committee was established to research market trends and quality complaints related to dies and moulds in both the consumer goods and engineering sectors. The results of this research were incorporated in IMI work plans and policy decisions. The efficacy of this institutional arrangement was exemplified in the essential links established with manufacturers of metal and plastic parts, which were competing with imported items of lower price and higher quality. Consequently, many of the assisted firms were able to raise productivity, reduce wastage of raw materials and respond rapidly to changing market demands.

High-level advisory services for the installation of an official industrial quality control laboratory for essential oils - Comoros

Budget: \$47,915

Funded by: UNDP

70. Advice was provided for strengthening the quality control and certification system for essential oils. Staff from the counterpart organization were trained in the development of standard specifications and the analysis of industrial samples for certification. A major export item for the Comoros, ylang ylang oil, which was fetching a low price due to the lack of quality certification, can now be quality tested and certified.

Regional programme for industrial modernization of the capital goods sector in Latin America

Budget: \$3,259,574

Funded by: The Governments of Italy, France, Japan, Switzerland and Venezuela

71. Under this project over 2,000 managers and technicians, mainly from small-scale firms, received training through seminars and workshops, while some 140 executives and senior managers undertook study tours to the donor countries involved. The countries covered by the project were: Argentina, Bolivia, Brazil,

Chile, Colombia, Cuba, Ecuador, Mexico, Peru and Venezuela. Assistance in capacity-building was provided to individual companies on a cost-sharing basis. In addition, research and development institutions were identified in each participating country that could offer further training in aspects of industrial modernization, product development, low-cost automation, manufacturing design, factory layout and related issues. The programme catered to individual enterprises in the capital goods sector through representative bodies such as chambers of commerce, professional associations and federations of industry. Among the methodologies and tools developed were two computer software packages: BEST - Business Environment Strategic Toolkit, and FIT - Financial Improvement Toolkit. Both packages were pilot-tested by the participating firms and adapted to reflect the experiences of the user groups. BEST and FIT are copyrighted UNIDO products disseminated in conjunction with a training-of-trainers workshop.

5. Industrial information, investment and technology promotion

72. The effective 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**Capacity building programme in technology transfer negotiation**

Budget: \$75,000

Funded by: UNIDO regular budget

73. This project was aimed to complete the preparation of the UNIDO Manual on Technology Transfer Negotiations. Previous work on the Manual was supported by a number of donors. The Manual is a normative and didactic package covering the full range of subjects of concern to technology negotiators, users and policy-makers in Governments and companies. The Manual contains guidelines and principles - of a legal, technical and economic nature - of use to recipients and

suppliers of technology. The contents of the Manual have been validated by representatives of technology user and supplier groups, including Licensing Executive Society International.

Third generation of the UNIDO Computer Model for Feasibility Analysis and Reporting (COMFAR)

Budget: \$572,000

Funded by: Self-financed from the COMFAR Fund

74. Drawing on the experiences of more than 1,000 users in 126 countries, a new generation of COMFAR was developed. The new COMFAR III Expert for Windows permits financial analysis of industrial and non-industrial investment projects, be these in new plants, in the expansion or rehabilitation of existing plants, or in joint ventures. The English language version of this third generation of COMFAR was officially released in September 1995. By the end of 1995, 394 licences had been acquired by users in the public and private sectors, 60 per cent of these being from developing or least developed countries. The new version of COMFAR has been well received and preparatory work was completed in 1995 for translations into French and Spanish. Programme development, user administration and marketing activities are fully financed from the sale of licences.

Investment promotion programme including an investment forum for selected PTA (COMESA) countries

Budget: \$221,500

Funded by: The Industrial Development Decade for Africa⁹

75. In collaboration with the Secretariat of the Common Market for Eastern and Southern Africa (COMESA) and the Uganda Investment Authority (UIA) UNIDO organized an Investors' Forum for Eritrea, Ethiopia, Kenya and Uganda. The Forum was held at Kampala, Uganda, in November 1995 and attracted 112 potential partners from 31 countries. A total of 46 letters of intent or other business agreements were signed, with a total value of some \$292 million. The programme also brought together representatives of national investment agencies, thus facilitating the exchange of experiences in this field. Thirteen project agreements were concluded for Uganda, with UIA now seeking UNIDO assistance in the preparation of pre-investment studies. It was considered that such investment forums, among small clusters of countries with common borders, are a valuable means of facilitating regional economic integration.

⁹ This project is an IDDA supplementary activity and for this reason does not appear in addendum 2 of the Annual Report, 1995.

Ongoing projects**Intechmart, Technology transfer opportunities for small- and medium-scale industries - New Delhi, India**

Budget: \$244,000

Funded by: The Government of India

76. A total of 150 foreign companies from 37 countries as well as 170 companies from India were represented at the meeting. Altogether more than 2,000 business contacts were established, from which the organizers identified 51 cases of detailed negotiations, 15 of which relate to joint ventures and 36 of which concern technology agreements. A follow-up survey conducted in September 1995 confirmed that negotiations had reached an advanced stage, or investments had been realized, for technology and investment business worth some \$30 million.

Establishment of an industrial technology and market information network (ITMIN) - Sri LankaBudget: \$1,287,000¹⁰

Funded by: UNDP and a consortium of local public and private organizations

77. The project aims to establish a comprehensive, sustainable and self-sufficient network that will ensure that users have easy access to both local and international information and services. The project entails a number of novel features. ITMIN was established as a private company formed by eight leading public institutions and private enterprises already engaged in providing business services and information. These organizations thus have a genuine vested interest in the success of the new venture. In addition, the management of the company was subcontracted to the foremost information broker in Sri Lanka, Infomart. The Network is expected to be making a profit within one or two years. During that time, it will increase the supply of information on export opportunities, open doors to investment in Sri Lankan industry, raise awareness of business opportunities for small- and medium-sized firms, and provide information throughout the world on aspects of the Sri Lankan market. Small- and medium-sized firms will also be shown how to access information of use to their operations, and by subscribing to the network, users will gain entry to UNIDO industrial databases as well as to business sources on the Internet.

Technical assistance programme on contracting build-operate-transfer (BOT) projects in the power sector - EcuadorBudget: \$91,557¹¹

Funded by: UNDP and UNIDO, regular budget

78. This programme aims to enable the Ecuadorian Electrification Institute (INECEL) and the Ministry of Energy and Mining to establish the policy, legal and financial framework for the promotion of BOT projects in the power sector. The Ecuadorian Government will implement a new hydroelectric power plant, with a maximum output of 230 MW, at San Francisco in the basin of the Pastaza river. In order to involve the foreign and national private sector in the implementation of this project, the Government, through INECEL, prepared a regulatory framework for BOT projects in the power sector. UNIDO assisted in assessing the applicability of the BOT modality for this investment project. In a second phase, UNIDO provided international legal expertise. UNIDO has also prepared general regulations on public bidding procedures for concessions relating to power plants, prepared a standard BOT project agreement for power plant projects, assisted preparation of bidding documents for the San Francisco project, and defined a long-term assistance programme for Ecuador in the BOT area. By the end of 1995 basic documentation for initiating the bidding process had been finalized.

Completed projects**Investors Forum for Ghana**

Budget: \$120,000

Funded by: The Industrial Development Decade for Africa¹²

79. The European Union Centre for the Development of Industry worked with UNIDO and the Ghana Investment Promotion Centre in organizing the Forum. Prior to the Forum, UNIDO arranged training for Ghanaian entrepreneurs to improve skills in project preparation and joint venture negotiation. The Forum attracted participants from 18 countries. Two joint venture contracts were negotiated worth \$9 million in airport equipment and lumber products. A total of 48 letters of intent were signed with a total value of some \$103 million. These opportunities covered a variety of subsectors including fisheries, textiles and palm and copra oil.

¹¹ This figure is the sum of the budgets of five small projects that comprise this programme. Of this sum, \$3,345 are from the UNIDO regular budget.

¹² This project is an IDDA supplementary activity and for this reason does not appear in addendum 2 of the Annual Report, 1995.

Local production of health system inputs related to HIV/AIDS

Budget: \$101,500

Funded by: UNDP, under a TSS-1 arrangement

80. The project involved an analysis of market demand for products used in the diagnosis, treatment and prevention of AIDS and AIDS-related diseases in sub-Saharan Africa, as well as the identification of opportunities for investment in local production of these goods in the quantities and at the prices required. The countries covered by the study were Cameroon, Central African Republic, Gabon, Kenya, Uganda and the United Republic of Tanzania.

Feasibility study on the production of disposable syringes and needles in Viet Nam

Budget: \$37,040

Funded by: The OPEC Fund

81. After having been approached by the Vietnamese Government to provide a loan for financing an investment in disposable syringes and needles, the OPEC Fund requested that UNIDO prepare a feasibility study. The study was implemented within three months of signature of the Technical Support Services Agreement. The analysis showed that the investment project was feasible on technical, financial and economic criteria. The study likewise provided comprehensive recommendations on the most efficient ways of implementing the investment project. Based on these findings, some \$4.4 million were raised to finance the investment, from the OPEC Fund and from a local contribution.

6. Rural industrial development

82. 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 centers.

New projects**Promotion and development of small-scale industries in the Cabo Delgado, Niassa and Nampula provinces - Mozambique**

Budget: \$749,449

Funded by: The Governments of Norway, Sweden and the Netherlands

83. In cooperation with the National Institute for the Development of Local Industries, the project has fostered business skills among 752 demobilized soldiers, women and other potential and existing entrepreneurs. Already operating enterprises have been assisted in improving their production processes and advice has been given on the preparation of business plans. The project has focused on 15 selected poor rural districts in Cabo Delgado, Niassa and Nampula provinces. With Provincial Authorities, the project has also played a catalytic role in the decentralization of public administration.

Rural income opportunities - Thailand

Budget: \$273,000

Funded by: UNDP

84. The project is part of a joint UNDP/ILO/FAO/UNIDO effort to support a government programme to improve the income opportunities of the rural poor in the northeastern region of Thailand, a focus of rural poverty. UNIDO has developed a programme to improve the marketing and design of handicrafts produced by some 1,000 families as well as a programme to promote a village-based system of subcontracting that aims to improve incomes among the families involved by up to 40 per cent.

Emergency assistance to the "KLAS" complex for cereal processing at Sarajevo and to the cereal-processing industry of Bosnia and Herzegovina

Budget: \$167,467

Funded by: The Government of Japan

85. With the objective of improving the supply of basic foodstuffs, and within the framework of a coordinated food relief emergency programme, this project is designed to contribute to the reconstruction and diversification of the KLAS complex (the largest producer of bread in Sarajevo) as well as to the rehabilitation of the cereal-processing industry in other regions of Bosnia and Herzegovina. The project also involves a feasibility study on the installation of a frozen dough-processing line at the central bakery of the KLAS complex.

¹⁰ Of which \$440,000 were funded by UNDP under two projects (one of which was a TSS-2 project which, as such, is not reported on in addendum 2 of the Annual Report, 1995).

Ongoing projects**Strengthening the handmade paper industry in India**

Budget: \$704,999
Funded by: UNDP

86. The project has established a testing laboratory for pulp and paper as well as a demonstration paper-making plant at the Kumarappa National Handmade Paper Institute. The capabilities of this Institute are also being enhanced to provide training, consultancy and information services to the Indian handmade paper industry. The Institute is now providing consultancy services to village-level operators as well as to entrepreneurs seeking to enter this business. The project has also given advice on how to produce improved paper and board for both domestic and export markets. The project will study the demand for handmade paper and board in India and abroad to determine the grades of paper and board on which the handmade paper industry should concentrate. Workshops were organized in 1995 to facilitate the dissemination of information. The export performance of this subsector has improved markedly, with many units beginning to export for the first time. Many units have experienced significant increases in output and profitability. The Institute is also working on the evaluation of various indigenous fibres and pulping processes for possible adoption by producers of handmade paper. A form of paper developed at the laboratory scale shows great export potential and is now being tested in a pilot plant. A range of training courses is also under preparation at the Institute for entrepreneurs, operators, consultants, and specialized technicians.

Timber frame buildings for emergency shelter

Budget: \$707,965¹³
Funded by: The Government of Japan

87. The project was designed to address the widespread destruction of buildings caused by conflict in Croatia. The project had two main aims: (a) to contribute directly to the alleviation of an acute shortage of accommodation, and (b) to transfer an appropriate construction technology, timber frame building (TFB), to Croatian companies. The transfer of this technology was intended to permit more rapid (and possibly more affordable) construction of buildings than with traditional building methods. The project was thus a departure from more usual forms of refugee assistance in that it sought both to provide emergency shelter and assist the re-initiation of economic growth and social stabilization. Of the six community buildings scheduled to be constructed, work could proceed on only three during 1995 owing largely to changes in the scale and location of conflict areas and

¹³ A previous project of the same title had been financed by the Government of Italy. The combined value of the two projects is \$1,327,434.

a shortfall in municipality funds earmarked for construction. Follow-up work has sought to promote the TFB technique amongst construction firms and municipalities.

Completed projects**Alternative development: rehabilitation of the Milka Plant - Bolivia**

Budget: \$1,433,424¹⁴
Funded by: UNDCP

88. The project achieved its objective of containing and reducing production of drug-related crops by offering an alternative source of income, in this case from milk production. This was achieved through rehabilitation of the Milka factory. As a consequence of the project, sales from the plant grew from the equivalent of \$100,000 to around \$1,000,000. Around 800 former coca growers are now producing milk. This project was implemented in conjunction with the larger project Agro-industrial development in Chapare - also funded by UNDCP and completed in 1995 - which addressed the rehabilitation of eleven agro-industrial plants. Operational losses at these plants were reduced, with detailed business plans prepared and legal frameworks drawn up for the creation of agro-industrial firms in which the farmers could participate as shareholders. A follow-up to these projects is being actively pursued.

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

89. This is the only thematic priority with a geographical 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 that lies 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**UNIDO's high-impact programme 5 - A UNIDO programme for women entrepreneurship**

90. Design work was undertaken during 1995 on this high-impact programme. Frequently, women

¹⁴ The project was operationally completed, although project administration continued into 1996.

entrepreneurs face discriminatory attitudes that are often institutionalized in the policy and legal framework. Concerted efforts are needed to enable women to make better economic choices and to transform their businesses into competitive enterprises, generating income and employment opportunities through improved production. Accordingly, this programme is aimed at: (a) closing the gender gaps and redressing gender-biased policies and practices that negatively affect women entrepreneurs, and (b) creating an enabling environment for the growth of women's industrial enterprises.

91. Specific activities to be undertaken during implementation of the programme will include: advice on the formulation of gender-sensitive policies; subsector-specific technical and management training for women entrepreneurs; workshops to raise gender awareness amongst policy-makers, government officials and staff of training bodies, chambers of commerce, banks and other institutions; and the preparation of databases on women entrepreneurship for networking purposes and for the use of women entrepreneurs. The programme will be implemented in Burkina Faso, Côte d'Ivoire, Eritrea, Ethiopia, Kenya, Madagascar, Malawi, Morocco, Senegal, United Republic of Tanzania and Zimbabwe.

Assistance to enhance the technical and entrepreneurial skills of businesswomen in textile and related products - United Republic of Tanzania

Budget: \$962,400
Funded by: The Government of Switzerland

92. The project aims to upgrade the technical and business skills of female entrepreneurs producing textiles and related products. Improvements to textiles, garments and related products will be made in terms of design, quality and the reduction of production costs. The socio-economic status of the women involved will be advanced through formal and practical training, while monitoring and advice will be given throughout the assisted production units. A survey of training needs has been completed and training begun, with over 50 trainees graduating thus far. A study tour for trainers has been undertaken and databases are being developed on the business profiles of the trainees.

Ongoing projects**National Africa leather and footwear industry scheme - Ethiopia**

Budget: \$989,400¹⁵
Funded by: UNDP and the Government of Switzerland

93. The project has continued to promote a range of activities aimed at hides and skins improvement, including the introduction of a quality-grading scheme

¹⁵ Combines two projects of the same title.

among tanners, the introduction of effluent treatment equipment to tanneries and the acquisition of essential equipment (under a revolving fund arrangement) by the footwear and leather goods industry. Assistance has also been given to the footwear and leather goods industry in marketing.

Manufacturing of agricultural tools, implements and farm machinery - Uganda

Budget: \$3,807,518
Funded by: UNDP and the United Nations Capital Development Fund

94. The project aims to create a manufacturing capability in Uganda that will be able to design, produce and sell basic agricultural implements and machinery. This has been achieved through the production of the company SAIMMCO, based at Soroti. Production at the company began in March 1995. Training was given to workers, engineers and managers. The company also runs a job shop, thereby earning income from the provision of engineering repair and maintenance services. The company will be privatized in early 1997, until which time it will be operated by project and local staff.

Promotion and development of agro-related metalworking industries in least developed countries (Phase 2) - regional Asia

Budget: \$529,000
Funded by: The Government of Germany¹⁶

95. This project is being implemented in Bangladesh, Bhutan, Cambodia, Lao People's Democratic Republic, Myanmar, Nepal, Solomon Islands and Western Samoa. The project aims to strengthen national focal points in those venues to enable them to provide technical information and advice to enterprises in agro-related metalworking industries; to develop and promote machinery prototypes for the participating countries; to initiate the establishment of a database on raw materials demand and supply for agro-related metalworking in five countries; to upgrade the skills of blacksmith trainers in all participating countries; to promote the production of small-scale machinery for agro-based food processing industries in six of the participating countries; and to develop and promote food-processing equipment prototypes.

96. The project has sought to transfer technologies through the provision of prototypes, drawings, publications, and expert services. National experts have been trained in the use of a raw materials database. Workshops for blacksmith trainers have been held in Bhutan, Myanmar, Nepal and Western Samoa. Counterparts also attended the 4th Agricultural Machinery Exhibition and Symposium, held in Thailand

¹⁶ The first phase of this project was funded by the Government of Italy.

in November 1995. In the implementation of this project, UNIDO has worked in close cooperation with the ESCAP Regional Network for Agricultural Machinery.

Development of 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

97. In many African countries, seed dressing applicators are used only rarely, although their use can augment agricultural output and help to diminish post-harvest losses of seed. Under this project, a number of prototype machines were fabricated at engineering institutes in the United Republic of Tanzania and Zambia. In the process, training was given to fabricators of the machines as well as to staff of agricultural institutions dealing with the use of seed applicators. Training was also provided to some 50 users of the applicators. Preparations were made in 1995 for a seminar to be held at Arusha in 1996, which would cover all aspects of applicator development, manufacture and use.

Manufacture of low-cost rural transport devices - Zimbabwe

Budget: \$392,918

Funded by: UNDP

98. The project introduced and disseminated wheel-bending technology to increase the supply of good-quality low-cost transportation in Zimbabwe's communal lands, thereby helping to alleviate the severe transport constraints facing rural households. One of the main bottlenecks on rural transport was the scarcity and high cost of suitable wheels, bearings and axle systems. The project has also assisted the development of facilities for the maintenance of rural transport. Following surveys of enterprises suitable for participation in training workshops, five such workshops were staged during 1995 (a total of 55 workshops were arranged over the course of the project). Trainees will be able to cope with shortages of steel and bearing systems by working with substitutes or by using alternative channels of procurement. The capabilities in this field of the Institute of Agricultural Engineering were also upgraded, primarily through training. The project has resulted in an increased supply of carts. The carts themselves are of higher quality (being lighter, stronger and less costly), and the development of other low-cost transport devices has given villagers greater choice in terms of product and price range.

Completed projects

Assistance to the COMESA (Common Market for Eastern and Southern Africa) Leather and Leather Products Institute

Budget: \$94,000

Funded by: The Industrial Development Decade for Africa

99. The aim of the project was to train 12 trainers of trainers in key branches of leather technology, namely tanning, machine maintenance and pollution control. The trainees came from institutes in Ethiopia, Kenya, Sudan, and Zimbabwe. In addition to the training itself, the project produced and distributed a manual for training of trainers in leather technology. Following her attendance at the course one of the trainers then conducted a four-week training programme for 10 Ethiopian women.

Rehabilitation and establishment of finished articles manufacture¹⁷

Budget: \$145,000

Funded by: The Industrial Development Decade for Africa

100. The project established a leather soles unit in the Training and Production Centre for the Shoe Industry, which is located in Kenya. A total of 12 trainees from various African countries were trained in the manufacture of leather soles. The established unit provides services on a commercial basis to the entire industry in Kenya, as well as offering training services to the entire region. Prior to the project, Kenyan footwear manufacturers were unable to make their own leather soles, largely due to lack of equipment and relevant training. As a consequence of the project, three of Kenya's five footwear manufacturers were able to participate in overseas trade fairs and win export orders. The remaining firms will also receive assistance.

Demonstration pilot programme for the design, manufacture and testing of hammer mills - regional Africa

Budget: \$332,000

Funded by: The Industrial Development Decade for Africa

101. The prime objective of this project was to transfer technology and strengthen engineering capabilities to permit the design and manufacture of hammer mills in selected African countries. Hammer mills are used throughout Africa for the milling or grinding of cereals such as maize, barley, oats, etc., as well as cassava, rice husks, maize cobs, and other items. A total of 33 engineers and technicians were selected from seven African countries to participate in a ten-week programme

¹⁷ This project is a subcomponent of the Regional Africa Leather and Footwear Industry Scheme (RALFIS).

of training at ARCEDEM (African Regional Centre for Engineering Design and Manufacturing) covering the development, design and manufacture of hammer mills. Machinery samples were produced at ARCEDEM and sent to the participating countries along with technical blueprints. With the assistance of ARCEDEM staff, production demonstrations were also carried out in the participating countries by the trainees.

C. Economic and technical cooperation among developing countries

102. While some of the activities in support of economic and technical cooperation among developing countries (ECDC/TCDC) are referred to under chapter III in their thematic context, the present section provides a consolidated overview of the main projects developed and implemented in 1995. Special emphasis was placed on promoting ECDC/TCDC for the benefit of least developed countries and the African region.

Regional and subregional cooperation and integration

103. During the year, UNIDO approved and started implementation of a large-scale regional demonstration programme in Africa on the design, manufacture and testing of hydraulic presses. The programme reinforces UNIDO support for strengthening the African Regional Centre for Engineering, Design and Manufacturing. The Centre is one of only a few African regional institutions capable of providing support to the development of engineering industries in African countries. As the major output of this project, a fully developed and tested prototype of a hydraulic press will be used to demonstrate the assembling process, operation and testing of the product. It is envisaged that the development and implementation of this project would lead to the establishment of an African network for agro-related metalworking and engineering industries.

104. UNIDO organized investment forums for Ghana, Zanzibar, and COMESA countries. An important feature of these forums was the promotion of economic cooperation among participating developing countries. To upgrade the national capability in investment promotion and negotiation, UNIDO organized a training programme in Ghana for 130 local participants as well as foreign participants from India, Nigeria and Sierra Leone, with a view to sharing relevant experiences.

105. An expert group meeting on the development of the machine tool industry in the Gulf region was held at Dubai, United Arab Emirates, in November 1995. The meeting reviewed the current status of existing machine tool industries and problems inhibiting development and cooperation in this sector in the Gulf region. As a further step to explore and promote subregional cooperation, UNIDO prepared an opportunity study for the manufacture of machine tools.

106. As a follow-up to the fifth Asia/Pacific metrology programme review meeting, UNIDO, in cooperation with the China National Institute of Metrology, organized a workshop on quality, standardization and metrology, at Beijing, in May 1995. The workshop focused on facilitating information and experience exchange, as well as promoting cooperation among participating countries in establishing mechanisms for mutual recognition of certification.

107. In cooperation with the Jamaica Promotions Corporation, UNIDO arranged a symposium on the implications of the North American Free Trade Agreement (NAFTA) for CARICOM industry. Fourteen Caribbean States participated in the meeting, at which the current state of industry in CARICOM countries and the impact of NAFTA for specific countries and manufacturing branches were reviewed. A number of policy and strategy recommendations to Governments and enterprises were adopted and issues related to intellectual property rights were discussed.

108. The India Intechmart, held in February 1995, had an explicit ECDC element. Investment and technology cooperation among participating countries was promoted through a special financial provision under the project. The year also saw the approval of an integrated investment and technology promotion programme for the United Republic of Tanzania. Through this programme, efforts will be undertaken to promote business agreements through mobilization of potential investors from developing countries, particularly from the Asia and Pacific region.

Sharing experience and information among developing countries

109. The African-TIES programme had a strong ECDC/TCDC dimension. For the 1994-1995 biennium of the programme, "technology for development" was the central theme representing an integrated approach to the issues of technology transfer and development in Africa. The assessment of the programme and recommendations for its future directions were the subject of the sixth African-TIES meeting, held in Mauritius, in November 1995, attended by 15 countries in the African region.

110. To promote and popularize the use of coconut industry waste for energy generation, an international workshop was held in Indonesia to disseminate information on technologies utilizing the waste heat produced by the carbonization of coconut shell during charcoal production. Fifteen participants from Africa, Asia and Latin America attended the workshop.

111. An African regional workshop on the development of industrial policies and strategies was co-sponsored by UNIDO in cooperation with the Korean International Cooperation Agency (see also chapter IV, section G). The workshop provided an important exposure to

African industrial policy-makers on the industrialization approaches and competitiveness-enhancing strategies followed by the Republic of Korea over various development stages. A similar workshop is envisaged to be held in the coming year with participation of countries from Asia, Central and Eastern Europe, and Latin America.

112. In view of the importance of environmental concern within the African region, an expert group meeting on the environmental management in the iron and steel industry was held at Pretoria, South Africa, in July 1995. The South African Rolled Steel Producers Coordinating Council (SARSPCC) and the African Iron and Steel Association (AISA) were actively involved in the organization of the meeting. The meeting provided a forum for exchange of experience and information for reducing and preventing pollution. It also proposed mechanisms for cooperation at the level of enterprises, institutions and Governments of the region.

113. A group training programme on sugar technology was held at Ankara, Turkey, from 11 September to 3 November 1995. Technical personnel from participating countries upgraded their knowledge and skills in sugar production processes and equipment maintenance. To improve its capacity in providing information and support for its members, an information centre was set up at Beirut, Lebanon, at the Secretariat General of the General Union of Chambers of Commerce, Industry and Agriculture for Arab countries.

114. A workshop on essential oils and aroma chemical industries was held for least developed countries at Eskisehir, Turkey, in October 1995. Due to rapid developments in terms of technologies and market requirements, there was an urgent need to update and enhance the know-how of least developed countries to enable them to exploit the potential of their abundant aromatic plants.

D. Human resources development

115. The UNIDO Human Resource Development (HRD) Programme promotes the application of relevant industrial knowledge and improves industrial skills within developing countries, with particular regard to developing entrepreneurship, and to creating capacities for technological management and innovation, and assessing the impact of technological change on socio-economic development. Training is only one aspect of the UNIDO HRD strategy. In 1995, particular attention has been directed to creating a comprehensive framework and integrated approach to HRD in keeping with the 1993 in-depth evaluation of UNIDO's industrial human resources development activities. The primary concern of this approach is to link supply elements (training, education and skills planning) with demand elements (demographic patterns, employment and labour market trends, and changes in the workplace).

HRD and UNIDO's global forum role

116. The reformed HRD concept and programme approaches provided the foundation for position papers for the United Nations World Summit for Social Development at Copenhagen (March 1995), the twelfth session of the Conference of African Ministers of Industry, Gaborone, Botswana (June 1995), the International Conference on Human Resources Development in a Changing World, Melbourne, Australia (July 1995), the Fourth World Conference on Women at Beijing (September 1995), the UNESCO university-industry cooperation conferences held at Accra, Ghana, and Port-of-Spain, Trinidad and Tobago (both in September 1995), and the United Nations General Assembly report on human resources development. The preparatory exercises involved research, documentation, and seminars to foster learning alliances for the sharing of ideas and resources.

117. During the year, UNIDO, assisted by a group of international advisers, developed strategies and tools, including databases, to allow the Organization to effectively respond to countries requesting support in HRD programmes, as well as to guide UNIDO cooperation with other United Nations entities. The HRD programme has been refocused to assist countries with developing and transitional economies in building up a broad spectrum of human resources with required skills and capabilities and in developing a critical base of entrepreneurs, managers, technicians and technology-support professionals. To this end, UNIDO has established a demand-oriented, integrated HRD programme in three primary areas of support: upstream services, including policy advice based on analysis and assessment of requirements; institutional capacity-building and catalytic learning systems, including training, at subsector levels and in specialized fields; and communication networks to simplify coordination and synergy of efforts.

118. To help countries design appropriate policies, strategies and programmes for enhancing industrial skills, requires analysing interactions between the key components of the HRD system for industry. Such analysis facilitates the disaggregation of labour market needs, the identification of constraints and bottlenecks prevailing in the system, the identification of possible options and solutions to eliminate constraints, and the formulation of a programmatic approach to HRD for industry. For this purpose, the HRD-ROM (Human Resources Diagnosis and Reorientation Map) was devised and applied to a preliminary study of the HRD terrain in Latin America and the Caribbean. Guidelines to HRD-ROM have been prepared.

119. The PRIME approach (Promoting Responsible Industrial Merit through Entrepreneurship) serves as a framework for developing strategic tools and technical cooperation programmes. For example, Maximizing

Options Thinking for Visionary Enterprise Reformers (MOVER) was created to offer a theoretical model as well as practical experience to assist entrepreneurs in coping with major challenges and opportunities in the globalized environment by advancing creative, options-oriented problem solving. The model can also be used by policy and decision makers and other change agents, especially in HRD institutions. The PRIME MOVER methodology has been introduced in awareness-building seminars on quality management and quality improvement of industrial products for Asian countries, and in preparation, assessment and management of industrial projects for African countries.

120. Another conceptual model, the Graduate Resources Integration Programme (GRIP), was prepared to facilitate university-industry linkages. Consolidating the complementary comparative advantages of the key partners, GRIP is expected to match educated graduates from institutes of higher education with industrial employment requirements. An agreement was signed to implement the programme initially with the Russian Federation and UNESCO and an operational manual has been prepared for pilot testing with a group of universities in ten countries.

121. To enable UNIDO clients to make an informed selection of learning opportunities in industrial development, UNIDO's traditional hard-copy Guide to Training Opportunities for Industrial Development has been replaced with the interactive electronic database entitled Global Learning Opportunities for Business Education cum Industrial Networking (GLOBE-IN).

Technical cooperation activities

122. Technical cooperation undertaken by UNIDO as regards HRD responds directly to the concerns of Member States as expressed in General Conference resolution GC.5/Res.2 and Board decision IDB.13/Dec.3. Particular emphasis has been placed on local capacity-building relevant to mainstreaming women in industrial development, technology transfer, project appraisal and preparation, restructuring and privatization, investment promotion, environmental protection, energy, and small and medium industries.

Strategy and policy advice

123. UNIDO provided advisory services and preparatory assistance to five African countries, the Caribbean region, and Jordan for developing national and regional HRD programmes; to Indonesia for a distance learning network for industry; and to the Islamic Republic of Iran on mainstreaming women in industrial development. In the Philippines, a World Bank-funded feasibility study was conducted to determine demand-supply and sustainability strategies for private training centres, and for the transfer of responsibility for the National Manpower Youth Commission to the private sector.

124. Five awareness-building seminars for policy makers, senior government officials, entrepreneurs and managers were held in 1995 for Africa, Asia and the Pacific, Latin America and the Caribbean on such topics as project preparation and evaluation, project management, environmental management, technology management and industrial quality. Related HRD programmes took advantage of and strengthened indigenous capacities of local intermediaries such as professional associations, chambers of commerce and non-governmental organizations, as a means of delivering programmes in line with specific local needs.

Capacity-building: Trainers and managers as learning facilitators

125. "Training" refers to the acquisition of specific technical skills while "learning" includes the concept of development as an ongoing process for all actors involved in HRD. Bearing this in mind, intensive efforts were made to rethink traditional group training programmes, owing both to resource constraints and to the reform-driven need to focus on thematic priorities and integrated programmes. Thus, a new set of criteria was developed for implementing such programmes - giving priority to those meeting the requirements for sustainability, impact, national relevance, and the use of in-house expertise and capabilities. At the same time, the total number of trainees in in-plant and other group training programmes of UNIDO increased by 11 per cent over the previous year.

126. The revision of the training programme on industrial planning in Japan led to a new seminar on technology management and industrial development. Participants from five developing countries benefited from practical sessions and study visits, which contributed Japanese know-how and experience in technology transfer and production processes. In China, the training programme to promote the participation of women in the country's modernization process focused on the training of trainers for women entrepreneurs and managers. A group of project managers from the Russian Federation participated in a study tour conducted jointly by UNIDO and the World Bank. In Brazil, UNIDO introduced modern technology and gave support to the main textile school and research centre for training managers in new management and processing techniques. In the field of food-processing and related industries, UNIDO expanded projects, conducted workshops, and trained trainers in areas such as technology, maintenance, quality, packaging and marketing.

Promoting learning for managers, technicians and entrepreneurs

127. At the enterprise level, a wide range of sector- and industry-specific HRD programmes were implemented. Examples of these programmes include training of trainers to conduct project appraisal and preparation of

investment projects in developing countries, outreach and capacity-building exercises for women in small-scale agro-based enterprise workshops, and pilot training programmes to improve energy-efficiency.

128. In June, a regional workshop for Arab least developed countries was held for engineers and technicians on critical industrial maintenance issues. A two-month technical study tour was conducted for an HRD programme for Iranian female professionals from the sugar manufacturing industry. Examples of enhancing local capacity to manage industry-specific technology transfer include an Africa-wide training course on footwear technology and training for trainers in leather manufacturing technology, tannery machinery maintenance and pollution control in the leather industry.

E. Integration of women in industrial development

129. During the course of 1995, the UNIDO programme on the integration of women in industrial development focused on substantive preparations for and participation in the Fourth World Conference on Women and its accompanying NGO Forum, held at Beijing in September 1995. In addition, UNIDO pursued the promotion, preparation and implementation of projects for women. At the same time, continued emphasis was placed on mainstreaming gender issues into programmes and projects through gender-sensitization training programmes for UNIDO staff, refining and developing of tools for the integration of gender issues into UNIDO's work as well as providing *ad hoc* specialized advice on the integration of gender considerations into specific UNIDO projects. Specifically with regard to the follow-up to the Beijing Conference, close cooperation and interaction were maintained with several agencies of the United Nations system as well as with international NGOs.

The Fourth World Conference on Women

130. Under the guidance of the interdivisional Task Force for the preparation of the Beijing Conference and with the assistance of a special adviser, UNIDO finalized its substantive inputs to the Conference. These inputs consisted of five regional analyses on the participation and role of women in manufacturing, a position paper by the Director-General on the UNIDO contribution and planned follow-up action, and several other publications and promotional materials that were distributed at the Conference and at the NGO Forum. During these two events, UNIDO either organized, co-sponsored or participated in several panel discussions, round-tables and press conferences. Specifically, UNIDO organized a "Women and Industry Day" with participation at the ministerial level from different regions. This high-level panel strongly recommended that UNIDO play an active role in the promotion and implementation of gender-sensitive government policies and in the increase of

women in decision-making positions. To this end, a target was adopted of 30 per cent of women in managerial positions in industry, by the year 2010.

Expert Group Meeting on Women in Industry July 1995

131. The expert group meeting on women in industry consolidated and reviewed the outcome of the five regional analyses on the participation of women in manufacturing: patterns, determinants and future trends. These analyses had been prepared in cooperation with the United Nations regional economic commissions as one of the substantive inputs by UNIDO to the preparatory activities for the Beijing Conference. The meeting endorsed UNIDO's theme for the Conference, which focused on the link between industrial and social development in particular with regard to poverty alleviation. The meeting elaborated the strategic actions to be undertaken by UNIDO for the Conference itself as well as for follow-up activities. Major recommendations focused on policy issues with emphasis on access to resources, human resources development, and capacity-building for integrating women in sustainable industrial development. In addition, priority areas of action were developed for the five regions - Africa, Asia and the Pacific, Europe, Latin America and the Caribbean, and Western Asia. UNIDO-specific recommendations were proposed particularly in the fields of capacity-building for women managers and entrepreneurs in SMEs, transfer of affordable and appropriate technologies, assistance in developing institutional capacities, promotion of investment opportunities as well as collection and dissemination of data and information.

132. The UNIDO delegation at Beijing, led by the Director-General, vigorously supported the Member States in their effort to recognize the critical role to be played by women in the economic arena. The Platform for Action, adopted by the Conference, bears testimony of the results in this respect.

133. Following a review of the Platform for Action, in particular the areas dealing with poverty alleviation, advancement of women in the economy, education and training, decision-making and environment, and also taking into account the recommendations specifically addressed to UNIDO during the various events organized by UNIDO, a three-point agenda for a follow-up action plan was defined:

- a) Gender-sensitive policies and strategies
 - In-depth research and analysis at the national level for a better integration of women in industrial development, based on the results of the regional analyses referred to above;
 - Development and dissemination of a database on women in industry;

- Elaboration of a programme of incentives and gender-sensitization to promote increased participation of women in decision-making and managerial positions in industry.
- b) Women entrepreneurship and human resources development
 - Development and implementation of the high impact programme for women entrepreneurship development in selected countries.
 - c) Investment and information centres for women
 - Development of appropriate outreach mechanisms for women by strengthening existing UNIDO facilities, e.g., Investment Promotion Service offices, cleaner production centres, and UNIDO services such as Intechmart, investment forums, and the INTIB network, with a view to connecting these mechanisms to women's organizations;
 - Preparation of a special training package for women to acquire knowledge and skills enabling them to prepare bankable project proposals.

Development and implementation of women-specific programmes and projects

134. During 1995, in line with the programmes adopted in previous years, in particular the training programme for women entrepreneurs in the food-processing industries and the thematic programme "Women entrepreneurs for industrial growth", several new projects were approved through contributions from the Industrial Development Fund, such as in Botswana (funded by Japan), Kenya (funded by Germany), and the United Republic of Tanzania (funded by Switzerland). Several other projects were developed, e.g. in Ghana, Namibia and Uganda, for which the sources of financing were being explored.

135. A programme for women's entrepreneurship development was developed in the framework of the high-impact programmes launched under the UNIDO reform (see also section III.B.7 of this report). This programme is intended for implementation at the country level and funds have been obtained for projects mainly in the food-processing industries in Côte d'Ivoire, Ethiopia, Mali and Senegal. In addition, work is underway to develop a new training module for women entrepreneurs focusing on spice production in the United Republic of Tanzania.

136. As a result of the regional study on the participation of women in manufacturing in the ECLAC region, a

Colombian pilot project was designed to elaborate a national programme to increase participation of women.

Mainstreaming of gender considerations

137. With the assistance of a gender training expert, six gender training workshops were held that were attended by some 70 Headquarters staff members. These workshops were aimed at strengthening the capabilities of the staff to effectively address gender issues and use appropriate tools and methodologies in assessing gender needs and gaps. While the manuals were developed for in-house training, the methodology developed and the contents of the course could easily be adapted and integrated into UNIDO technical cooperation programmes to increase the gender awareness of decision-makers in the developing countries. Specifically, checklists were developed for addressing gender issues in a number of industrial subsectors as well as in each of UNIDO's new thematic priorities.

138. In order to support decision-makers both in UNIDO and in recipient countries, UNIDO developed a database on women in industry that provides statistical data on over 100 indicators at the country level.

Inter-agency cooperation and NGO networking

139. UNIDO participated in the deliberations of the Commission on the Status of Women and of the *ad hoc* inter-agency meeting on the advancement of women held in New York in March 1995. Furthermore, UNIDO prepared substantive inputs for the System-Wide Medium-Term Plan for the Advancement of Women 1996-2001. At the programme and policy level, UNIDO was engaged in close cooperation with various United Nations agencies (UNDP, United Nations Statistics Office, ILO, FAO, IFAD, regional economic commissions) with particular emphasis on the implementation of the high-impact programme for women entrepreneurship development and the database on women in industry, etc.

140. Networking with NGOs continued and, in cooperation with the Non-governmental Liaison Service, UNIDO participated in the United Nations-NGO consultation meeting on women in the Baltic States, held in Estonia, in December 1995. At this meeting UNIDO took the lead in a two-day workshop on women entrepreneurship development for the Baltic States. Upon accreditation of Soroptimist International to UNIDO (IDB.14/Dec.24), discussions were initiated on a possible joint programme for women entrepreneurs in Africa.

CHAPTER IV

UNIDO AS A GLOBAL FORUM FOR INDUSTRIAL DEVELOPMENT

A. Conceptual introduction

1. As a result of the reform process, a distinction has been introduced between the roles of UNIDO as: (a) a provider of specialized technical cooperation services; and (b) a global forum on industrial development. Both roles are interlinked and mutually reinforcing: it is through the exchange of information, experience and analyses at the global level that key technical cooperation needs are often identified and response strategies formulated. At the same time, project-level solutions to issues at the country level can be brought to the attention of other interested countries through global or regional meetings.

2. The global forum function of UNIDO was endorsed at the sixth session of the General Conference in resolution GC.6/Res.1 and information requested on its various components in resolution GC.6/Res.2. While the full elaboration of the key elements and new initiatives under the global forum role will only be concluded in the 1996-1997 biennium, the present chapter provides information on relevant activities undertaken in 1995.

3. As first outlined in document GC.6/30/Add.1, the global forum role of UNIDO entails:

- Building understanding among developed and developing countries and economies in transition, concerning global interdependence, and promoting partnerships and initiatives to support international industrial cooperation.
- Spreading knowledge about technologies, existing and new approaches to industrial development.
- Transferring the lessons of industrial development from North to South, South to South, and West to East.
- Stimulating economic cooperation among developing countries at different levels of industrialization.
- Providing industrial statistics and ensuring international comparability of industrial data and

standards for their collection, processing and reporting.

- Assisting in the establishment and, above all, in the implementation of international conventions, norms and standards, such as the Montreal Protocol, the United Nations Framework Convention on Climate Change, emerging eco-labelling schemes in industrial subsectors, support in the accreditation and articulation of ISO 9000 and preparing for the introduction of ISO 14000 series.
 - Acting as an honest broker with specialized capabilities to support developing countries in addressing the challenges of globalization and regional integration processes in the fields of technology, industrial services and investments.
4. Many activities in those areas have already been part of the UNIDO work programme for quite some time. Without aiming at an exhaustive inventory, the following activities are relevant in this context:
- UNIDO undertakes analyses of emerging industrial and technological trends, assesses their implications and translates them into advice on appropriate industrial strategies and policies.
 - UNIDO is a major Montreal Protocol executing agency and is engaged in policy-level and operational initiatives to implement Agenda 21 within the framework of the United Nations Commission on Sustainable Development.
 - UNIDO is establishing a database on energy-efficient technologies to support the United Nations Framework Convention on Climate Change.
 - UNIDO has developed, on behalf of the UNIDO/UNEP/FAO/WHO working group, a Voluntary Code of Conduct for the Release of Genetically Modified Organisms into the Environment.

- UNIDO has established and operates the Biosafety Information Network and Advisory Services (BINAS).
- UNIDO is the designated official United Nations repository of industrial statistics and prepares the International Yearbook of Industrial Statistics.
- UNIDO databases provide information on technological options in different sectors of industry while software packages such as COMFAR, BEST, FIT and CompStrat are being increasingly used as instruments for decision-making in industry at the firm or subsectoral level.
- In response to a request by the Leather and Leather Products Industry Panel, UNIDO is developing impartial international standards for eco-labelling in that sector to complement existing national and regional standards.
- UNIDO is promoting a range of international standards and quality improvement systems, in cooperation with the International Standards Organization and other relevant agencies.

5. Following the call from Member States at the 1995 General Conference, UNIDO has begun to explore how it could move further upstream and provide services to Member States on issues related to industrial standards, conventions, benchmarking and, generally, services of a normative nature. To this end, a special activity group was constituted as part of the reform process.

6. The activity group has started to identify selected areas where (a) UNIDO commands high technical competence, (b) technical knowledge is not easily available elsewhere, (c) UNIDO enjoys high credibility in the circles in which norms or standards are to be applied, and (d) the Organization is recognized as an impartial and neutral force.

7. Tentatively, four areas were selected for further exploration.

UNIDO seal of accreditation

8. Considerable attention has already been given to the proposed UNIDO Seal of Accreditation to be offered to accreditation bodies in developing countries. Through a mutual recognition agreement, such bodies would be able to grant internationally recognized certification to domestic enterprises. This intends to reduce the costs associated with certification - particularly for the important ISO 9000 and 14000 series of standards - and allow entrepreneurs much greater market access.

UNIDO industrial development index

9. A UNIDO industrial development index would provide international benchmarking of many dimensions of industrial development. Traditional quantitative indicators would certainly be included, but this innovative approach would include also aspects such as

competitiveness, structural composition of the industrial sector, structure of capital stock, educational level, state of R and D, ownership structure and environmental standards. Further dimensions could be considered that would reflect both the prerequisites for industrialization and how the results of industrial activity are used and distributed. Such an index would help countries to assess their position in an international context, identify strengths and weaknesses, and also develop support programmes together with UNIDO and other international organizations.

Guidelines for industrial science and technology parks

10. UNIDO guidelines on the establishment of industry-related science and technology parks in developing countries would provide an instrument for monitoring and certifying the extent to which such parks achieve internationally acceptable levels. This would also provide support in marketing efforts and in the continuous improvement of such institutions and in ensuring that they play an effective role in the globalized world economy.

Performance norms and benchmarks for industrial processes

11. Based on the life cycle concept, required improvements in industrial processes with respect to technological, environmental and social factors could be identified through comparison with established international standards, benchmarks and norms. Such standards could also, where not existing, be suggested or elaborated by UNIDO along with proposals for remedial measures in terms of policy and technological improvements. A life cycle assessment of industrial processes would also represent a practical instrument for applying various recommendations at the industrial level emanating from recent global United Nations conferences, such as the summits of Rio de Janeiro, Beijing or Istanbul. In addition, it would be a concrete step forward in implementing one of the draft ISO 14000 standards, relating to the application of life cycle analysis as a tool for strategic planning, product or process design as well as alternative manufacturing methods.

12. The time frame for exploratory work in the above areas foresees a comprehensive report to the Board in 1997 and a presentation of results and recommendations to the General Conference in 1997. In developing those new initiatives, UNIDO is establishing cooperation with other agencies so as to ensure that their relevant expertise is brought to bear on industrial development.

B. Industrial statistics

13. As a global forum in matters of statistics, the United Nations Statistical Commission defines and implements international statistical objectives and methodologies. In 1993, the Commission recommended a reorganization of

global responsibilities in matters of industrial statistics. The change meant that, whereas UNIDO was previously a secondary user of data compiled by the United Nations Statistical Office, it has now assumed full responsibility for collection, verification and dissemination of industrial statistics. Under the new arrangement, OECD and UNIDO ensure the global coverage with OECD responsible for its member countries and UNIDO for all other countries.

14. UNIDO put into effect this new arrangement in 1995 and initiated the annual collection of detailed industrial statistics. For that purpose, it first established a network of two-way information channels with over 170 national statistical offices and developed a new questionnaire in interaction with those offices and OECD, that is used as a measurement tool adjusted to the requirements of international surveys.

15. Second, it developed "information products" tailored to the needs of constituencies that require global statistics. The statistics collected are numerical data relating to aggregates of firms placed 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 lending global credibility to data marked by national characteristics and placing them in a harmonized context that permits international comparability.

16. In 1995, the volume and complexity of this task took a much greater dimension. This was due on the one hand to the collection of more detailed information (four-digit against the customary three-digit level of disaggregation) and, on the other hand, the increased number of countries covered in 1995 following the entry into the global statistical forum of countries in transition.

17. In addition to processing of data, UNIDO pursued their dissemination. The UNIDO Industrial Statistics Database, supplemented by the UNIDO Commodity Balance Databases, is sold for secondary dissemination and to final users or exchanged for data from national sources. In 1995, about 120 copies of the UNIDO databases were disseminated to international brokers such as the World Bank, the World Trade Organization and OECD; national organizations such as Ministries of Trade and Industry; private commercial companies such as marketing firms or commercial departments of production firms; and private non-profit entities such as research companies; as well as to academic institutions.

18. Under the new arrangement for industrial statistics, UNIDO also started publishing a new recurrent publication: *The International Yearbook of Industrial Statistics*. It replaces the *United Nations Industrial Statistics Yearbook*, vol.1. The 1995 edition (issued by a commercial publisher) presented statistics and derived

indicators for over 120 individual countries as well as for a number of selected country groups.

19. Besides generating global information, UNIDO contributed to the establishment of international standards and norms in the field of industrial statistics. The value of statistics much depends on international comparability which, 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, the ACC Subcommittee on Statistical Activities and the International Statistical Institute, UNIDO participated in seven international meetings on matters of international coordination and activities in the course of the year. A salient aspect of the international coordination in which UNIDO participated in 1995 was the global introduction of a new revision (Rev.3) of the International Standard Industrial Classification. Furthermore, UNIDO was active in disseminating statistical tools for the purpose of quality control in manufacturing processes.

20. Closely related to its statistical activities, UNIDO issued two research publications in 1995. *Beyond Quality: An Agenda for Improving Manufacturing Capabilities in Developing Countries* (Edward Elgar Publishing, Ltd., Cheltenham, 1995) examines statistical quality control in case studies from Latin America, Africa and Central Europe. *Policies for Competition and Competitiveness: The Case of Turkey*, a study sponsored by the Ford Foundation, goes from empirically-based analyses of competition and competitiveness policies in Turkey to an international perspective by reviewing worldwide conditions. Also, UNIDO staff lectured on industrial statistics at the Institute for Social Studies in The Hague.

21. Finally, UNIDO introduced in 1995 a Windows version of the NISP (National Industrial Statistics Programme) software, a tool for collection, tabulation and dissemination of data created by UNIDO and provided to national users through technical cooperation programmes. Likewise, UNIDO began offering its various databases in Windows format, thereby attuning itself to the needs of the most sophisticated users and, ultimately, expanding the dissemination of its products.

C. Industrial information

22. As a global forum for industrial development, UNIDO has helped build knowledge of industry worldwide by monitoring global economic, political and technological developments as they unfold and assessing their quantitative and qualitative impacts on different regions and countries. Similarly, through technical cooperation it has created a unique bank of information and expertise on technology transfer in a variety of sectors.

23. The Industrial and Technological Information Bank (INTIB) uses its expertise in collecting, storing, retrieving and disseminating information to exploit the comparative advantage of UNIDO and ensure that this knowledge on industrial development is made as widely available, known and used as possible.

24. Responding to General Conference resolution GC.5/Res.3 "to provide information services to industry to facilitate the widest possible access of developing countries to technological information on industrial subsectors", the promotion of industrial information is part of the seven thematic priorities of UNIDO. The main objective of the programme in 1995 was to develop and enhance the access of Member States to information sources on industrial technologies and investment opportunities; to support INTIB regional, national and sectoral networks - with a focus on strengthening the regional focal points through advisory and inquiry/referral services - and expanding INTIB national focal points into self-sufficient and self-sustainable industrial information networks. A variety of approaches were used, depending on the status of development of a country, the potential of existing institutions and networks, and the need for training, hardware and software.

25. Regional information programmes for Africa and Arab countries, Asia and the Pacific, Eastern and Central Europe and NIS and Latin America and the Caribbean were formulated to establish and interlink a global integrated information service for industry to facilitate interregional cooperation in building up technology and investment partnerships.

In Africa, the regional project to install the INTIB standard database application and to develop the African network in cooperation with ARCT was implemented for 10 African countries. ITMIN (Industry, Technology and Market Information Network)-type projects were developed for selected countries (Ghana, Kenya).

- In Asia and the Pacific, cooperation was strengthened with APCTT as the INTIB regional focal point. The ITMIN project for Sri Lanka was under implementation. Requests for similar projects were received from Indonesia, Thailand and Viet Nam.
- In Eastern Europe and the NIS, a project for upgrading information services in the region to provide industry and business information for SMEs was developed and considered at the regional workshop on industrial and business information services for SMEs at Bratislava, Slovakia, from 14 to 15 November 1995.
- In Latin America and the Caribbean, cooperation was established with RITLA to strengthen information services in the region. ITMIN-type projects for Bolivia, Colombia and Peru were developed under trust fund arrangements.

26. To increase the flow of technology, including environmentally sustainable technologies, to developing countries, a pilot methodology - consistent with the recommendations of the Commission on Sustainable Development - was developed by INTIB. The methodology provides comparative analyses of industrial process/technology needs, identified through country surveys, with the technology options available (and their vendors). The pilot application of the methodology was implemented in Peru and Thailand.

27. A variety of tools and services developed by INTIB support the network members to function more effectively. In particular, the International Referral System serves as a rapid and efficient means of identifying and matching different sources of information in response to enquiries from business communities. The core of the system, which is an inventory of all the specialized sources of information in each Member State of UNIDO, was compiled and produced in computerized format as the World Directory of Industrial and Technological Information Sources.

28. To provide access to new and emerging technologies, including environmentally friendly technologies, the technology monitors on genetic engineering and biotechnology, microelectronics, advances in materials technology, high technology spin-offs, marine industrial technology and environmental technology were redesigned and merged into a more focused emerging technology series. This will concentrate on technologies of special significance to developing countries, with closer linkage to the work of international centres, such as ICGEB, ICS and CASE, initiated by UNIDO.

29. To establish world-wide electronic access to UNIDO information resources, the Organization established its presence on the World Wide Web of the Internet in October 1995. Since its introduction, thousands of requests from over 70 countries were serviced. Efforts also continued to improve the connection of the INTIB focal points to the Internet global communications network and knowledge base. In addition to electronic messaging, this includes access to computerized information resources. Training was provided in the use of the Internet and other interactive networks to gain access to business, technology and investment information. The first workshop took place in Moscow in May 1995 for the NIS countries, followed by workshops held in September at Prague for Central and Eastern Europe and at Bogota for Latin America and Caribbean countries. Similar workshops were developed for other regions for implementation in 1996.

30. The Sixth Advisory Group Meeting of INTIB was held from 9 to 12 May 1995 in Vienna, during which all information activities were reviewed and recommendations were provided for further improvement of the Organization's information services.

D. Research publications

Global Report 1995

31. The *Global Report* is an annual series reflecting UNIDO's perspective of global industrialization. It has a two-fold objective: to provide an annual review of the latest trends and short- and medium-term prospects for the manufacturing sector in various regions of the world, and to present an in-depth assessment of selected issues of crucial importance for industrialization in developing countries and the economies in transition.

32. The main topic of the *Global Report 1995* was how to sustain the growth impulse stemming from rapid changes in the global economic environment. The *Report* underlined the fact that economic liberalization and globalization accompanied by accelerated trade, investment and technology flows - the main impetus for global recovery - are proceeding at an accelerated pace in both developed and developing countries. It stressed that the international community would have to pay particular attention to the needs of those countries, in particular the least developed countries, that risk becoming net losers in that process.

33. In addition to the usual English and French editions, the *Global Report 1995* was also published in Spanish. To ensure more effective distribution of the *Report*, the English and Spanish editions were co-published with Oxford University Press, United Kingdom, and the Fondo de Cultura Economica, Mexico, two highly renowned English- and Spanish-speaking publishing houses with proven international distribution networks.

Industrial development reviews

34. Within the industrial development review series, UNIDO initiated the preparation of reviews of Eritrea, Ethiopia, Kenya and Uganda for issuance as non-sales publications. The preparation of these reviews was linked to the substantive activities of UNIDO and the IDDA-related programme on redefining national priorities to foster the processes of industrialization in Africa. Reviews of India and the Islamic Republic of Iran were published and reviews on the Central Asian Republics (two volumes) and China are being initiated for co-publishing with the Economist Intelligence Unit as UNIDO sales publications. A seminar on industrial development linked to the Review of India was held at New Delhi in mid-1995.

35. In the context of UNIDO's focusing efforts, it was decided to discontinue the review series in its present country-level orientation. The series, which over the years has produced a body of in-depth country analyses, will be reoriented and transformed into a new research programme with a stronger focus on providing the conceptual and analytical underpinning for UNIDO programme development in selected developing regions and subregions.

E. Global technology centres

International Centre for Application of Solar Energy

36. The International Centre for Application of Solar Energy (CASE) was established in 1994 with the mandate to promote the application of solar energy technology in developing countries. The Centre is funded by the Government of Western Australia and the Commonwealth Government of Australia. The Centre is located in Perth, Australia. In collaboration with UNIDO, the Centre provides the following principal services: assistance in preparing applications for project finance; assistance in training to ensure the proper operation and maintenance of renewable energy systems; support to project implementation and management; consultancy services for feasibility work; and externally funded project definition studies. Typical projects involve photo-voltaic, wind, solar thermal and other systems, technology seminars, and other issues. Projects are based on demand from institutions in developing countries formally requesting UNIDO or CASE assistance.

37. Within a five-year programme for CASE, 1995 was the first full year of operation. The Centre initiated solar energy activities in Indonesia, Malaysia, Thailand and Viet Nam. In addition, an international workshop on solar energy was held at Perth, in October 1995.

International Centre for Science and High Technology

38. The International Centre for Science and High Technology (ICS) is intended to strengthen the capabilities of developing countries in applying science and technology to the development of the industrial sector, and in particular to promote the transfer of know-how and closer cooperation between enterprises and R and D institutions. The structure and programmes of ICS were defined in a feasibility study completed in 1990, with pilot projects initiated immediately thereafter. Activities of ICS include: research; workshops, seminars and training courses; support to short-term exchanges between researchers and technologists in industry; dissemination of scientific/technological information through a documentation centre; creation and management of a network of centres of excellence; and consultancy and advisory services. The Centre's work is currently focused on various aspects of chemistry, the environment, new materials and technology management. The main institutional bodies of ICS are: the Steering Committee, composed of representatives of UNIDO, the Italian Government, donor and developing countries; the International Scientific Committee, a body of scientists from developed and developing countries which reviews the programmes of the ICS; and the ICS Secretariat.

39. 1995 saw the commencement of preparatory activities for the full-fledged implementation of ICS. Emphasis is on assisting developing countries' industrial

enterprises and R and D centres with technology transfer in specialized fields such as lasers, fibre optics and new materials.

International Centre for Genetic Engineering and Biotechnology

40. In 1981, UNIDO initiated activities that led to the establishment of the International Centre for Genetic Engineering and Biotechnology (ICGEB). In 1982, the concept for such an international centre of excellence was approved by a high-level conference of developed and developing nations held at Belgrade. The statutes of the Centre were signed in 1983 by 26 countries. The establishment and subsequent development of ICGEB has been guided, under the aegis of UNIDO, by a panel of scientific advisers and by a Preparatory Committee of representatives of the States signatory to ICGEB statutes. The Centre was established as an international organization in February 1994, and the transfer of assets from UNIDO to ICGEB were effected on 22 December 1995. To maintain close cooperation between UNIDO and ICGEB, a liaison office has been established at UNIDO Headquarters.

41. Comprising two components located at Trieste, Italy and New Delhi, India, the Centre forms an interactive network with affiliated centres in Member States. ICGEB develops state-of-the-art research of importance to bio-industries in Member States and strengthens the research capabilities of its members through training, collaborative research programmes and advisory services. The Centre is seeking to advance applications of the latest biotechnologies in public health, nutrition, industrial production, environmental protection/remediation and energy saving.

42. During 1995, ICGEB continued research, publishing and training activities. Contacts continued to be developed with the industrial sector in its Member States for the transfer of know-how developed by the Centre. In addition to the regular programme of courses and meetings, three courses on biosafety and the management of biological risk were co-sponsored with UNEP.

New initiatives

43. During 1995, preparatory activities and feasibility studies were undertaken on the potential establishment of three further global technology centres: an international centre for hydrogen technology in Turkey; an international centre for advancement of manufacturing technology in India, and an international centre for materials evaluation technology in the Republic of Korea.

F. Investment promotion network

44. In chapter III.B.5 of the present report, selected country-specific investment promotion activities of UNIDO are described in greater detail. These are supported by the Investment Promotion Service (IPS) network of UNIDO, which is a genuine reflection of the Organization's role as a neutral honest broker bringing together partners from developing and developed countries in joint investment projects.

45. During 1995, the IPS network continued to expand and IPS Istanbul became operational. Negotiations were finalized for the establishment in 1996 of Services in Bahrain, Beijing and Vienna. Negotiations were also finalized for the establishment of an Investment and Technology Promotion Initiative (ITPI) in India, also to become operational in 1996. In November 1995, an agreement was signed with NIMTECH, which allows UNIDO to harness financial and technological resources in the United Kingdom for the benefit of developing countries. Furthermore, UNIDO completed the groundwork to establish networks within China and India to ensure access to the UNIDO investment promotion programme in various provinces of these countries.

46. Throughout 1995, the placement of delegates in IPS offices continued to be a mainstay of the investment promotion programme. Over 30 delegates, from all developing regions, were placed in the Offices and demand for places in this programme is steadily increasing. UNIDO explored new avenues to finance delegates in IPS offices including the private sector in developing countries as well as international organizations such as the European Commission. In IPS Tokyo, the shuttle programme for delegates continued, allowing optimum access to the Japanese investment community.

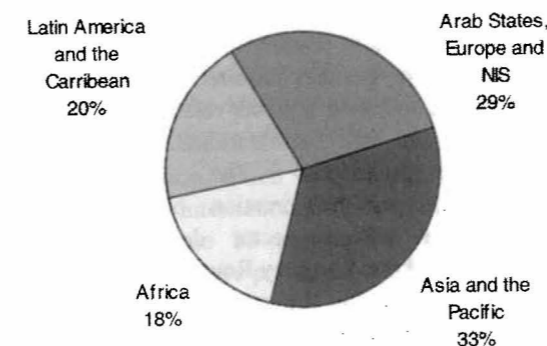
47. As in previous years, the IPS network took the lead in organizing a number of specialized promotional events. Prominent in this initiative was the organization of EUROPALIA '95. It was convened at Sao Paulo and served to broker investment cooperation arrangements between European investors and Latin American sponsors in the agro-industry sector. In the same vein was the organization of EUROPEIA, again in the agro-industry sector, linking investors from Western Europe with sponsors in Central and Eastern Europe. The Service at Milan was also a co-organizer of BORITEC '95. Among the other entities organizing BORITEC were the Milan Fair Authorities, the Italian Ministry for Foreign Affairs and the European Commission.

48. During the year, the twelfth and thirteenth industrial investment programmes' meetings were convened in Vienna. These meetings allowed the Heads of IPS offices and Headquarters staff to exchange views on the future direction of the programme. Among the topics discussed was the design of programmes to meet the

requirements of the least developed of the developing countries. Other topics of interest included the charging of fees by IPS offices for services given to the business community and the decentralization of administrative procedures from Headquarters to the Services.

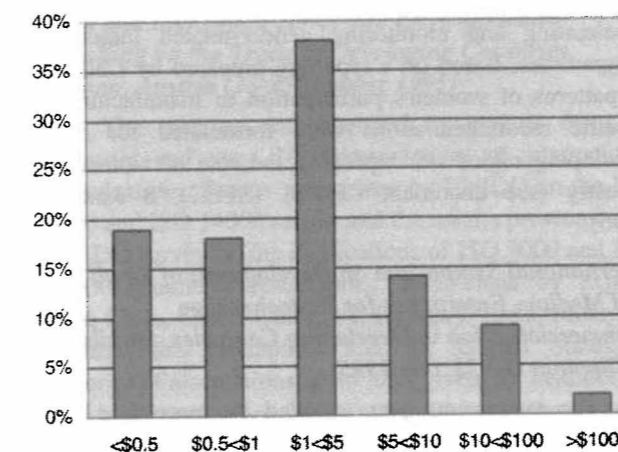
49. In 1995, out of a much larger number of investment projects identified by UNIDO in all developing regions, negotiations on 107 projects were concluded between the partners. These projects are expected to generate a total value of new investments of \$862 million. More than three quarters of these projects were in the form of joint ventures.

Figure 11. Investment projects promoted by region - 1995



50. The regional breakdown (figure 11) of concluded investment projects shows Asia and the Pacific as the leading recipient region (33 per cent), followed by Arab States, Europe and NIS with 29 per cent, Latin America and the Caribbean with 20 per cent and Africa with 18 per cent. 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: 19 per cent of projects are below \$0.5 million and 75 per cent below \$5 million.

Figure 12. Investment projects promoted by size - 1995 (Millions of US\$)



G. Selected meetings

51. Out of the large number of meetings organized in 1995 by UNIDO (for a complete list, see Appendix F in Addendum 1 to the present report), this section reviews selected meetings which clearly reflect the global forum role of UNIDO.

Global Forum on Industry: Perspectives for 2000 and Beyond

52. The Global Forum on Industry: Perspectives for 2000 and Beyond, was held at New Delhi, India, from 16 to 18 October 1995, under the auspices of UNIDO and the Government of India. Its aim was to analyze the role, trends and prospects of industrial growth at the turn of the century in the light of emerging global economic developments. The Forum attracted wide participation by government representatives from 35 countries, the private sector, academia and intergovernmental organizations. More than 30 background and issue papers for various panels were prepared by UNIDO for international dissemination.

53. The paper presented to the Panel on the State of World Industry, with scenarios for the post-2000 period, pointed to the unevenness of industrialization in the developing world and considered in particular the role of industry in economic and social development in Africa. Seven papers were presented to the Panel on New Technologies, Innovation and Competitiveness. Papers given at the Panel on Globalization and Industrial Partnerships highlighted the main forces driving globalization. The challenges and opportunities created by globalization were also discussed. Six papers were prepared for the Panel on Global Trade Liberalization and its Implications for Industrial Restructuring. Four papers were presented to the Panel on Industrial Policy Reforms, which addressed the changing role of governments. Documentation for the Forum also included issue and background papers on environmental policies and industrial competitiveness, employment and social aspects of industrialization, as well as industrial development and international cooperation with a focus on the future role of UNIDO.

54. The Forum made a number of detailed recommendations of which a selection is summarized hereafter. It was considered important that policies and institutional measures be developed that relate specifically to technological development. UNIDO can play a catalytic role in this respect; the desirable extent of government support through industrial policy has to be assessed in the context of each country; the importance of support to foster foreign direct investment in industry was underscored, and it was held that the role of small- and medium-scale industry was likely to increase over time. Many recommendations were made as to the nature of the services UNIDO should provide. It was considered, for example, that UNIDO has a crucial

role to play in technological management and upgrading in developing countries, as it is well placed to facilitate cross-border flows of ideas and information. UNIDO support to small- and medium-scale industry and to the promotion of foreign direct investment in industry was considered essential, as was UNIDO's role in advising on industrial policy and strengthening private sector organizations and associations.

Round Table on Technology Transfer, Cooperation and Capacity Building for Sustainable Development, Vienna, Austria (6-8 February 1995)

55. The meeting was attended by some 50 participants from 25 countries, and some 20 representatives of 10 international organizations. The meeting was convened by UNIDO, UNEP and UN/DPCSD. UNIDO papers were presented on the enhancement of technological change and information systems for environmentally sound technologies. A UNIDO/UNEP paper was given on cleaner production programmes. Working groups were established to consider two key issues: institutional development and capacity building; and technology cooperation and partnerships. The roundtable defined the elements of a multi-agency work programme on environmentally sound technologies, concentrating on four areas: policy development; needs assessment; institutional development and capacity-building; and partnerships and cooperation. UNIDO was invited to initiate follow-up action with Governments, financial institutions, the private sector, and other parts of the United Nations system.

Expert Group Meeting on Quality, Standardization and Metrology for Developing Countries, Beijing, China (17-23 April 1995)

56. The meeting was co-sponsored by UNIDO and the China State Bureau of Technical Supervision and was attended by some 30 participants, mostly from the Asia and Pacific region. Given that a number of countries in the Asia and Pacific region have developed measurement facilities and related technologies, and progressed in the implementation of the ISO 9000 series, the meeting provided a forum in which these and other countries could share experiences and information while exploring possible cooperation arrangements. The meeting made a number of recommendations on quality, standardization and metrology. In particular, it was considered that further efforts are required by Governments to develop institutions and technical capabilities for continuous quality and productivity enhancement. United Nations organizations, including UNIDO, were called on to assist the definition of policies and strategies for such enhancement and to provide related training. Developing countries were encouraged to align their national standards with international standards and to cooperate with each other in so doing. Governments were likewise called on to promote implementation of the ISO 9000 series and to support the establishment of mechanisms

for mutual recognition of certification. United Nations organizations were also requested to prioritize the establishment and/or upgrading of metrology laboratories and testing facilities, particularly in least developed countries.

Private Sector Forum: Key to Sustained Economic Growth and Integration, Gabarone, Botswana (3-5 June 1995)

57. The forum took place on the occasion of the twelfth meeting of the Conference of African Ministers of Industry, with the cooperation of the Government of Botswana, the Organization of African Unity and the Economic Commission for Africa and was organized by UNIDO, UNDP and the Africa Business Round Table. The forum, which was attended by 188 participants, deliberated, *inter alia*, on: ways of enhancing the involvement of the private sector in Africa's industrialization; the policies required to facilitate this; and the means of fostering a closer relationship between the private sector and multinational, regional and subregional organizations. The forum made recommendations on the creation of an enabling environment for private sector development; the implications of both the Uruguay Round Agreements and technological change for the performance of African industry; the mobilization of financial resources for private sector development in Africa, and regional cooperation and private industry.

Expert Group Meeting on Women in Industry, Vienna, Austria (10-12 July 1995)

58. The meeting was attended by 20 participants from all developing regions, with some 30 persons attending as observers. Participants included representatives of governmental organizations, the public and private sector and the NGO community. The meeting deliberated on a wide range of issues addressing, *inter alia*, consolidating the UNIDO inputs to the Fourth World Conference on Women, thus contributing to the development of its post-Beijing programme, further developing UNIDO's relationship in this field with governmental organizations and NGOs, and identifying regional strategies for accelerating and monitoring gender-related industrial programmes. Based on a typology prepared by UNIDO of patterns of women's participation in manufacturing, specific recommendations were formulated for each developing region on improving the role of women in industry (see document CPD.21 (SPEC), 8 January 1996).

International Symposium on Development of Small and Medium Enterprises for Biotechnology Commercialization in Developing Countries, Manila, Philippines (24-28 July 1995)

59. The symposium was attended by more than 200 participants from a number of mostly Asian developing countries. The symposium was co-sponsored by UNIDO and the German Federal Ministry for Economic

Cooperation through the Carl Duisberg Gesellschaft-Southeast Asia Program Office. The aims of the symposium were to identify business opportunities arising from recent developments in biotechnologies which are consistent with developing country needs and aspirations, and to formulate strategies in development cooperation and technology transfer for the commercialization of biotechnology. The symposium consisted of presentations of papers on: (a) developments in biotechnology transfer and commercialization; (b) policy, legal, and bio-safety issues; and (c) the assessment of future biotechnology options and related issues. Group discussions were held on each theme, and a special forum was organized for potential investors with an interest in selected biotechnologies that are ready for, or are already being, commercialized.

Regional Workshop on Industrial Policies and Strategies, the Experience of the Republic of Korea and its Relevance to the African Countries, Seoul, Republic of Korea (14-22 September 1995)

60. The workshop, which was co-sponsored by UNIDO and the Korea International Cooperation Agency, was attended by some 30 participants from 20 African countries. Papers were presented and discussions held on salient features of the Republic of Korea's industrialization experience. Short papers were also prepared on the industrial structure, industrial policy framework and business environment in the African countries represented. Lessons of relevance to the African context were derived from the Korean experience. These lessons included the importance of a political leadership committed to national economic development, the need for efficient public administration, the importance of a high degree of business-government cooperation, the adoption of export-oriented trade policies, the need for well developed educational and research and development institutions closely tied to industry, and the importance of well developed infrastructure.

Expert Group Meeting on the Potential Effects of ISO 9000 and ISO 14000 Series and Environmental- Labelling on the Trade of Developing Countries, Vienna, Austria (23-25 October 1995)

61. The meeting was attended by experts from 10 countries and some 10 representatives of international organizations. Papers were given by UNIDO on the ISO 9000 and ISO 14000 series, and the results presented of a UNIDO survey on the implications of ISO 9000 and ISO 14000. Country presentations were made by experts from Chile, China, Colombia, Hungary, India, Malaysia, Nigeria, the Philippines and the United States of America. Presentations were also given on institutional activities by representatives of seven intergovernmental organizations. Two working groups outlined a work programme - directed at UNIDO and other agencies - to facilitate a developing-country adjustment to the

challenges posed by ISO 9000 and ISO 14000. The recommendations made were detailed, and covered the following issues: the development of international standards and certification frameworks; policy support to developing countries; the development of institutional infrastructure; and the nature of support required at the enterprise level. The report of the meeting was sent to the International Standards Organization and other interested parties to initiate deliberation and coordination on the recommendations made. UNIDO has initiated a follow-up survey with the International Standards Organization.

UNIDO Colloquium on Industrialization and Urban Development, Vienna, Austria (23-25 October 1995)

62. The colloquium was attended by experts, city administrators and planners from developing and developed countries. The meeting focused on the following themes: the impact of urban manufacturing on employment and gender relations; industrial pollution abatement; energy efficiency in materials production, shelter construction and use; and technological changes in industrial production and their effects on the location of manufacturing. Outputs of the colloquium served, *inter alia*, to form the UNIDO contribution to the official documentation of the Habitat II Conference.

Expert Group Meeting on Technology Policy and Innovation Systems in Developing Countries, Vienna, Austria (28-30 November 1995)

63. The meeting was attended by some 10 experts from developed and developing countries and by UNIDO staff from throughout the Organization. At the meeting, trends in industrial technology policy and the global economic framework were discussed and analysed, the opportunities for and challenges of industrial and technological development in the developing countries were evaluated and strategic issues for UNIDO's work in supporting industrial technology policy formulation, implementation and assessment were identified. Sessions were held reviewing conceptual issues, including technological change and its determinants, the roles of skills, policies and institutions, and other subjects. Each participant presented a case study, either of a country experience or of a conceptual issue. Numerous lessons were drawn from the wide variety of international experiences considered, and these were summarized in the report of the meeting.

Symposium on Development and Utilization of Biomass Energy Resources in Developing Countries, Vienna, Austria (11-14 December 1995)

64. Some 50 scientists, academics, government representatives and representatives of intergovernmental bodies attended the symposium. The symposium compared regional biomass energy production and potential uses, and considered country case studies on the present situation and trends in biomass energy utilization. Technology issues discussed included

biomass resource production, conversion and technology transfer to developing countries. An analysis was also made of the financial resources available and of the mechanisms appropriate to funding biomass projects, various biomass projects were presented and environmental issues and methods of incorporating these into economic analysis were considered at the symposium. A number of recommendations were made. It was considered, for example, that biomass energy planning could follow a double path, with large projects for urban areas and smaller projects in rural areas. Biomass uses should be promoted through a continuous public information campaign. It was also considered that the approval and acceptance by the United Nations of the Intergovernmental Panel on Climate Change (IPCC-95) recommendations opens a large opportunity for the development of biomass energy resources and uses.

Expert Group Meeting on Industrial Utilization of Medicinal and Aromatic Plants in Asia, Jakarta, Indonesia (19-22 December 1995)

65. The meeting was sponsored by the International Centre for Science and High Technology (ICS) and was the result of collaboration between the Department of Chemistry of the University of Indonesia and the Chemical Industries Branch of UNIDO. Scientists participated from 13 Asian developing countries, with 30 Indonesian scientists as observers. The subjects discussed included R and D, agronomy, toxicity and activity studies, processing, standardization, quality control and marketing of medicinal plant products. Problems facing scientists were identified, as were the requirements for the development of industries based on plant matter, and a set of recommendations was drafted for consideration by UNIDO, FAO, WHO and ESCAP. The possibility of forming a regional network was discussed and it was agreed that the FAO Asian Network on Medicinal and Aromatic Plants should be expanded to include industrial activities. ICS was requested to sponsor regional symposia and training programmes.

CHAPTER V

THE REGIONAL DIMENSION

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

2. For many years, the Organization's clients and its constituency have been calling for an enhanced UNIDO field representation to enable the Organization to promptly and adequately respond to the requirements of the developing countries. The strengthening of UNIDO field representation was, therefore, one of the major aims within the ongoing reform process in 1995.

3. Following the request from the Programme and Budget Committee to prepare an *in-depth* analysis on the actual and potential impacts of the UNIDO Country Director (UCD) programme and submit a revised proposal of a new framework for field representation, UNIDO presented a comprehensive analysis and framework for a new field representation to the eleventh session of the Programme and Budget Committee, and subsequently to the Industrial Development Board at its fourteenth session and the sixth session of the General Conference, in December 1995. The document, which was prepared on the basis of an extensive study conducted by a team of consultants who visited a number of countries in all developing regions, contained a review of field representation programmes of other international organizations as well as an extensive analytical presentation of UNIDO views on field representation. The main conclusion in this document was that UNIDO

should move towards a stronger field presence by increasing the number of field offices, enhancing the role and functions of UNIDO Country Directors as well as delegating more financial authority to UCDs.

4. In 1995, the actual number of field offices was far from the target of 50 field offices that had been set earlier by Member States. UNIDO maintained 43 field offices, of which 15 were in Africa, four in the Arab States, 10 in Asia and the Pacific, two in Europe and the Newly Independent States of the former Soviet Union (NIS) and 12 in Latin America and the Caribbean.

Table 2. UNIDO Field Offices by region and source of funds in 1995

| Source of funds | Africa a/ | Arab States | Asia and the Pacific | Europe and NIS | Latin America and the Caribbean | Grand total |
|---------------------------|-----------|-------------|----------------------|----------------|---------------------------------|-------------|
| UNDP | | | | | | |
| Sectoral Support | | | | | | |
| 1994 | 7 | 2 c/ | 7 | 1 | 8 | 24 |
| 1995 | 8 | 3 c/ | 7 | 1 | 8 | 25 |
| Operational budget | | | | | | |
| 1994 | 5 | 1 b/ | 2 | - | 3 | 10 |
| 1995 | 5 | 1 b/ | 2 | - | 2 | 9 |
| Regular budget | | | | | | |
| 1994 | 5 | - | 1 | - | 2 | 8 |
| 1995 | 5 | - | 1 | - | 2 | 8 |
| Other sources d/ | | | | | | |
| 1994 | - | - | - | 1 | - | 1 |
| 1995 | - | - | - | 1 | - | 1 |
| Total | | | | | | |
| 1994 | 17 | 3 e/ | 10 | 2 | 13 | 43 |
| 1995 | 18 | 4 e/ | 10 | 2 | 12 | 43 |

a/ Two posts in Africa included under the UNDP Sectoral Support programme are also partially financed under the regular budget.

b/ Included under Africa and therefore not figured in the "Grand total".

c/ Two offices included under Africa and therefore not figured in the "Grand total".

d/ Includes voluntary contributions and IPF funds.

e/ Three offices included under Africa and therefore not figured in the "Grand total".

5. During the year it became increasingly evident that the prevailing financial constraints would force UNIDO to maintain its presence in the field at the given level rather than, as previously desired, to increase its field offices.

Thus, the Organization concentrated on strengthening the financial and staff resources of the field representation programme by identifying new and more diversified financing schemes, including the redeployment of headquarters posts to the field, increased reliance on national programming staff and enhanced contributions from host Governments toward local office costs.

6. The sectoral support funding of UNDP for the UCD programme will cease at the end of 1996. However, in its session in June 1995, the UNDP Executive Board approved an additional \$3 million for the year 1997 - on a one-time, exceptional basis - to facilitate the smooth phase-out of UNDP support for the UCD programme.

7. New coordination arrangements between UNDP and UNIDO at the country level, which will replace the Memorandum of Understanding between UNDP and UNIDO concerning the integration of UNIDO field services within UNDP field offices (concluded in 1989), were initiated in 1995 for finalization in 1996. The new arrangements will reflect the results of the ongoing reform process, as well as the evolution of execution and implementation modalities, and the increased importance of an active fund-raising role for UCDs.

8. Throughout the year, UNIDO concentrated on increasing the effectiveness and enhancing the impact of its field offices. A redefinition of the role and functions of UCDs was undertaken based on the understanding that UNIDO field offices should function as effective centers for the assessment of the actual situation of the country, identification of support requirements, formulation of integrated UNIDO programmes at national and regional levels, and mobilization of funds.

9. Delegation of administrative and financial authority, coupled with simplification of procedures, was one of the fundamental components of the ongoing process of making UNIDO field representation more effective. UNIDO took a number of steps towards decentralization and uniform procedures were established in allocating annual budgets for the operation of individual field offices, which are executed by the respective UCD. Proposals for a further delegation of responsibility to UCD offices for recruitment of local staff, local purchasing and appointment of experts are under active consideration.

10. On an experimental basis, allocations of limited technical cooperation funds to two UCD offices were made to permit UCDs to develop projects locally and provide certain substantive services. The impact of these measures is being evaluated, and consideration is being given, resources permitting, to expanding this practice to a greater number of UCD offices.

B. Africa

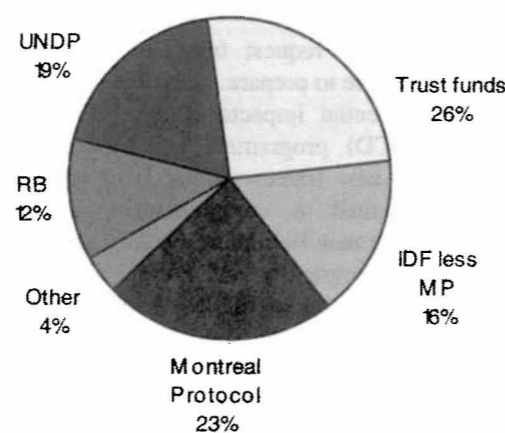
11. Despite a marked improvement in Africa's economic growth performance in 1995 caused by a more

favourable external economic environment and the adoption of appropriate domestic policy measures, the continent's overall economic condition remains precarious. While the number of countries experiencing negative economic growth declined from 14 to three, and the number of countries recording real GDP growth rates of more than 6 per cent increased from two to eight from 1994 to 1995, much of the improvement was concentrated on Southern and Eastern Africa.

12. In sub-Saharan Africa, the growth of manufacturing value added (MVA) in 1995 rose to 1.6 per cent, compared with 0.4 per cent in 1994. However, in recent years only a few countries have been able to sustain growth at relatively robust rates and attract foreign direct investment (FDI). These same countries have made headway in fostering macroeconomic stability through broad economic reform. MVA growth in the larger economies tended to remain weak, and in some cases negative. Indeed, the region has failed to make significant progress even in many labour-intensive industries. For example, clothing and footwear exports from Africa are minimal. And Africa is the one region that, according to most assessments of the Uruguay Round, will benefit little from global trade liberalization.

13. This slow industrial progress has been due to a variety of factors, including, *inter alia*, a continued high dependence on a few primary commodities and weak institutional support systems for industry. The prolonged socio-economic crisis has been aggravated in many cases by drought and famine, encroaching desertification and other natural disasters.

Figure 13. Technical cooperation expenditure in Africa in 1995, by source of funds
(Total of \$32.9 million)



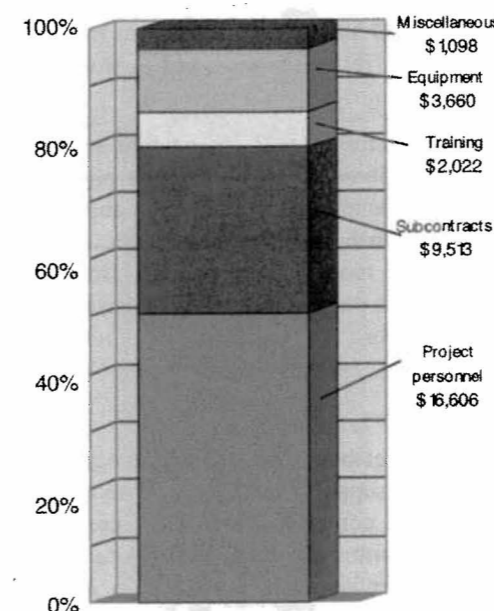
UNIDO support

14. UNIDO offered a wide range of technical cooperation services within the framework of the Second Industrial Development Decade for Africa (IDDA).

These services were provided with consideration of the objectives and areas of concentration of the United Nations New Agenda for the Development of Africa in the 1990s, the reorientation and prioritization of UNIDO services as well as the specific needs of African countries and subregions. The support programme in Africa focused on strengthening industrial institutions; developing strategies and policies for accelerated industrial development; private sector development with emphasis on strengthening private sector institutions; small and medium industry development; rehabilitation of key industries, including the introduction of cleaner production techniques in selected countries; developing human resources for industry; assisting women to meet the challenges of industrial and technological change in a competitive, global economy; and promotion of technology and investment.

15. In 1995, UNIDO technical cooperation delivery in Africa amounted to \$32.9 million. At the same time, UNIDO approved 100 new projects for a total amount of \$24.5 million from all sources of funds while project revisions resulted in an increase of \$7.2 million of project budgets. Thus, in total, \$31.7 million was approved for African projects in 1995. In addition, UNIDO finalized terms of reference for 12 TSS-1 projects for a total implementation value of \$0.92 million.

Figure 14. Technical cooperation expenditure in Africa in 1995, by project component
(In thousands of US dollars)



16. UNIDO fielded industrial sector programme review missions to six countries (Cameroon, Central African Republic, Chad, Ethiopia, Gabon and Madagascar), with

a view to developing support strategies that would address such critical issues as poverty alleviation, income generation and competitiveness of African industries. Appropriate follow-up actions during 1995 aimed at developing priority programmes for future implementation.

17. The twelfth session of the Conference of African Ministers of Industry (CAMI) convened at Gaborone, Botswana, in June 1995. Critical global issues affecting Africa's industrialization were discussed. Concurrently with CAMI at Gaborone, a private sector forum was held, jointly organized by UNIDO, UNDP, OAU, ECA and the African Business Round Table (ABR). This meeting brought together high-level experts on industrialization from both developed and developing countries to review industrial development in Africa, exchange ideas on the prospects of the region's industrialization, and define a support strategy for private sector development.

18. UNIDO, in cooperation with the Korean International Cooperation Agency, organized a regional workshop on industrial policies and strategies - the experience of the Republic of Korea and its relevance to the African countries. The workshop, which was attended by 28 participants from 20 African countries, including Ministers and chief executives of private sector enterprises, deliberated on key issues of the Republic of Korea's industrialization and their relevance for and applicability in Africa.

19. In United Nations General Assembly resolutions 46/71A and 47/118A, the United Nations system, including the specialized agencies, was urged to expand the scope of assistance provided to South Africa aimed at addressing socio-economic issues. In this regard, UNIDO, in 1995, consulted with the Government, public sector institutions and the private sector with a view to increasing awareness of the role of UNIDO in the industrialization process and paving the way for a fruitful UNIDO/South Africa cooperation programme. With the National Economic Development and Labour Council, UNIDO jointly organized a seminar on integrating technology, competitiveness and development. The seminar identified several areas for UNIDO support programmes (pending South Africa's membership in UNIDO or an agreement of cooperation) within the framework of the Government's reconstruction and development programme.

20. In November 1995, UNIDO participated in the Conference of the Global Coalition for Africa held at Maastrich, Netherlands. In response to some of the issues raised in the main conference document "Africa Faces the Future", UNIDO prepared a strategy paper for industrial development in Africa in the context of a global economy. The paper focused on, *inter alia*, the significance of the Uruguay Round of Agreements for African manufacturing, and the importance of regional

and subregional cooperation in order to overcome the limitations of small markets in many African countries.

21. In December 1995, at the sixth session of the General Conference of UNIDO, the Director-General announced a proposal for an Alliance for Africa's Industrialization as a complementary effort to the United Nations System-wide Special Initiative on Africa. This Alliance will be further developed and elaborated in 1996 in close consultation with African Governments and regional and subregional organizations.

Industrial Development Decade for Africa

22. For the biennium 1994 - 1995, the total budgetary appropriation for the IDDA programme amounted to \$10.5 million. Of that amount, a total of \$2.7 million had been committed in 1994 and \$7.8 million was available for programming in 1995 and allocated to the two programmatic components as follows:

- Technical cooperation activities (XA), \$3.9 million;
- Supplementary activities (YA) including short-term technical advisory services (STAS), \$3.9 million.

23. Despite the financial difficulties faced by the Organization in late 1995, the overall IDDA allocation did not suffer any reduction; in fact, it increased in relative terms, if compared against the overall reduction of UNIDO regular budget resources.

24. The formulation and implementation of the 1995 UNIDO programme took into consideration IDDA programme goals and objectives as inspired by decisions and recommendations made by CAMI and the UNIDO Industrial Development Board. Technical cooperation projects carried out during 1995 were concentrated on activities aiming at reviewing and formulating strategies, policies and programmes in support of African countries' own long-term visions for the development of their industrial base. They also paid particular attention to investment promotion, private sector development, technology transfer, human resources development and training.

25. Supplementary activities concentrated heavily on regional and subregional cooperation. This was accomplished by means of building linkages and networks between national economies and programmes and by supporting African regional cooperation institutions in the definition and implementation of their programmes. Supplementary activity projects also covered investment promotion and human resources development considered critical in the present stage of development of the continent. STAS resources provided a flexible and rapid instrument through which UNIDO could respond promptly and efficiently to pressing needs emanating from countries. STAS activity addressed mainly policy advice to Governments and advisory services on investment project preparation and

investment decision-making, as well as technology negotiation and acquisition.

26. While most of the technical cooperation projects as well as STAS activities were concentrated at the national level, supplementary activities focused on activities that had African-wide implications.

27. IDDA resources were also used to finance a number of activities carried out through the legislative organs of UNIDO, ECA and OAU. These included, in particular, the organization of the twelfth meeting of CAMI and the preceding meeting of the Intergovernmental Committee of Experts of the Whole on the Industrialization of Africa, as well as the private sector forum held on the occasion of the twelfth meeting of CAMI.

C. Arab Countries

28. The Arab countries encompass some of the world's wealthiest countries and, at the same time, a number of least developed countries. Most of the Arab countries, however, are of medium income, with a well-established industrial base. This diversified picture, in terms of both income levels and industrial and technological capacities, frequently calls for subregional industrial development approaches so as to match the assistance needs of groups of countries with reasonably similar characteristics.

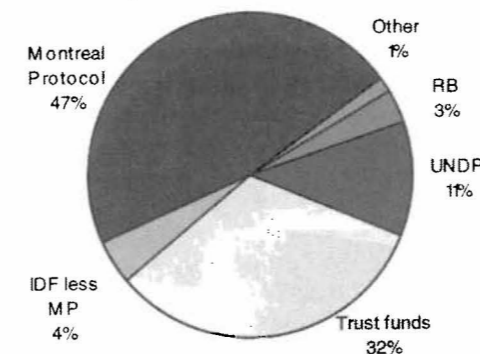
29. The public sector is still responsible for a large proportion of industrial investment, employment and production in the region. However, the relatively low productivity level of publicly owned industrial enterprises is being increasingly recognized. Accordingly, UNIDO has focused support in areas such as privatization, restructuring and productivity enhancement.

30. Industrial restructuring and privatization as well as the effects of trade liberalization agreements often result in short-term job redundancies. This fact, coupled with high population growth in several countries, calls for efforts to promote more labour-intensive small and medium industries, in particular in downstream activities related to the oil sector.

UNIDO support

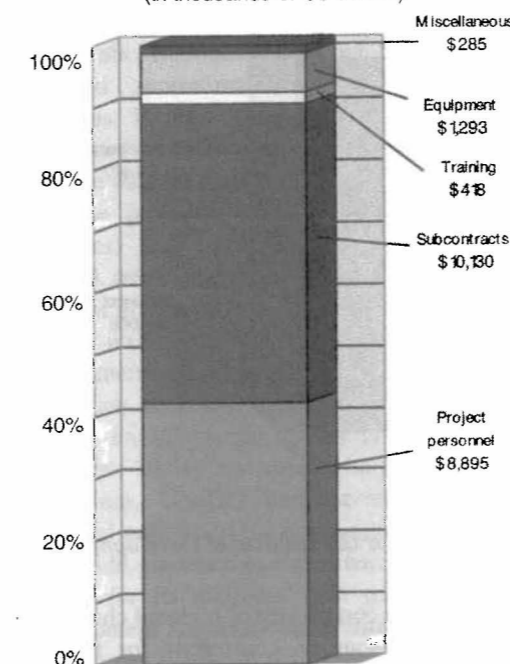
31. In 1995, UNIDO elaborated its regional programming strategy for UNIDO support of industrial development in the Arab region. A complementary study, prepared in close cooperation with AIDMO, provides a detailed analysis of the potential for cooperation in industrial development among Arab countries. This study contains concrete proposals and an action programme for regional cooperation in a wide range of industrial fields. Both exercises established a firm foundation for ensuring an optimum response by UNIDO to the changing situation and emerging needs of the region.

Figure 15. Technical cooperation expenditure in Arab States in 1995, by source of funds
(Total of \$21.0 million)



32. In 1995, total UNIDO technical cooperation expenditures in Arab countries amounted to \$21.0 million, representing an increase of 65 per cent over the previous year. Of this total, 47 per cent was accounted for by self-financed trust fund projects and 31 per cent by projects under the Multilateral Fund for Implementation of the Montreal Protocol. In the latter, UNIDO played a major role in activities in Algeria, Egypt, Jordan, Lebanon, Sudan, Syrian Arab Republic and Tunisia.

Figure 16. Technical cooperation expenditure in Arab States in 1995, by project component
(In thousands of US dollars)



33. Apart from a wide range of activities at the national level, 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: human resources development, development of national and regional technological capacities, upgrading industrial product competitiveness, standardization and quality control, industrial management information and development of agro-industries.

34. Examples of these activities included a regional meeting in Turkey on cooperation in the field of catalysts in the Middle East and North Africa; and a regional seminar on ISO 9000 and total quality management held in Lebanon in cooperation with ESCWA. In addition, two assessment studies were carried out in 1995 in the fields of instrumentation facilities and services available in the countries of the Western Asian region and in total quality management systems in the textile industry. A regional investment forum took place in Amman, Jordan, immediately following the Middle East and North Africa Economic Summit in October 1995.

35. A number of projects in the framework of IDDA funding were under implementation in the Arab region. For example, one project pertains to the development of industry-related consulting services for the Maghreb, while others concern feasibility studies on the industrial use of medicinal plants and aromatic herbs in Sudan and strengthening training programmes at a shoe design centre in Tunisia.

36. During 1995, four projects and six preparatory assistance projects were approved for implementation based on the UNIDO programming strategy for services to the Palestinian people developed at the end of 1994. The projects covered areas such as: industrial project preparation and appraisal, management of public investment projects, renewable energy application and establishment of the Palestine Standards Organization and a fashion design centre. Additional projects also supported the building materials and construction industry, the plastics industry, small- and medium-scale enterprises and the Ministry of Industry of the Palestinian National Authority.

37. During 1995, UNIDO initiated or undertook various TSS-1 activities in fields such as industry-related environmental issues (United Arab Emirates), SMEs (Qatar) and industrial policies and strategies (Syrian Arab Republic).

38. UNIDO finalized country support strategies for Egypt, Lebanon, Morocco, Syrian Arab Republic and Tunisia, and industrial sector programme review missions were fielded to Morocco and Syrian Arab Republic. As a result of these activities, technical cooperation programmes were agreed upon in various fields, such as in increasing the competitiveness of industrial products in view of existing and/or forthcoming cooperation agreements with European Union.

D. Asia and the Pacific

39. The rapid economic and industrial advancement of most countries in the Asia and Pacific region has generated significant changes in their industrial structures. First, industrial activity has become increasingly diversified, both along horizontal and vertical lines. Notwithstanding variations by countries, industrial production has gradually moved away from a limited range of unskilled labour-low technology-intensive industries to a larger variety of higher skill- and technology-intensive industries. Second, industry in the region has been strongly linked to international markets, both in terms of foreign trade and foreign direct investment. This is largely attributable to most Governments having made substantial progress in regaining and maintaining macroeconomic stability while at the same time progressively introducing outward-looking, export-led industrialization policies. This has been complemented by other reforms geared to removing market distortions and hence releasing market forces, including a clear emphasis on private sector-led industrial development, and a deregulation of financial markets.

40. While the above trends can be observed for large parts of the region, the pace and extent of economic progress and reform have differed. The newly industrializing and ASEAN countries have taken the lead, with South Asia following at some distance, and the region's economies in transition and least developed countries being in the early phases of this process.

41. This impressive industrial advance - particularly when compared to other developing regions - should not mask, however, the manifold unresolved problems as well as newly emerging challenges in the region. The single most striking phenomenon is that economic and industrial progress has gone hand in hand with growing imbalances in the distribution of income and wealth, thus leading to increasing regional disparities within countries. Likewise, it is true that more than half of the absolute poverty worldwide still is to be found in the region, numbering approximately 800 million people. Furthermore, urbanization, spurred by migration from rural areas, has reached critical levels in many cases. Finally, environmental degradation with respect to, *inter alia*, industrial pollution, energy production, soil erosion and deforestation, is on the rise, and energy shortages are increasingly felt.

UNIDO support

42. In 1995, UNIDO technical cooperation delivery to the region amounted to \$22.8 million - roughly the same level as in the previous year. In addition to significant UNIDO involvement in UNDP-funded government-executed projects in a number of countries, activities under the Montreal Protocol accounted for 22 per cent of the total and IDF projects for another 19 per cent.

Figure 17. Technical cooperation expenditure in Asia and the Pacific in 1995, by source of funds
(Total of \$22.8 million)

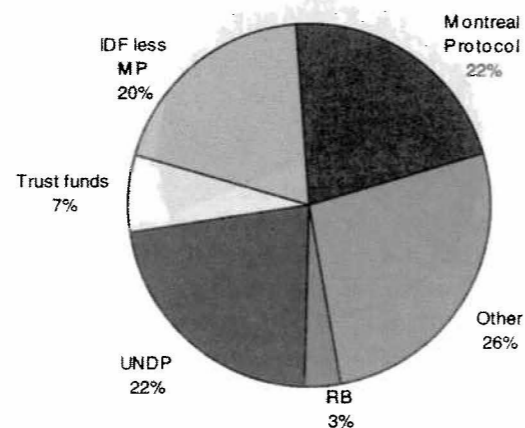
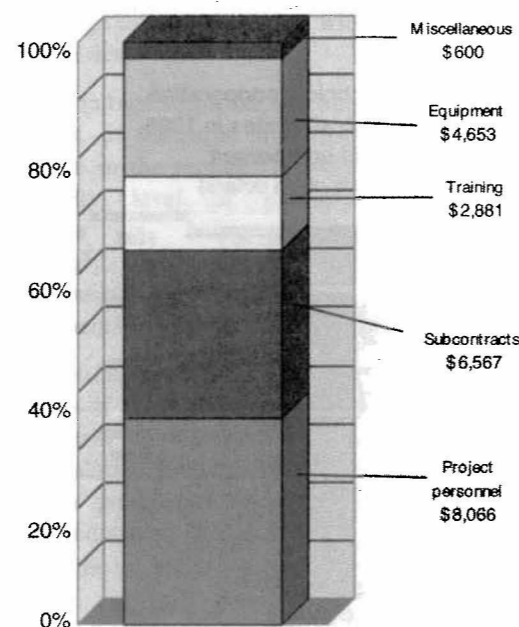


Figure 18. Technical cooperation expenditure in Asia and the Pacific in 1995, by project component
(in thousands of US dollars)



Special Programme for the Industrial Development of Asia and the Pacific

43. In view of both the complexity of regional challenges and the prevailing resource constraints for regional activities, the UNIDO Special Programme has concentrated on those areas with potentially the highest development impact. In 1995, these included the establishment of an Asian bio-informatics network, a number of projects for the containment of environmental

degradation emanating from tannery effluents, pollution control and environmental protection in chemical industries, and active participation in the UNDP inter-country programme. With respect to the region's LDCs, a number of initiatives were taken. These initiatives, notably in agro-processing and related metal-working industries, emphasized small and medium industrial enterprises with a view to capacity-building, institutional strengthening and training schemes.

44. The following provides examples of UNIDO country-level programmes and activities in the region in the reporting period. The listing is of an illustrative nature, with greater details provided in chapter III.B of this report.

Environment and energy

45. In Pakistan, a number of environment-related projects were launched related to phasing out ozone-depleting substances in the refrigeration industry and establishing an industrial pollution control and monitoring programme for sugar factories and adjacent distilleries. In the Islamic Republic of Iran, UNIDO initiated several Montreal Protocol projects in the domestic refrigeration and compressor sector as well as in environmental pollution control and waste minimization in pulp and paper industries. UNIDO assisted China in formulating 16 projects for the implementation of the country's Agenda 21 - all of which are in the field of environment and energy. Likewise, assistance was provided to the Chinese Government in the implementation of Montreal Protocol projects. UNIDO assisted in formulating an industrial environment management programme for the People's Democratic Republic of Korea for which UNDP has allocated approximately \$2 million from its IPF resources. In Viet Nam, two large-scale projects were formulated to reduce waste water pollution stemming from the industrial areas of Viet Tri and Dong Nai. Both of these projects will be funded from UNDP IPF resources, and implemented, to a large extent, by UNIDO. A major programme aimed at reducing pollutant discharge from selected industrial sectors in Sri Lanka was approved in 1995. In India, two environment-related TSS-1 projects (a study on cleaner production techniques and technologies and a master plan for environmental quality management in a region in eastern India) are approaching completion. In the Philippines, UNIDO initiated the TSS-1 project on industrial policy and the environment. The objective was to provide guidance to the Environmental Management Bureau for its dialogue with the National Economic Development Authority on environmental dimensions in the country's industrial policy.

Promotion of small and medium industries

46. During 1995 IDF funds were secured from the German Government for a four-year programme in Viet Nam to support the development of small and medium

industries in the private sector. In Bhutan, UNIDO introduced prototypes of locally adapted agricultural appliances and machinery and conducted a training programme. In Myanmar, UNIDO initiated a training programme for women entrepreneurs in the food-processing industries. In the South Pacific subregion, UNIDO became the executing agency for the UNDP small enterprise development programme. In India, the India-UNIDO Working Group established in 1994 finalized a proposal for a technical cooperation programme to support the modernization and restructuring of clusters of Indian small and medium industries.

Regional Meeting of Ministers of Industry of Asia and the Pacific

The meeting, which took place from 19 to 20 October 1995 at New Delhi, India, was convened pursuant to General Conference resolution GC.5/Res.14. The agenda called for a review of regional cooperation in the industrial sector within the framework of the UNIDO Special Programme for the Industrial Development of Asia and the Pacific.

Under the theme "accelerated industrial development and competitiveness in the Asia and Pacific region", the meeting reviewed a selected number of important issues related to the intense competition in an increasingly globalized economy and their repercussion on industry in the region.

Jointly prepared by the Secretariats of UNIDO and ESCAP, the meeting was attended by some 90 representatives from the countries of the region as well as from important regional institutions. The deliberations concentrated on:

- Perspectives for competitive industrial development in Asia and the Pacific in the context of evolving global developments
- Coping with the challenges of competition at the enterprise level: innovation, new technologies and institutional support
- Environmentally sustainable industrial development
- Least developed countries in the region
- The UNIDO regional programme for Asia and the Pacific: achievements and perspectives.

The deliberations among the Ministers of Industry and senior Government representatives resulted in the adoption of the New Delhi Declaration on Accelerated Industrial Development and Competitiveness in the Asia and Pacific Region. The Declaration describes the regional priorities for services required from UNIDO and strongly affirms the central and vital role of the Organization in the United Nations system in the field of industrial development.

Information, investment and technology

47. In the context of an Intechmart convened in India in March, UNIDO and the Ministry of Industry organized three seminars on investment opportunities, foreign investment and finance for investment. In China, UNIDO helped promote foreign investment in Yanbian prefecture, in the country's Tumen River area. UNIDO also assisted China through a series of projects for the introduction of the build-operate-transfer (BOT) scheme and through a study on management of technological change in an evolving market economy. In Pakistan, with support from the Government of Denmark, work continued on a large-scale project to establish a ecotoxicology centre capable of performing technological and environmental research of pesticides production and use. UNIDO initiated work in Bangladesh - as follow-up to an earlier study on the Bangladesh software industry - in order to establish access to international industrial databases through Internet connectivity. The project is intended to be carried out with the country's industrial associations, and UNIDO foresees partial funding by the World Bank.

Industrial strategy and policy advice

48. In 1995, a major programme was approved aimed at assisting the Government of Viet Nam in the formulation of a medium-term industrial and trade development strategy and related action plan, and funding was obtained from various IDf donor countries. In Indonesia, UNIDO implemented a TSS-1 project on the strategic management of industrial development with the objective of developing a strategic framework and action programme for the design and restructuring of enterprise clusters in the rubber and consumer electronics industries.

E. Europe and the NIS

49. The UNIDO programme in Europe and the Newly Independent States of the former Soviet Union (NIS) includes 30 countries, out of which 15 are located in Europe and 15 in the NIS. Of the European countries, three - Cyprus, Malta and Turkey - are established market economies, whereas the other 12 are undergoing a deep transformation process, introducing market mechanisms and institutional infrastructure to create a sustainable basis for economic development. The majority of the NIS countries are also promoting market-based economic policies, yet are less advanced in their transformation process which in general started later than in the countries in Europe.

50. In 1995, economic trends and industrial transformation patterns varied widely among the countries, both in terms of the depth and the pace of change. In many countries, the existence of a highly educated labour force, as well as the influx of foreign assistance and foreign investment both had a positive impact on the pace of the introduction of market reforms

over the period. A better understanding of the global dimension of industrial cooperation based on the principles of comparative advantage and of competition, and of the potential benefits resulting therefrom, also played an important role in this process.

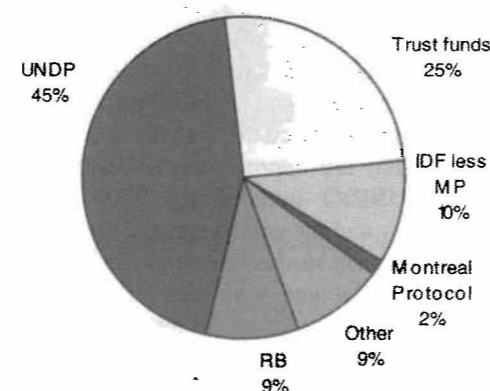
Economic trends

51. According to the basic economic indicators for 1995, most of the European economies in transition began to recover from economic crisis. The average increase in GDP was more than 4 per cent, and economic growth rates in most countries of the region were higher than in 1994. The highest GDP growth - exceeding 5 per cent - was recorded in Poland, Slovakia and Slovenia.

52. For a number of these countries the level of economic performance in 1995 surpassed the best results achieved prior to the economic crisis and subsequent transformation. Industry played a key role in this upturn, with industrial output growing on average by 8 per cent. In many countries, the private sector contribution to GNP exceeded 50 per cent. Foreign investment inflow continued, although not in the volume desired - and anticipated - by the Governments in the region.

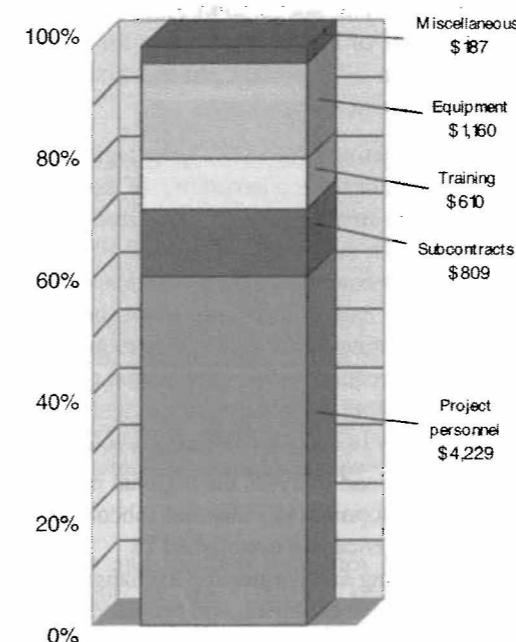
53. The majority of NIS countries experienced further economic decline in 1995, though the pace of the downturn slackened. It can be expected that the following years should also bring in this group of countries the consolidation of positive economic trends that were manifest in 1995 in the European part of the region, including: positive growth in GNP, increased industrial growth in selected sectors, further reduction in inflation, stabilization of unemployment, and growth in exports. It is also expected that privatization and private sector development will proceed.

Figure 19. Technical cooperation expenditure in Europe and NIS in 1995, by source of funds
(Total of \$7.0 million)

**UNIDO support**

54. Throughout the year UNIDO placed great importance on continuing the ongoing policy dialogue with key decision-makers in the countries of the region. One part of this dialogue revolved around semi-annual meetings with the Permanent Missions in Vienna to keep them informed about the nature and pattern of UNIDO technical cooperation, new opportunities for technical cooperation and constraints faced in their implementation, and the UNIDO priorities for the future. As a reflection both of the expressed demand of the Member States and UNIDO priorities and capabilities, UNIDO services were concentrated on five priority areas: industrial restructuring and privatization, investment promotion (including pre-investment analyses), enterprise development with emphasis on SME promotion, industrial strategy and policy advice, and environment and energy-related issues. In all these fields, UNIDO provided assistance in terms of policy advice, institutional support, and human resources development, including gender issues.

Figure 20. Technical cooperation expenditure in Europe and NIS in 1995, by project component
(In thousands of US dollars)



55. In 1995, technical cooperation delivery to the region amounted to \$7.0 million - an increase of 47 per cent over the previous year. Of this, 31 per cent originated from UNDP resources and 23 per cent from third-party-financed trust funds.

56. The range of services in the region increased substantially in 1995 in such fields as quality assurance, standardization, technological and business information,

industrial investment project preparation and appraisal, policy advice on industrial restructuring, human resources development, reduction of ozone depleting substances and SME promotion. Also, technical cooperation delivered by UNIDO was more widely spread among the countries of the region.

Joint Committees

57. A clear trend in the region is for countries to cooperate with UNIDO in a double capacity, both as recipients and as donors. The mechanism of Joint Committees was used to regularly review and promote the activities of the Organization in the countries concerned as well as to promote outreach activities for the benefit of the developing countries (and other economies in transition). During 1995, Joint Committee meetings were held with the Czech Republic, Romania, Russian Federation, Slovakia and Turkey. Joint "outreach" programmes were approved for the Czech Republic, Slovakia and Turkey, with a focus, in general, on human resources development. As regards the Czech Republic and Slovakia, the focus was on activities within the centres for non-metallic and metallic industries, while in Turkey, emphasis was on organizing in-plant group training.

Country support strategies

58. During the period under review, UNIDO published country support strategies for four Central Asian countries (Azerbaijan, Kazakstan, Kyrgyzstan and Uzbekistan). Follow-up missions were launched to Saudi Arabia - the original funding partner - and to the European Bank for Reconstruction and Development to discuss modalities for implementation of identified projects. The preparation of country support strategies also began for Croatia and Slovakia.

Sources of funds

59. In 1995, UNIDO mobilized both traditional and new sources of funding for technical cooperation programmes and projects in the region. Contributions were obtained, *inter alia*, from the Governments of Austria, Japan, Netherlands, and the United Kingdom, as well as from the Multilateral Fund for the Montreal Protocol, the European Union, and the World Bank. A fact-finding mission was carried out to Armenia to prepare a technical cooperation programme for funding consideration from, among others, the Government of Greece. A programme of cooperation was also prepared for Bosnia and Herzegovina following the inter-agency mission to this country in the beginning of 1995 in which UNIDO participated.

60. Financial support was also received from UNDP indicative planning figure resources for UNIDO-executed projects in Albania, Azerbaijan, Bosnia and Herzegovina, Czech Republic, Kazakstan, Republic of Moldova, Slovenia, and The former Yugoslav Republic of Macedonia. In general, potential new opportunities

were identified under self-financed trust funds, the Global Environment Facility, the European Union PHARE/TACIS programmes and USAID, though further negotiations are required to make full use of these opportunities.

F. Latin America and the Caribbean

61. Economic developments in Latin America and the Caribbean during 1995 were dominated by the aftermath of the 1994 Mexican financial crisis. The decline of the region's economic growth (falling from 5 per cent in 1994 to only 0.6 per cent in 1995) was somewhat reflected in the recession that hit Mexico and Argentina in 1995. As these two countries settled into the painful process of adjustment by undergoing strong austerity measures, the rest of the region placed increasing emphasis on regional integration and economic liberalization.

62. The Mexican crisis highlighted the region's vulnerability to volatile international capital flows but, at the same time, showed the strong capacity of the region's economies to react to such disturbances. The reforms under way since the end of the 1980s have clearly prevented the crisis from having lasting effects on the entire region (as was the case in 1982 when a similar shock plunged the region into a long recession).

Regional Meeting of Ministers of Industry from Latin America and the Caribbean

The meeting, which took place from 19 to 22 September 1995 at Montevideo, Uruguay, was attended by representatives from 19 countries in the region and from nine regional organizations. The agenda covered a wide range of issues related to the region's industrial development including:

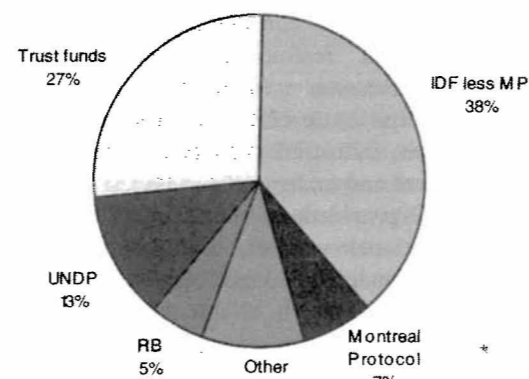
- Industrial strategies and policies in the context of global and regional economic integration
- Private sector development
- Quality management and competitiveness
- Investment promotion and technology transfer
- Capacity-building for the development of human and technological resources
- Environmentally sustainable industrial development
- Prospects for the UNIDO programme in the region

A Ministerial Declaration was adopted that emphasized the importance of industrialization and the support for UNIDO's continued role as a specialized agency for industrial development. This declaration, along with the meeting's conclusions, will guide UNIDO in developing new support programmes for the region aimed at attaining higher standards of economic and social development.

UNIDO support

63. In 1995, UNIDO technical cooperation delivery to the region amounted to \$8.8 million, of which 46 per cent originated from IDF resources. Self-financed trust funds accounted for another 15 per cent of the total.

Figure 21. Technical cooperation expenditure in Latin America and the Caribbean in 1995, by source of funds (Total of \$8.8 million)



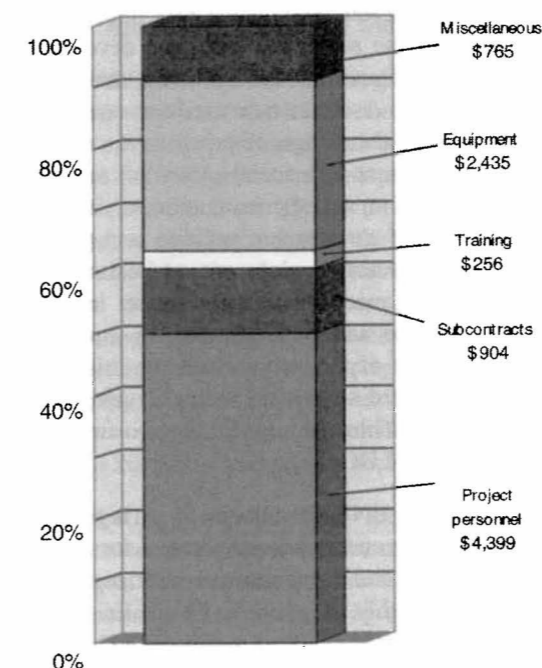
64. UNIDO's Regional Cooperation Programme for the Industrial Recovery of Latin America and the Caribbean saw the completion of important phases in some of its component programmes:

- During a meeting held in 1995, the regional programme for the modernization of the capital goods sector in Latin America finalized field activities with the counterparts of all 10 participating countries. The positive results presented by each country, as well as those identified during the UNIDO evaluation, prompted a request for the preparation of a new project applying the same approach and methodology to other industrial subsectors.
- Through the end of 1995, the regional programme for the development of industrial subcontracting in Latin America had established 28 subcontracting and partnership exchanges in 14 Latin American countries, and provided training in the application of UNIDO software. In 1995, the seventh and eighth regional exhibit "Subcontrata Latino Americana" took place at Asunción, Paraguay, and Santiago, Chile.
- The biotechnology programme developed its strategy for the next phase which will focus mainly on project management, the commercialization of biotechnological products, application of biotechnology to the solution of environmental problems and bioinformatics. As

the substantial financial support from UNDP received in the first two phases will be reduced, other funding options are being explored.

- In Central America, UNIDO elaborated an agenda for industrial modernization in the Central American private sector. The document, prepared with the cooperation of ECLAC, took into consideration the positions of the private sector in Costa Rica, El Salvador, Guatemala, Honduras and Nicaragua for an overall strategy framework encouraging the industrial modernization of the subregion. Concrete action plans and programmes are being developed for each of the countries of the subregion jointly with the Federation of Chambers and Associations of Industry in Central America.

Figure 22. Technical cooperation expenditure in Latin America and the Caribbean in 1995, by project component (In thousands of US dollars)



65. Small and medium industries (SMIs) remained a main target of the UNIDO technical cooperation programme, marked by starting several country-level programmes for development of clusters of SMIs. The cluster approach has proven to be highly effective for SMI support in Latin America and the Caribbean region. This approach aims at the organization of clusters of small industries with a view to enhancing linkages between government support institutions, groups of enterprises and specialized industry associations. In a number of countries, initiatives were also undertaken to promote specific target groups, such as women entrepreneurs or enterprises in rural areas.

66. In the environmental field, 1995 saw the expansion of the UNIDO national cleaner production centres programme to Latin America. Brazil and Mexico became active members of the network and initiated negotiations for the further extension of the programme to Argentina, Central America and Colombia.

67. The main focus of TSS-1 activities in the region (Colombia, Ecuador, Uruguay, Amazonia) continued to be advice on the promotion of environmentally sustainable industrial development through environmental management and cleaner production. At the same time, an increasing number of TSS-1 activities advised Governments of the region in formulating industrial policies aimed at translating macro-economic reforms into greater productive employment and higher income levels for the population (Bolivia, Costa Rica, Cuba, Guatemala, Jamaica, Mexico, Panama, Uruguay and Venezuela).

68. In seeking to identify alternative mechanisms for financing technical cooperation programmes, efforts were made towards improving the cooperation framework with regional financing institutions and towards promoting self-financing schemes of cooperation. The negotiations with the Interamerican Development Bank paved the way for better harmonization of operational procedures of both institutions. The region also experienced an increase in self-financed trust fund programmes, e.g. in Argentina, Brazil, Colombia and Mexico.

G. Least Developed Countries

69. Numerous problems constrain industrial development in the LDCs. Restrictions to development relate to physical conditions such as remote insular and land-locked locations as well as to resources, markets, savings and foreign exchange, human resources, infrastructure and institutional factors. The internal obstacles are all too familiar: poor infrastructure and communication, inadequate health and educational services, scarce and unreliable power supplies, and insufficient agricultural and industrial support services together with generally weak institutional and administrative capacity and capabilities for development. Furthermore, progress often falters or is lost in the face of civil unrest and natural disasters. Vicious cycles of poverty can be found in many LDCs, where abject poverty in rural areas may lead to environmental degradation through unsound farming, or to rapid urbanization as a result of migration away from rural areas.

70. Compounding the already precarious situation of development in most LDCs are factors related to the international economic environment. Such factors include: changing patterns of industrial competition; changes in the determinants and the magnitude of foreign direct investment and financial flows; the

development of new technologies resulting in new production processes and skill requirements; the building of new regional trading blocks; and the uncertainties in exchange rates and raw material prices.

71. The share of all LDCs in world manufacturing value added (MVA) has remained constant since 1980 at a level as low as 0.3 per cent. Likewise, the share of MVA in GDP for all LDCs hardly changed from 8.6 per cent in 1980 to 8.8 per cent in 1993 (the latest year for which figures are available).

UNIDO support

72. UNIDO programmes and projects in support of LDCs have been described throughout the present report, in particular in chapter III within their thematic context. The present section provides a summary account of the main areas addressed. In 1995, total UNIDO technical cooperation delivery to LDCs amounted to \$8.6 million. While this is at a lower level than in 1994 - the shortfall being caused entirely by the decrease in UNDP-funded projects - a significant increase (22 per cent) was achieved in 1994 in net project approvals, which went up from \$6.2 million in 1994 to \$7.6 million in 1995. Out of these total net approvals, three quarters (76 per cent) went to African LDCs.

73. The figures referred to above exclude a significant number of regional, interregional and global projects as well as fellowships, study tours and group training programmes in which LDCs, together with other developing countries, are involved.

74. UNIDO continued to support programmes in LDCs aimed at creating an enabling environment for investment promotion and mobilizing of financial resources for industrial development. A total of 10 LDCs benefited from support which covered, *inter alia*, assistance to ministries of industry in formulating their national investment policies, identifying international investment opportunities and strengthening investment and export promotion institutions in LDCs.

75. As a further element to support LDCs in mobilizing local and foreign investments, UNIDO organized international investors forums for a number of LDCs. In this context, in April 1995, UNIDO organized an investment forum in the United Republic of Tanzania for Zanzibar, which led to the approval of a large-scale investment programme. This programme, funded by UNDP, aimed at strengthening investment and export promotion institutions in Zanzibar. UNIDO organized an investment forum for four selected Member states of COMESA, including three LDCs, in November 1995 that resulted in promoting some 80 investment projects in the three LDCs.

76. Within the context of its new thematic priorities, UNIDO gave particular attention to further promoting

the industrialization of LDCs through a focused programme on enhancing linkages between industry and agriculture. While continuing its special programmes for LDCs in Asia and the Pacific and in the Arab region on agro-related metal-working industries, a high impact programme was elaborated on application of quality principles to the food-processing sector in seven sub-Saharan countries in East and South Africa, including five LDCs. The programme has as its immediate objective the rapid and measurable improvement of food safety at the enterprise level (see also section III.B.7 of this report).

77. Based on case studies in seven LDCs in Central, East and West Africa, UNIDO developed a high impact programme introducing new technologies for abatement of mercury pollution. The objective is to replace mercury amalgamation with new technology while improving miners' income through more efficient recovery. This programme is now being reviewed for implementation in Asian LDCs (see also section III.B.2 of this report).

78. Taking into account the increasingly important role of a dynamic private sector for industrial development, UNIDO actively supported the LDCs in their private sector development. Assistance focused on various areas, such as supporting the design of privatization strategies including development of a social safety net to mitigate the negative social impact of privatization, reviewing the legal framework of government policies and strategies related to private sector development, and establishment of a consultative mechanism to enhance interaction between the private and public sector. In April 1995, UNIDO hosted an expert group meeting in Nepal to discuss issues related to private sector development in preparation of the Third Ministerial Symposium on the Industrialization of LDCs.

79. In addition, UNIDO elaborated a high impact programme on integrated advisory services for industrial policy formulation and competitiveness strategies. The main objective of this programme, *inter alia*, covering three LDCs in Asia (Cambodia, Lao People's Democratic Republic and Myanmar), is to assist the Governments of these countries in formulating a medium-term industrial strategy and to enhance interaction between policy makers and industry (see also section III.B.1 of this report).

80. In view of the pivotal contribution of micro, small and medium enterprises to employment creation and income generation in rural areas, UNIDO gave considerable attention to their support. Seven LDCs benefited from UNIDO technical cooperation in this field, covering a range of activities from formulation of a coherent and effective policy framework for rural industrialization to the establishment of a support network for training and advisory services.

81. Nineteen LDCs received assistance from UNIDO in human resources development aimed at upgrading critical skills required for industrial development. UNIDO formulated a high impact programme for women's entrepreneurship development, based on a survey undertaken in 10 South and East African countries, including six LDCs. The programme aims at alleviating gender-specific imbalances that have a negative impact on women's performance as well as creating an enabling environment for growth of women's industrial enterprises.

82. In the area of environment, UNIDO continued its support to 10 LDCs. Projects ranged from waste-water and animal waste treatment to building institutional capabilities for industry-related environment policies, research and development in new and renewable sources of energy. Projects also focused on pollution control and cleaner technology, including the phasing out of ozone-depleting substances.

Third Ministerial Symposium on the Industrialization of Least Developed Countries

UNIDO hosted the symposium in Vienna, from 30 November to 8 December 1995 in conjunction with the sixth session of the General Conference. It provided a forum for Ministers and delegates from 38 LDCs and six international organizations to discuss common industrial development issues as well as their future cooperation with UNIDO.

The participants agreed that, despite their differing development levels, the LDCs consider "sustainable private sector development and accelerated growth of industrial enterprises" as their prime development objective at the start of the 21st century. The participants emphasized that the Governments in LDCs should take the responsibility to further improve the macro-economic environment through formulating appropriate development policies, establishing regulatory and legislative systems, developing human resources and infrastructure as well as establishing consultative mechanisms between the public and private sector.

The meeting acknowledged the importance of privatization as an instrument for creating favourable conditions for industrial growth and economic development. The Ministers agreed that an active private sector, supported by an investment-friendly environment, will play a pivotal role in sustainable

industrial development of LDCs by creating employment and income-generating opportunities.

The symposium recognized the need for enhancing the fundamental role of regional cooperation to promote the flow of goods, services, investments, skills and technology. Such cooperation should encourage close interaction of trade, industry and training institutions among the countries involved, and facilitate the development of internationally competitive industries.

While recognizing that many LDCs have made considerable efforts to promote private sector development, the meeting agreed that they require continuous support from the international community. The meeting proposed a set of measures and recommendations for consideration by United Nations organizations, bilateral development organizations, and international and regional financial institutions.

The conclusions and recommendations of the symposium were submitted to the sixth session of the General Conference for consideration. The General Conference took note of the recommendations of the symposium and appealed, in its resolution GC.6/Res.8, "to the international community, especially the developed countries, regional and international financial institutions and private investors, to enhance their financial and technological support" to the LDCs.

CHAPTER VI

MOBILIZING FUNDS FOR UNIDO SERVICES

1. In 1995, UNIDO intensified its efforts to establish working relationships with new potential sources of funds while expanding contacts with traditional donors. The drive towards an increasing diversification of funds was called for, *inter alia*, in response to the continuing trend of a rapidly dwindling role of the UNDP indicative planning figure (IPF) as the central fund for technical cooperation in the United Nations system. For UNIDO, funds provided from this source decreased from \$86.2 million in 1990 to \$9.7 million in 1995 in terms of annual net project approvals.

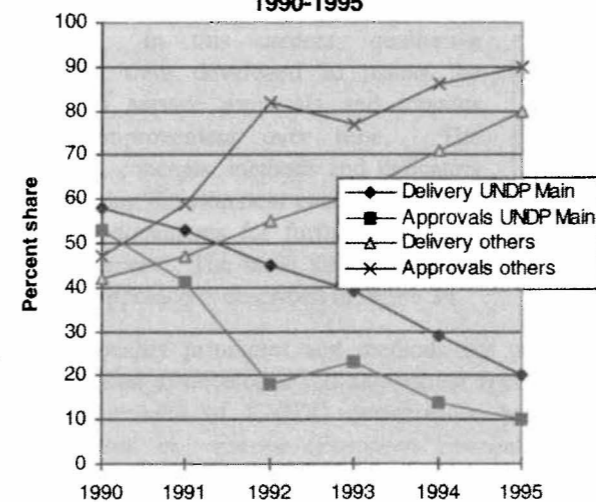
2. Figure 23 shows the dramatic implications of this trend for the relative composition of extra-budgetary financing of UNIDO technical cooperation activities. The share of UNDP-IPF (including special measures and cash counterpart contributions) plunged between 1990 and 1995 from 58 per cent to 19 per cent of project delivery and, even more accentuated, from 53 per cent to 11 per cent of net project approvals.

3. While UNIDO has been successful in developing new sources of funds - most notably the Multilateral Fund of the Montreal Protocol accounting in 1995 for approximately 30 per cent of new project approvals - it is clear that the magnitude and rapidity in the reduction of UNDP financing has been too significant to be fully compensated for immediately.

4. Development of new reliable sources of funds for UNIDO activities is, however, a time-consuming process. In a number of cases, a legal agreement is required as a first step before such cooperation can be envisaged. In addition, the review and approval process required by new donors can be very long. In the 1994-1995 biennium a number of initiatives were started that are expected to be reflected in the delivery figures in future years. The main ones are summarized below.

5. In respect of Governments as donors - until now with contributions received mainly from the relevant ministry for international cooperation through the IDF - efforts have been made to broaden access to other ministries as well as to other multi- and bilateral sources. These efforts are starting to produce results. For instance, a large project aimed at the establishment of business incubators in Eastern Europe was funded by the Ministry of Economic Affairs of the Netherlands. In another case, four Nordic countries contributed funds earmarked for transitional economies to a UNIDO regional development project in Kaliningrad. Further activities carried out in 1995 included approaching donors of non-convertible currencies to provide part of their contribution in convertible currencies and contacting recipient Governments with a view to mobilizing self-financing of high-priority activities. In addition, consultations with the European Union have been ongoing since 1994 with the expectation of an agreement in the course of 1996 that will open the way for cooperation and funding.

Figure 23. Net approvals and delivery
1990-1995



6. With regard to development finance institutions, UNIDO has participated in negotiations with the World Bank on the formulation of a standard agreement between the borrowers of Bank funds and the United Nations agencies that in the meantime has been finalized. This will further facilitate involvement in the implementation of loans in areas of UNIDO expertise that, until now, has been based on a UNIDO model agreement. In some recent cases the World Bank approached UNIDO directly with requests to provide specialized services, and in four fields of mutual priorities (privatization, quality management, small and medium industries and build-operate-transfer schemes), contact has been established between task managers in UNIDO and the World Bank. In 1995, UNIDO was implementing eight projects under World Bank financing. These projects ranged from an ecologically sustainable industrial development (ESID) programme in Madagascar to private sector industrial skills development in the Philippines and the training of Russian managers in project management. A considerable pipeline has been built up involving some 15 projects on which UNIDO is negotiating with the World Bank and its borrowers for implementation.

7. Negotiations with the Inter-American Development Bank, initiated in 1994, resulted in the formulation of an agreement to be signed in early 1996. This breakthrough will make it possible for UNIDO to implement loan components and other technical cooperation financed by

the Inter-American Development Bank. Some large-scale projects are likely to be signed during 1996. Initial discussions were already undertaken by the Director-General of UNIDO with the African Development Bank with a view to signing a similar agreement.

8. Within the United Nations system UNIDO worked actively in 1995 with the Common Fund for Commodities (CFC) to develop a portfolio of projects. Currently projects worth \$11 million are ready for approval. These are fully within the thematic priority of developing agro-based industries, primarily in Africa. Efforts were also made to accelerate the project negotiation process for CFC projects. Similarly, focused activities were undertaken to develop a substantial pipeline of projects for financing from the Global Environment Facility. Five projects totalling \$15 million are in an advanced stage, and some approvals are expected in 1996. Further, cooperation with the United Nations Children's Fund in the area of salt iodization, specifically by small-scale salt producers, is expected to lead to new approvals. Finally, UNIDO is trying to sustain the success of the Organization in recent years with the Multilateral Fund for the Montreal Protocol.

9. Regarding the industrial sector itself, an initiative started in 1995 to develop contacts with a number of large international enterprises will be actively pursued in 1996, not only to improve contacts with industry in general but also specifically with a view to mobilizing resources in support of UNIDO activities.

CHAPTER VII

QUALITY ASSURANCE AND EVALUATION

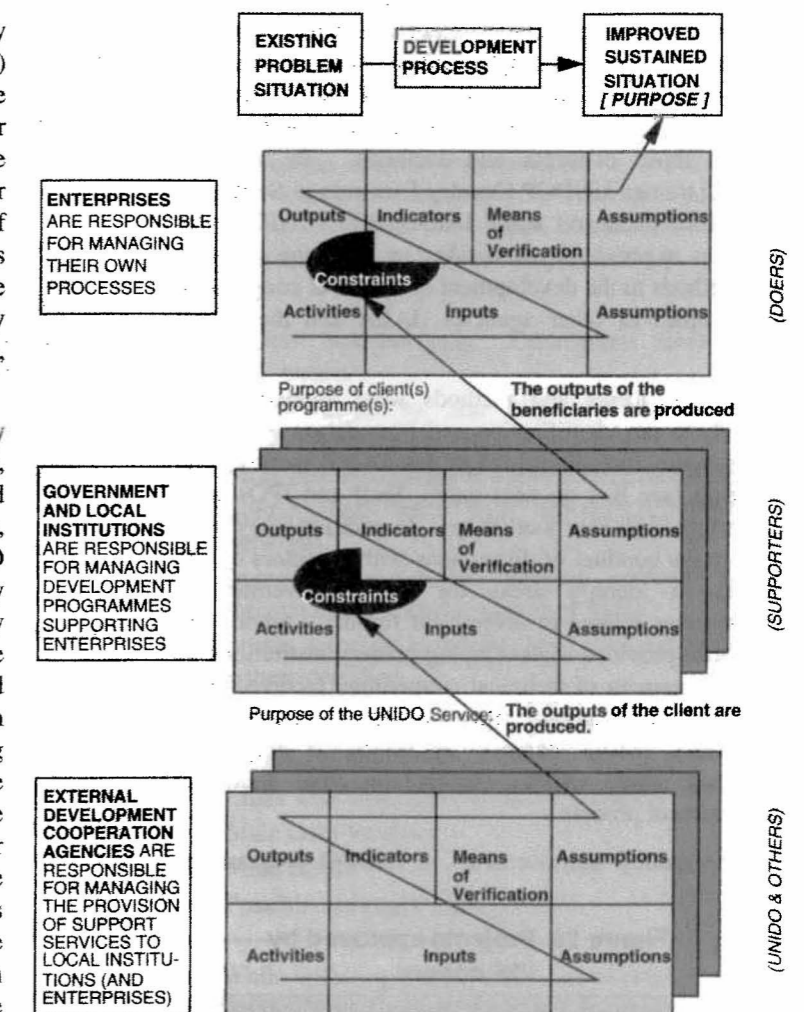
A. Quality assurance

1. The adoption of quality management by UNIDO (as outlined in document GC.5/23) greatly benefited from the acceleration of the reform process in 1995. Of particular significance was the initiation of work on the introduction of performance indicators for the organization as a whole. The purpose of assessing UNIDO performance is its continuous improvement in relation to the quality criteria established for its services by Member States: relevance, efficiency, effectiveness, sustainability and impact.

2. Guiding principles for the quality management of development cooperation, based on the UNIDO Constitution, provided a framework for the identification, formulation and implementation of UNIDO services in 1995; principles applied in quality management were noted with appreciation by the sixth session of the General Conference (GC.6/Res.10). The main methodology used to develop UNIDO services is an adaptation of objectives-oriented project planning (OOPP). In this context, qualitative indicators were developed to assess the quality of service proposals and monitor overall improvement over time. The principles, concepts, methods and indicators for managing development cooperation were issued as documents for further discussion and refinement. The basic structure of the UNIDO approach is described in figure 24.

3. The quality principles and methods are presently being applied to develop a self-assessment approach to the measurement of UNIDO performance based on models used in Europe (European Foundation for Quality Management - EFQM), India, Japan and the United States of America. The criteria adopted are objective and internationally recognized as valid for the

Figure 24. Basic structure of development cooperation



assessment of organizational excellence. UNIDO is the first organization within the United Nations system in the process of adopting such a self-assessment approach, following the further training of its staff by EFQM in 1995.

4. The approach to performance measurement being adopted by UNIDO comprises four result criteria: client

satisfaction; impact on industrial development; financial situation; and staff satisfaction. It also comprises five enabling factors: leadership by management; UNIDO policy, thematic priorities and component strategies; staff management; resource management; and critical processes. Qualitative indicators for the assessment of these enabling factors are being developed within the activity groups set up under the reform process. In addition the notion of "internal customer" is being introduced at the level of each organizational unit and through the staff performance evaluation system.

5. UNIDO work on concepts and methods for the quality management of development cooperation was discussed at working sessions on this subject with 12 multi- and bilateral development cooperation agencies in March 1995. The UNIDO concepts and methods were found to be at the forefront, several agencies wishing to learn more about them through further working sessions. Thus, UNIDO staff visited the World Bank, the International Monetary Fund and the European Union to present those concepts and methods. In addition, UNIDO trained UNDCP Country Directors in South and South-East Asia and some IAEA staff. UNIDO was again, as in previous years, asked to apply the concepts and methods to the development of technical cooperation programmes of other agencies (IAEA and the World Bank).

6. The concepts and methods were applied within UNIDO to the identification and formulation of several programmes including through one OOPP workshop in Slovenia (see box on next page). Staff and JPOs were trained through four workshops. In addition, they were used in the conduct of discussions with Directors of IPS offices to identify areas for the improvement of programmes related to investment forums. Advice has also been provided to developing country institutions on the management of technical cooperation received from bi- and multilateral organizations to help them effectively master external assistance to ensure its sustained and visible impact on the industrial development process.

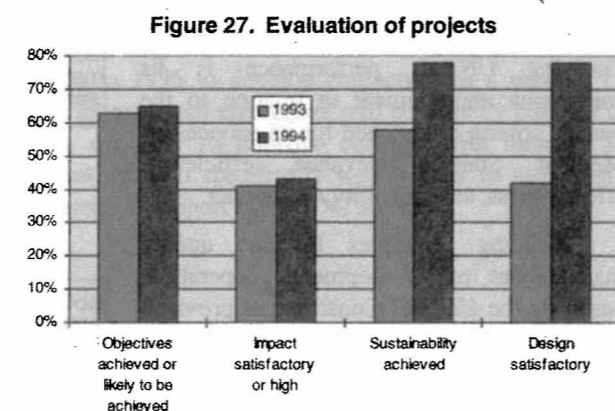
7. The quality improvements in UNIDO programmes

and projects - brought about by the application of quality management principles through a decentralized quality assurance system - resulted in significantly higher approval ratios by the UNIDO Programme and Project Review Committee (PPRC) as well as by donor countries to IDF. Both developments are shown in figures 25 and 26.

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. A total of 23 in-depth evaluations and 96 project performance evaluation reports were completed in 1994, forming the basis for the 1995 review. This exercise provides for an assessment of project performance. It contains structured information on project management, funding sources, attainment of objectives, shortcomings in design, problems in implementation and lessons learned. The key findings of the 1995 review are summarized below (see figure 27).



9. On average, project performance was at a level similar to that achieved in the previous year: outputs were produced and immediate objectives were achieved or likely to be achieved as planned in 65 per cent of cases in 1994 (63 per cent in 1993). In line with this finding, project impact also recorded a slight improvement: it was found to be satisfactory or high in 43 per cent of cases in 1994 against 41 per cent of cases in 1993.

Project sustainability was achieved in 78 per cent of cases, which is a marked improvement when compared to the 1993 figure of 58 per cent.

10. The review found that, on average, project design (project formulation) recorded a significant improvement with satisfactory design indicated in 78 per cent of projects implemented in 1994, against only 42 per cent in 1993. This may be attributable to the continuous attention paid to high quality standards in project design in recent years. However, further improvement is desirable in project design in particular, by applying quantitative performance indicators at the purpose (immediate objective) and development objective (impact) levels.

11. The quality of project monitoring and backstopping was assessed to be very good to satisfactory in about half of the evaluated projects, which is approximately at the level of the previous years. However, it should be noted that 1994 was the first year of the UNIDO reform accompanied by staff reduction and reassignments so that project monitoring and backstopping took place under particularly challenging conditions.

Investment Promotion Services

12. Evaluations of six Investment Promotion Service (IPS) offices were conducted in the 1994-1995 biennium. The main findings and lessons learned from these evaluations were presented to the thirteenth UNIDO industrial investment programme meeting held in November 1995, thus supporting the feedback from evaluation to programme management. The evaluations confirmed the importance of investment promotion activities in supporting increased flows of capital and technology to developing countries. They also confirmed that the promotion of industrial investment in developing countries in many cases takes place in high risk environments; therefore, while many investment opportunities are identified not all of them materialize. The evaluations further underlined the relevance of IPS offices as a window on business opportunities in developing countries, particularly for small and medium enterprises. Most of the IPS offices have a good reputation as a neutral source of information and matchmaking; in some cases, client satisfaction is clearly reflected in the willingness to pay for some of the services provided.

13. Among the various IPS promotional activities, the delegate's programme was found to be the most effective in bringing results. It is a unique characteristic of the UNIDO programme and deserves to be strengthened. On the other hand, it was 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 should place increased emphasis on identifying and networking partners, in addition to support to project formulation.

Workshop for the Preparation of the Draft Business Plan of the Slovenian Small Business Development Centre (SBDC)

Ljubljana, 13-14 September 1995

The workshop was the initial activity of project DP/SVN/95/001 - "Strengthening the Small Business Development Centre of Slovenia" (SBDC). Its purpose was to work out - through an OOPP participatory approach - a draft business plan for the Centre.

The workshop was organized by the Ministry of Economic Affairs and attended by representatives of government departments, support and training institutions, industrial chambers and major donors. The discussions involved three main steps:

(i) Assessment of the existing situation: Participants were asked to (a) list the major constraints affecting the development of the SME sector in Slovenia and indicate (b) what action was currently being taken to mitigate those constraints and by whom.

The problem matrix was used as a framework against which to check (a) the relevance of the proposed functions of SBDC and (b) their complementarity to those performed by other parties.

(ii) Draft business plan: Participants identified SBDC's results:

- Easier access to, and improved quality of, support services for SMEs
- More positive attitude towards entrepreneurship
- Strengthened links with international SME networks
- Improved coordination between national and international efforts in support of SMEs

The main activities to produce the expected results were then identified.

(iii) The last phase of the workshop focused on:

- Responsibilities
- Links with ongoing programmes/projects
- Main tasks involved
- Main inputs
- Possible assistance from UNIDO.

14. While operating mainly at the initial stage of project promotion, IPS offices should also enhance their support to partners in their actual negotiations. For this to materialize, a long-term employment perspective would be essential for the recruitment of qualified staff to provide more advanced advisory services.

15. Furthermore, it was recommended to further strengthen the linkages of IPS offices both with development banks and other financing institutions and with complementary UNIDO technical cooperation

Figure 25. Projects approved by IDF donors

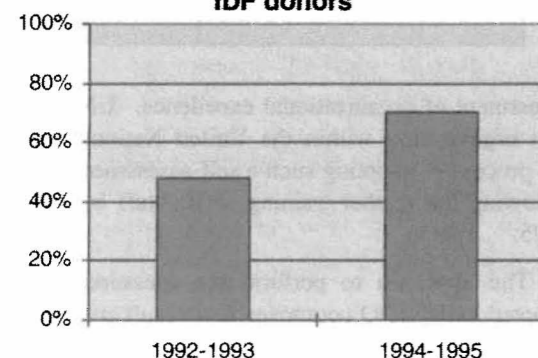
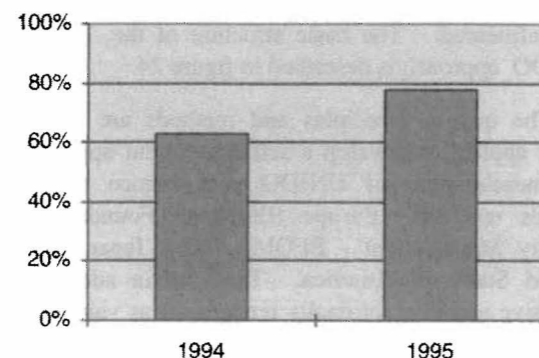


Figure 26. PPRC approval ratios



programmes, in particular networking of small and medium industries (e.g. through subcontracting exchanges), enterprise restructuring and privatization, and technology promotion.

Group training programmes

16. Group training programmes of UNIDO have been undertaken since the inception of the Organization. Lately, questions have been raised as to their demand-orientation, follow-up and impact. Various group training programme evaluations carried out (four during the period 1993-1996) as well as the results of the 1993 human resource development programme evaluation have confirmed their relevance as:

- A source of technical information and knowledge for the individual participants;
- A forum for exchange of information among developing country practitioners in different fields of industry;
- A gateway to promote other forms of technical cooperation;
- A means for effective demonstrations during plant visits.

17. In many cases, the skills and knowledge acquired by the participants have been applied in their own work environment. However, the impact sometimes has been

less than satisfactory due to unfavourable conditions and constraints prevailing in participants' home countries.

18. To maximize their impact, the following lessons learned will have to be applied when designing future group training programmes:

- Clear demand orientation as well as linkage with overall UNIDO priorities;
- Formulation of specific criteria guiding the selection of participants to ensure a homogeneous target group;
- A clear indication of what participants are expected to gain and learn from attending such training programmes;
- Well-organized plant visits; technology demonstrations should be accompanied by supporting documentation and allowances made to discuss and exchange information with plant-level personnel;
- Training programmes should be developed within a modular approach, each module representing a specialized topic within a broader subject;
- An emphasis on training of trainers and personnel from training institutions in developing countries;
- Creation of a well-designed follow-up mechanism.

ABBREVIATIONS

| | | | |
|-----------|--|----------|--|
| A | | | |
| ABR | African Business Round Table | ECDC | economic cooperation among developing countries |
| ACC | Administrative Committee on Coordination | ECLAC | Economic Commission for Latin America |
| AIDMO | Arab Industrial Development and Mining Organization | EFQM | European Foundation for Quality Management |
| AIDS | acquired immune deficiency syndrome | ESCAP | Economic and Social Commission for Asia and the Pacific |
| AISA | African Iron and Steel Association | ESCWA | Economic and Social Commission for Western Asia |
| ALABSUB | Latin American Association of Subcontracting Exchanges | ESID | ecologically sustainable industrial development |
| AL-INVEST | America Latina - INVEST | EU | European Union |
| APCTT | Asian and Pacific Centre for Transfer of Technology | F | |
| ARCEDEM | African Regional Centre for Engineering Design and Manufacturing | FAO | Food and Agriculture Organization of the United Nations |
| ARCT | African Regional Centre for Technology | FDI | foreign direct investment |
| ASEAN | Association of South-East Asian Nations | FIT | Financial Improvement Toolkit |
| B | | G | |
| BEST | Business Environment Strategic Toolkit | GCC | Gulf Cooperation Council |
| BINAS | Biosafety Information Network and Advisory Service | GDP | gross domestic product |
| BORITEC | Borsa per gli Investimenti e la Tecnologia | GLOBE-IN | Global Learning Opportunities for Business Education cum Industrial Networking |
| BOT | build-operate-transfer | GNP | gross national product |
| C | | GRIP | Graduate Resources Integration Programme |
| CAD/CAM | computer-aided design/computer-aided manufacturing | H | |
| CAMI | Conference of African Ministers of Industry | HRD | human resource development |
| CARICOM | Caribbean Community | HRD-ROM | Human Resources Diagnosis and Reorientation Map |
| CASE | Centre for Application of Solar Energy | I | |
| CCM | computerized colour matching | IAEA | International Atomic Energy Agency |
| CEA | Central Environmental Authority | ICGEB | International Centre for Genetic Engineering and Biotechnology |
| CEI | Central European Initiative | ICS | International Centre for Science and High Technology |
| CETIQT | Centro de Tecnologia da Industria Quimica e Textil | IDB | Industrial Development Board |
| CFA | African Financial Community | IDDA | Industrial Development Decade for Africa |
| CFC | Common Funds for Commodities | IDF | Industrial Development Fund |
| CFCs | chlorofluorocarbons | IFAD | International Fund for Agricultural Development |
| CGE | computable general equilibrium | ILO | International Labour Organization |
| CNC | computer numerically controlled | IMI | Institute for Machine Tools and Instruments |
| COMESA | Common Market for Eastern and Southern Africa | INECEL | Equadorian Electification Institute |
| COMFAR | Computer Model for Feasibility Analysis and Reporting | INTIB | Industrial and Technological Information Bank |
| D | | | |
| DPCSD | Department for Policy Coordination and Sustainable Development | | |
| E | | | |
| ECA | Economic Commission for Africa | | |

| | | | |
|-----------|--|----------|--|
| IPCC | Intergovernmental Panel on Climate Change | RITLA | Latin American Technological Information Network |
| IPF | indicative planning figure | RP | Regular Programme of Technical Cooperation |
| IPS | Investment Promotion Service | | |
| ISO/CASCO | International Organization for Standardization Conformity Assessment Committee | S | |
| ITAU | International Technical Assistance Unit | SARSPCC | South African Rolled Steel Producers Coordinating Council |
| ITMIN | Industrial technology and market information network | SBDC | Slovenian Small Business Development Centre |
| ITPI | Investment and Technology Promotion Initiative | SENAI | Servizo Nacional de Aprendi zagem Industrial |
| J | | SEZ | special economic zone |
| JPO | Junior Professional Officer | SIS | Special Industrial Services programme |
| L | | SME | small and medium enterprise |
| LDCs | least developed countries | SMI | small and medium industry |
| M | | SMID | strategic management in industrial development |
| MOVER | Maximizing Options Thinking for Visionary Enterprise Reformers | SPX | subcontracting and partnership exchange |
| MP | Montreal Protocol | STAS | short-term technical advisory service |
| MRAs | mutual recognition agreements | STENUM | Stoff Energie Umwelt |
| MVA | manufacturing value-added | T | |
| N | | TACIS | Technical Assistance for the Countries of Independent States |
| NAFTA | North American Free Trade Agreement | TCDC | technical cooperation among developing countries |
| NCPCs | national cleaner production centres | TFB | timber-frame building |
| NGO | non-governmental organization | TIES | Technological Information Exchange System |
| NIMTECH | New and Improved Technology | TSS-1 | technical support services at the programme level |
| NIS | Newly Independent States of the former Soviet Union | TSS-2 | technical support services at the project level |
| NISP | National Industrial Statistics Programme | | |
| O | | U | |
| OAU | Organization of African Unity | UCD | UNIDO Country Director |
| ODS | ozone-depleting substance | UIA | Uganda Investment Authority |
| OECD | Organisation for Economic Cooperation and Development | UNDCP | United Nations International Drug Control Programme |
| OOPP | objectives-oriented project planning | UNDP | United Nations Development Programme |
| OPEC | Organization of the Petroleum Exporting Countries | UNEP | United Nations Environment Programme |
| P | | UNESCO | United Nations Educational, Scientific and Cultural Organization |
| PHARE | Assistance for Economic Restructuring in the Countries of Central and Eastern Europe | UNIDOSS | UNIDO Industrial Subcontracting System |
| PPRC | Programme and Project Review Committee | USAID | United States Agency for International Development |
| PRIME | Promoting Responsible Industrial Merit through Entrepreneurship | W | |
| PTA | Preferential Trade Area for Eastern and Southern African States | WHO | World Health Organization |
| R | | X | |
| R and D | research and development | XA | Regular Programme of Technical Cooperation - IDDA |
| RALFIS | Regional Africa Leather and Footwear Industry Scheme | Y | |
| | | YA | Regular Programme of Technical Cooperation - excluding IDDA |