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UNIDO CONTRIBUTION TO THE

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ON THE LEAST DEVELOPED COUNTRIES:

INDUSTRIAL DEVELOPMENT OF LDC IN THE 1980s

AND PROSPECTS FOR THE 1990s

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CONTENTS

INTRODUCTION

The necessity for a set of special measures to assist the Least Developed Countries (LDCs) in bringing about a structural transformation of their economies was highlighted at UNCTAD II in 1968, with the adoption of resolution 24 (II), which specifically addressed the problems of countries with extremely poor development prospects.

With reference to this resolution, the Group of 77 Ministerial Meeting held in Arusha in February 1979, proposed a comprehensive programme of action which was outlined in UNCTAD resolution 122 (V) adopted at Manila in May 1979.

Based on United Nations General Assembly Resolution 34/203 of 17 December 1979, UNCTAD convened a Conference on the Least Developed Countries in Paris in September 1981 which subsequently adopted the Substantial New Programme of Action for the 1980s for the Least Developed Countries (SNPA). The SNPA aims particularly at promoting the structural changes necessary to overcome the extreme economic difficulties of the LDCs; at identifying and supporting major investment opportunities and priorities; at providing fully adequate and internationally acceptable minimum standards of living; and at mitigating, to the extent possible, the adverse effects of man-made and natural disasters. As such, it is a long-term programme comprising domestic measures to be taken by the LDCs themselves and supplementary international support measures aimed at fully implementing the programme.

For its contribution to the Second United Nations Conference on LDCs, UNIDO refers to the General Assembly Resolution No. 42/177, which, inter alia, "Requests concerned organizations and bodies of the United Nations System to submit, before the first preparatory meeting, reports containing a review of the implementation of the Substantial New Programme of Action for the 1980s for the Least Developed Countries within their fields of competence and proposals for further action as input to the preparations for the Conference".

Furthermore, in response to various mandates, in particular the resolution GC.2/Res.9 adopted by the UNIDO General Conference at its second and third session, this paper refers also to the decisions IDB.4/Dec.12 and IDB.5/Dec.6 taken by the Industrial Development Board at its fourth and fifth sessions.

This paper aims at defining the role of UNIDO as an executing agency for SNPA, to review the overall activities of UNIDO in the LDCs, and to develop an approach of the industrial development issues and strategy in Least Developed Countries. It also deals with an analysis of the industrial sector of the Least Developed Countries in the 1980s. In line with the purpose of preparation of the SNPA II, new prospects for improved industrial performance in the 1990s have been developed and consequently a proposed Industrial Action Plan for the LDCs is presented.

Among the annexes, special attention should be given to the specific examples of technical co-operation projects developed and implemented by UNIDO in the 1980s in LDCs.

<u>List of Abbreviations</u>

ACP	African, Caribbean and Pacific states
ECDC	Economic Co-operation Among Developing Countries
GRIP	Guaranteed Recovery of Investment Principal
IDDA	Industrial Development Decade for Africa
IFAD	International Fund for Agricultural Development
INTIB	Industrial and Technological Bank
IPF	Indicative Planning Figure
LDC	Least Developed Country/Countries
MIGA	Multilateral Investment Guarantee Agency
MVA	Manufacturing Value Added
ODA	Official Development Assistance
SIS	Special Industrial Services
SNPA	Substantial New Programme of Action for the Least Developed Countries
TCDC	Technical Co-operation Among Developing Countries
UNCDF	United Nations Capital Development Fund
UNIDF	United Nations Industrial Development Fund
UNIDO	United Nations Industrial Development Organization
UNDP	United Nations Development Programme

Chapter I

I. THE ROLE OF UNIDO IN THE IMPLEMENTATION OF SNPA

Within the United Nations system, UNIDO has been entrusted with the role of promoting and co-ordinating international co-operation for the industrial development of developing countries, including those which have been identified as least developed. UNIDO therefore takes the lead in identifying the need for resources and know-how for expanding and modernizing the industrial capabilities of these countries within the framework of their respective national policies. It also seeks to play a catalytic role, giving impetus and support to efforts to mobilize investible resources and know-how through governmental, financial, commercial and other entities.

To accomplish these objectives, the regular programmes of UNIDO encompass three basic types of activities: information resources designed for use in the formulation of national industrial policies; implementation of technical co-operation projects; and investment promotion efforts. UNIDO's programme activities are described below, together with examples from recent years relating specifically to the least developed countries.

A. Formulation of Industrial Policy

UNIDO's Industrial Policy and Perspectives Division undertakes research and studies on aspects of industrial development on global, regional and national levels as well as by sector. It has responsibility for developing new concepts; organizing seminars, symposia and expert group meetings; preparing publications based on these studies; maintaining a UNIDO industrial data base; and reviewing expert reports and incorporating field experience in UNIDO studies. It co-operates closely with Area Programmes in identifying and formulating technical co-operation programmes and projects. It thus focuses on several types of functions which are of direct relevance to the least developed and other developing countries:

- Global economic perspectives are prepared for industrial policy-makers in both developed and developing countries, along with analyses of the changing international industrial structure.

- Regional studies are focused on co-operation prospects and joint policy approaches among groups of developing countries, such as the group of African, Caribbean and Pacific (ACP) States, as well as the Arab and Latin American countries.

- Country-specific studies incorporate an advisory function for the national policy-making organs of the requesting countries, and enable the formulation and development of new technical co-operation projects which are responsive to ever-changing conditions. Some country studies (e.g., a study of prospects for rehabilitation of the sugar industry in Malawi) have served as forerunners of larger technical co-operation programmes.

- Industrial statistics and related services are aimed not only at improving the data on which technical co-operation programmes are based, but also at assisting developing countries to develop their own industrial statistical capacity.

- The methodology developed for integrated sector programming has been applied intensively in technical co-operation programmes, such as for the fisheries industry in western Africa.

- A survey of rehabilitation requirements in African manufacturing industry have been carried out, and industrial rehabilitation studies have been undertaken for seven countries, including Tanzania among the LDCs.

- The Industrial Development Review series presents in a consolidated form analytical surveys of the industrial sector in individual countries, including to date 18 of the 42 LDCs.

B. Technical Co-operation Activities

UNIDO's Area Programmes Division is responsible for planning and co-ordinating with UNDP and other co-operating agencies for programme activities in least developed and other developing countries. It co-ordinates the full programming cycle, including development of a balanced project portfolio, preparation of project designs and monitoring of programme implementation. (See Annex 3 for selected examples of UNIDO technical assistance projects in the LDCs.)

1. Programme and Project Development

The process of building up a portfolio of pipeline projects has intensified in recent years, owing to the increased resources which have been made available, particularly through UNDP. As part of this effort, a series of programming, programme review and project formulation missions has been carried out in LDCs relating to the fifth UNDP programming cycle (1992-1996). UNIDO has also participated in a series of mid-term country programme reviews relating to the current (fourth) UNDP programming cycle (1987-1991) in African and Asian LDCs.

UNIDO's programme and project development is carried out in a way that responds to the current macro-economic conditions prevailing in each region of activity:

- In Africa, UNIDO activities were carried out in support of the economic recovery and structural adjustment programmes initiated in recent years. Major emphasis has been placed on reinforcing capacities for formulating industrial strategies, plans and policies and on industrial restructuring and rehabilitation, including strengthened repair and maintenance capacities. Other areas of concentration included the development of agro-related industries, encouragement of entrepreneurship, industrial training, enhancement and expansion of the role of women in industrial development, technology transfer and industry-related energy development.

- In the Arab states, governments are trying to adjust to the recurring uncertainties of the oil markets by reducing their dependency on oil and by diversifying their economic structure. Although Arab LDCs are not counted among the major oil producers, they are highly vulnerable, at least indirectly, to fluctuations of the international oil market, and must find alternative sources of employment and investment during times of lower or declining oil prices. Current regional programmes emphasize technical co-operation regarding food development and security, development and transfer of technology, and upgrading of human resources.

- In the Asia and Pacific region, LDC activities are concentrated to a large extent on Bangladesh and Nepal, although project activities are also directed toward the differing needs of countries as diverse as Myanmar, Maldives and three Pacific island states. For these countries which have not shared in the economic progress experienced by many other Asian countries, field missions have proved very useful in exploring new concepts and in moving forward project proposals that have been submitted for consideration by governments.

- In the Americas, particular attention has been given to Haiti, the one LDC which is located in the Western Hemisphere, with programming missions adding consistently to the the set of pipeline projects in a number of sectors, such as food products and charcoal substitutes.

2. Project Implementation

UNIDO technical co-operation projects in LDCs cover the gamut of industrial operations, including agro-based, chemical, metallurgical and engineering industries. Highest priority in the LDCs is currently devoted to projects dealing with food processing and preservation and research and development of food production technology, as well as small- and medium-scale enterprises using locally available raw materials.

The industrial planning systems of many LDCs suffer from weaknesses such as unclear objectives and strategies at the sectoral levels, industrial policies inconsistent with changing needs and priorities, and insufficient co-ordination of planning and implementation between ministries and institutions. UNIDO programmes are giving increasing emphasis to industrial restructuring, decentralization of decision-making and operations, privatization and denationalization, and the need for an adequate information basis, planning tools and decision support systems.

Technical co-operation in the field of institutional infrastructure is characterized by an increasing demand for assistance in an integrated approach, involving a comprehensive package of technical services. UNIDO has also provided technical co-operation aimed at establishing and strengthening capacities in industrial information services of LDCs. The UNIDO programme in quality control, standardization and metrology is an important element of its integrated programmes. Promotion of small- and medium-scale enterprises through such means as industrial sub-contracting and entrepreneurship development has been another major element. UNIDO has also provided technical co-operation in establishing or strengthening institutions such as chambers of commerce and industry, federations of industry, and manufacturers' associations.

Industrial management and rehabilitation has also been a major sector of activity. Considerable attention has been devoted to the modernization of management structures and to the application of computers in management and the development of appropriate software. There have been efforts to develop a philosophy of rehabilitation at the government policy level, making appropriate use of diagnostic tools and action plans, including follow-up technical assistance at the plant level.

Industrial training includes a UNIDO fellowship programme which responds to the need of LDCs in particular for tailor-made training programmes for managerial and technical personnel of industrial projects, as well as a number of group training activities and study tours. A number of regional and subregional training programmes which have been undertaken are of direct relevance to LDCs; for instance, priority has been given under the IDDA to a number of training projects involving training institutions at the regional level.

Feasibility studies, as well as opportunity and pre-feasibility studies have been implemented, leading to new investment projects and the rehabilitation or expansion of existing enterprises. UNIDO methodologies for industrial investment project preparation, evaluation and financing have been presented in a number of least developed and other countries.

3. Sources of Funding

The number and overall amount of UNIDO technical co-operation projects for the benefit of developing countries have increased in recent years; the amount expended for LDC projects increased from $15.2 million in 1987 to $17.0 million in 1988 and to $22.3 million in 1989 (See Annex 1 for distribution of technical co-operation funding by country and region).

The main sources of finance for UNIDO technical co-operation activities have been the following:

- Indicative planning figures (IPF) of the United Nations Development Programme (UNDP). UNIDO was designated executing agency for a total of 575 projects (162 ongoing and 413 new) in 1988, amounting to approximately 12.0 per cent of total UNDP programmed resources.

- The Special Industrial Services (SIS) programme of UNDP is used for prompt resolution of urgent and clearly identified problems through short-term interventions. The LDCs continue to account for over one-sixth of the $3 million per year allotted to this programme.

- UNDP has also made funding available from its Special Measures Fund for the Least Developed Countries.

- UNIDO's Regular Programme of Technical Co-operation, which includes training of LDC personnel in various industrial fields, individual fellowships, group training programmes, co-operation among developing countries, consultation with Governments, and special activities for the least developed countries.

- The Industrial Development Decade for Africa (IDDA) has provided additional funding for industrial development in the 28 LDCs which are located on the continent of Africa.

- The Industrial Development Fund (IDF), which became the second largest funding source in recent years, has funded a number of noteworthy projects involving those which match technological resources and capacities in developed countries with the needs of enterprises in developing countries.

- Trust funds and self-financing arrangements have been an excellent mechanism through which UNIDO can provide useful services to industrial enterprises, as well as development finance institutions and development aid agencies. The trust funds bring industrial partners in the developed and developing countries together in industrial co-operation projects which are partly or wholly executed by UNIDO. These trust fund schemes are particularly suited for private sector development, such as where funds are provided by a development bank or donor agency to be channeled to the private sector in LDCs or where such funds are to be supplemented by local or foreign contributions from private companies.

A breakdown of UNIDO technical co-operation activities for LDCs by source of funds (see Annex 2) shows that the Indicative Planning Figures continue to be the largest source of funding. The IPFs, together with two other categories of UNDP funding, the Special Industrial Services and the Special Measures Fund, account for nearly two thirds of UNIDO funding for technical co-operation. Funds raised by UNIDO for its Regular Programme of Technical Co-operation, the Industrial Development Fund, and such special programmes as the IDDA meet an increasing range of other identified needs, giving special consideration to the needs of the LDCs. Trust Funds have effectively complemented UNIDO activities financed by multilateral sources such as UNDP.

Particular importance is placed on close co-operation within the United Nations system, so as to ensure that scarce resources are pooled and the merits of a multidisciplinary approach is maximized to fulfil the objectives of each proposal. While continuing its role as one of the major executing agencies of projects financed by UNDP, UNIDO is also strengthening its relationship with, for example, the World Bank and regional development banks.

UNIDO thus aims to play a pioneering and catalytic role, giving impetus and support to programmes of national and international entities. UNIDO is thus able to serve as a springboard in key areas of industrial development for mobilizing flows of investible resources and know-how through governmental, financial, commercial and other entities.

C. Co-operation with the Private Sector

UNIDO's efforts in the LDCs include co-operation with the private sector as well as with governments. UNIDO's System of Consultations, Investment Promotion activities, Industrial Investment Programme, and Industrial Technology Promotion activities are all designed to foster joint ventures between private sector institutions in the LDCs and other countries.

The UNIDO System of Consultations serves as a forum to enable contacts and negotiations between developed and developing countries. It thus enables the international community to assess worldwide development trends and also the problems hindering development in particular sectors of industry, as well as to formulate action-oriented recommendations at the national and international levels. For instance, the search for alternative technologies is one important aspect of recent consultations, and has resulted in the down-scaling of some existing technologies and industrial plants, which in turn have resulted in the introduction of mini-iron and steel plants, mini-fertilizer and mini-hydro power plants.

With regard to Industrial Promotion, UNIDO has assisted investors in developing countries in identifying sources of financing, technology and know-how, as well as in identifying joint venture partners. The nine UNIDO investment promotion offices in Europe, U.S.A. and Japan not only help in identifying joint venture partners but also receive delegates from the ministries of industry or LDC investment promotion agencies, as well as missions which are intended to promote a given country as a place for investment. Investment promotion meetings, which can be organized upon request, serve as a forum for bilateral discussions between local promoters of a project and the potential joint venture partners.

The Industrial Investment Programme continues to assist LDCs in identifying sound investment projects with local sponsors and in finding foreign partners to promote a share of financial and other resources required for their implementation. Such projects include the rehabilitation, modernization and expansion of existing facilities, as well as the establishment of new ones. The contribution of the foreign partner may include elements such as marketing expertise, plant and equipment, technical know-how and licenses, management support, and training of local staff.

UNIDO activities related to Industrial Technology Promotion are geared towards strengthening the technological capabilities of developing countries, assisting them in acquisition, adaptation and management of technologies, as well as the establishment of technology policies. UNIDO's Industrial and Technological Bank (INTIB) includes an Industrial Inquiries System, which compiles and disseminates comprehensive information on technologies and investments to developing countries upon request. UNIDO also assists LDCs in strengthening local technologies as well as in developing appropriate technologies.

D. Response to the Special Needs of the LDCs

As early as 1971, the Special International Conference of UNIDO indicated that special consideration of the industrial needs of the least developed countries should be among the means to achieve the most purposeful use of UNIDO resources. Following this recommendation, UNIDO convened an expert group meeting on industrial action in countries at early stages of development. UNIDO continued to play an active role in the activities and discussions which culminated in the Substantial New Programme of Action for the 1980s.

Total expenditure on UNIDO technical co-operation projects remained in the range of $14-20 million per year throughout the 1980s, and registered a sharp increase at the end of the decade, as noted above. Projects financed under both the regular programme of technical co-operation and trust funds registered the highest level of implementation in 1988-1989. Given the high levels of new and net approvals during 1988 and 1989, the level of project implementation is expected to increase further in 1990. In addition to technical co-operation activities at the country level, the LDCs also participate and benefit from activities organized by UNIDO at the regional and subregional levels.

UNIDO continues to focus its efforts on increasing and attracting support from external sources of funding. For example, agreements were signed with the Governments of the Sudan and Uganda in 1988 for the implementation of technical co-operation projects financed by the World Bank/IDA. Contacts were also initiated with the International Fund for Agricultural Development (IFAD) for the financing of a large-scale project aiming at developing and disseminating cereal processing equipment to alleviate the work of women in Sahelian rural areas.

Pursuant to Board decisions IDB.4/Dec.13 and IDB.4/Dec.14 on emergency assistance to the Sudan and Bangladesh respectively, the Secretariat sent a field mission to Bangladesh and the Sudan in late 1988 in order to assess the ways and means by which UNIDO could assist in the rehabilitation and reconstruction works required after the floods in August and September 1988.

In the case of Bangladesh, under the United Nations relief operations, UNIDO prepared a large-scale emergency rehabilitation programme for 5,500 diesel engine driven pump sets, which is presently under implementation. Three additional projects at various stages of development and approval relate to the use of excess capacity of engineering workshops, to the identification of measures to minimize flood damage to small and medium enterprises and to the production of power tillers, small boats and boat engines.

UNIDO also participated in the multi-donor mission to Sudan which was organized in October 1988 by the World Bank to assist in reviewing damage to the industrial sector and to draw up a two-year reconstruction programme. The findings of this mission were integrated in the Emergency Flood Reconstruction Programme. The areas of assistance identified within the framework of this emergency programme include rehabilitation of specific industries damaged by floods, in particular the cement and brick-making industries.

The participation of LDCs in such important activities as the Consultation meetings and industrial investment promotion meetings has been of particular concern to UNIDO. As has been the practice, the financing of the participation of representatives from LDCs to the four consultation meetings held during the fourth quarter of 1989 were borne out of the UNIDO regular budget. In the case of investment promotion meetings, UNIDO also covers the costs of the participation of promoters and representatives from LDCs. This was the case for the LDC participants to the 1988 Dakar Forum, to AFRICABAT* 1989 (Dakar, January 1989), as well as an industrial investment promotion meeting for five English-speaking countries in West Africa (Freetown, May 1989), and an ECDC Solidarity Meeting held in Guinea in December 1989.

Within the framework of the UNDP country programme cycle, UNIDO participates in mid-term country programme reviews. UNIDO participated in three such reviews (Lesotho, Malawi and Yemen) in 1989 and several others in 1989. These exercises are of particular importance since their purpose is to evaluate the ongoing country programmes and, if required in the light of any changing circumstances, to modify their contents and direction. In the 1990-91 biennium, UNIDO will participate in preparations for the next programming cycle.

An example of another important feature of the technical capabilities and flexibility of UNIDO to Myanmar (formerly Burma) in June 1989 at the request

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*) AFRICABAT: Salon industriel des professions des bâtiments de l'aménagement des territoires et des travaux publics d'Afrique.

of UNDP. The purpose of the exercise was to review United Nations financed programmes in the light of the government's reassessment of the country's economic policies. As industry was identified as one of the key sectors, UNIDO was called upon to review current structure and trends of industrial development and current or envisaged industrial policies in the country. In this particular case, the industrial review will also be used as a major input to the forthcoming country programme review in Myanmar.

For UNIDO's assistance to the LDCs in Africa, a document prepared by UNIDO in 1989 on industrial development in the African LDCs contains proposals for priority activities by Governments, the international community and UNIDO for the implementation of the IDDA programme. It was presented at the meeting of the Intergovernmental Committee of Experts of the Whole on Industrialization in Africa and at the Ninth meeting of the Conference of Ministers of Industry in 1989. Both the Committee of Experts and the Conference of Ministers requested UNIDO to intensify its assistance to the industrialization of the African LDCs and invited donor countries to increase their financial and technical assistance to those countries.

E. Related Areas of UNIDO Concern

1. The Industrial Development Decade for Africa programme serves as the focal point in UNIDO for co-ordination, follow-up and monitoring of all UNIDO projects and activities related to the IDDA; It promotes, formulates, and follows up the implementation of IDDA-related activities in co-ordination with African countries, regional and subregional organizations, and United Nations agencies and other international organizations, in particular the Economic Commission for Africa and the Organization of African Unity. It assists also in the preparation and promotion of investment projects in Africa; mobilizes technical assistance and investment funds for the implementation of the IDDA Programmes; initiates, co-ordinates and follows up UNIDO participation in an contribution to meetings of intergovernmental bodies and other organizations related to the Decade; and prepares policy documents and progress reports related to the Decade for submission to policy-making organs.

2. Special Programmes for the Industrial Development of Asia and the Pacific are geared to a rapid industrial growth of the developing countries of the region, with special emphasis on the least developed countries This programme, which benefits the 13 LDCs in the region (Afghanistan, Bangladesh, Bhutan, Democratic Yemen, Kiribati, Lao People's Democratic Republic, Maldives, Myanmar, Nepal, Samoa, Tuvalu, Vanuatu and Yemen) aims at facilitating the development of indigenous and relevant technologies wherever possible and at assisting where necessary in arrangements for the transfer of technologies for the development of industries in the region. The Third General Conference of UNIDO at its 9th plenary meeting decided to establish a special account within the Industrial Development Fund for these purposes and for the financing of technical co-operation projects and programmes for the industrial development of the least developed countries of the region.

3. Industrial co-operation among developing countries: In addition to the special attention given to regional co-operation in Africa and

other regions, many activities related to economic and technical co-operation (ECDC/TCDC) on an interregional basis have been implemented, often as a direct result of workshops and solidarity meetings set up to encourage such exchanges.

4. Integration of women in industrial development accounts for an increasing number of technical co-operation projects. Special attention has been given to the problems involved in the development and dissemination of appropriate food-processing technologies for rural women. New approaches have been developed that should lead to a more systematic consideration of women in technical co-operation and research activities, in particular in the LDCs.

5. Co-operation with industrial enterprises: Efforts have been made to bring about increased interaction and co-operation between enterprises from industrial and developing countries in areas such as the introduction and transfer of technology, marketing, financing and management techniques for the benefit of developing countries. Co-operation with the industrial sector was much enhanced by third-party trust fund and other arrangements to organize joint studies, missions and promotional workshops for participants from developing countries as a whole, for LDCs in particular.

6. Co-operation with non-governmental organizations: About 80 international NGOs presently have consultative status with UNIDO, which allows UNIDO to draw upon their experience for advice on substantive matters, training opportunities and the identification of experts. Close contact has also been maintained with national NGOs, which can provide UNIDO with low-cost expertise. Relations with NGOs have been particularly useful in the promotion of industrial co-operatives and of co-operation among developing countries in small- and medium-scale enterprises.

Chapter II

INDUSTRIAL PERFORMANCE OF THE LEAST DEVELOPED COUNTRIES IN THE 1980s

A. Review of Industrialization Trends

Since the adoption of the Substantial New Programme of Action in 1981, although a few LDCs could report encouraging growth rates in per capita GDP, the situation in general has deteriorated both from the economic and the social point of view. The implementation of SNPA has been very slow and only five of the 42 LDCs reached the general target envisaged by SNPA of a 9 per cent growth per annum of manufacturing value added (MVA). The factors responsible for this situation are well known, and include both external and internal contraints (e.g. poor policy choices, inadequate aid flows, weak infrastructure, dearth of human resources, natural and man-made disasters, depressed commodity proces, heavy debt burden, small size of domestic markets).

In the 1990s, it appears that industry in the LDCs might face a problem of survival rather than development, given the present macro-environment in most of these countries. As the manufacturing sector has remained very small in most LDCs, it is not possible to rely on this sector by itself to transform their economies, at least not in the short run. Nevertheless, in all LDCs the manufacturing sector has an important role to play in providing consumer goods and inputs to agriculture, in processing its outputs, and in creating job opportunities, thereby linking the unemployment problems faced by many LDCs with the questions related to the promotion of the private sector and the creation and development of small- and medium-scale industries.

In many African LDCs, MVA declined not only in per capita terms but overall. Between 1981 and 1986, Chad, Sierra Leone, Somalia, Sudan, Togo, Uganda and Tanzania each experienced negative MVA growth rates. Apart from Lesotho, Mali and Burundi, the average MVA growth rate in the other African LDCs was less than 5 per cent. In Haiti, the only Latin American LDC, conditions were no better.

In the Asian LDCs, however, the situation was somewhat better, with Burma and many of the smaller countries (Nepal, Bhutan and Maldives) experiencing MVA growth rates of over 5 per cent between 1981 and 1986, although in Bangladesh, which has the largest manufacturing sector not merely among Asian but among all LDCs, the MVA growth rate averaged only 1.3 per cent. Among the Arab LDCs in Africa and Asia, Democratic Yemen had a negative MVA growth rate, while Yemen had a positive one between 1981 and 1986.

Taking population growth into account, 16 LDCs experienced negative growth rates in MVA per capita during the first half of the 1980s. In many African LDCs, MVA also declined in overall terms, while in the Asian LDCs the situation was slightly better, with four countries recording MVA growth rates of about 5 per cent between 1981 and 1986. In many LDCs it would therefore be more accurate to refer to de-industrialization rather than industrialization during the 1980s.

The manufacturing sector of LDCs still predominantly consists of consumer goods industries, with little capacity for the production of intermediate and capital goods. The lack of linkages between industry and the other sectors of the economy has resulted in a heavy dependence of these countries on imported inputs and has hindered the accomplishment of any durable structural changes.

Among the factors which were considered as a prerequisite for the successful implementation of SNPA was the substantial increase in financial resources. However, the low domestic savings ratio (in 1987, the average domestic savings rate in sub-Saharan Africa was estimated at 4.9 per cent of GDP) did not permit productive investments in the manufacturing sector. In addition to this, the direct flows of official development assistance (ODA) to LDC industry have been relatively small. A UNIDO study concluded that 40 per cent of the external financial flows to the industrial sector came in the form of export credits, about 30 per cent from private bank lending and an average of between 5 to 10 per cent from non-concessional loans from multilateral development finance institutions, the latter registering a sharp drop compared to the situation in 1980. Moreover, the tendency has been to concentrate on "safe markets", with the consequence that many LDCs were excluded.

As for policy constraints in the industrial sector, the LDCs as a whole have suffered severely from import strangulation due to lack of foreign exchange, over-valued exchange rates and increasing debt burdens. This has been aggravated by indiscriminate pursuit of inefficient import substitution strategies, involving the shielding of domestic production by high protective barriers and frequently using inappropriate technologies. Extensive reliance on capital-intensive technologies, ill-adapted to domestic skill levels, has in many instances discriminated against simpler labour-intensive technologies.

External dependence by industry on intermediate and capital goods is reflected in the very high share of such goods in imports. Tanzanian industry provides a highly illustrative case in point: in 1984, the manufacturing sector generated $ 56 million in value added but consumed recurrent inputs valued at $ 420 million, 70 per cent of which were sourced by imports.

Except for food processing, the modern manufacturing sector in LDCs tends to be highly import-intensive. Evidence from a UNIDO survey of industries in the African region reveals that in the brewing industry, for instance, virtually all raw materials except water are imported. The same applies to practically all other branches of light and intermediate dustries such as soft-drink bottling, footwear, leather, apparel and metals. Of the 100 manufactures products produced by the 40 African countries covered in the survey, roughly 55 per cent of the product sample had an import content of close to 100 per cent; only in agro-industries and textiles was the import content under 25 per cent.

One consequence of this heavy dependence on imported inputs is a lack of linkages between the industrial sector and the rest of the economy. Once the LDCs started to experience severe balance of payment deficits, as they have throughout the 1980s when commodity prices were low, there simply is not the foreign exchange to obtain the inputs, and hence there is a reduction in capacity utilization if not outright closure.

Energy and mineral resources complement agriculture as sources of raw materials for industry. Three major UNIDO projects in recent years - diamonds in Botswana, natural gas in Bangladesh and iron ore in Mauritania - have had a mixed impact. In Bangladesh, locally available natural gas has been successfully used as a raw material base for the rapidly growing fertilizer industry to meet increasing domestic demand and leading to considerable savings in imports. The case of Botswana may also be seen as a success, with its economy enjoying one of the fastest growth rates in the world, but even here the linkages with manufacturing have not been very effective. In Mauritania, iron ore production, the engine of growth, stagnated in the 1980s due to the decline in both demand and prices; production and export estimates for the period under review turned out to be 70.0 per cent of what had been forecast, while real prices fell 15.0 per cent below those forecasts.

Unfavourable trends in cash crop production also give cause for concern in terms of the contribution to manufacturing growth. In a number of LDCs there has been a considerable decline in export earnings. Apart from cotton, there was a decline in production of all the other cash crops: coffee output by 23.7 per cent, cocoa by 15.4 per cent, and ground-nut products by 23.3 per cent. These unfavourable trends will prove difficult to reverse in the near future, since they result from a complex set of deep-seated problems, including inadequate production from aging plantations, the delayed impact of agricultural rehabilitation programmes, and the deliberate policy of some LDCs, for example the Central African Republic, to reduce the production of those crops that fetch low prices on the world market. A similar situation would seem to apply to the jute industry in Bangladesh.

For the majority of African LDCs, the absolute value of net agricultural output declined in real terms by 1.7 per cent per annum, or -4.6 per cent in per capita terms between 1981 and 1985. In 1986 the sectors performance improved markedly to show an increase of 3.2 per cent per capita value added. However, the exceptionally high growth rate can be attributed primarily to the improvement in weather conditions, notably the return of normal rainfall, rather than the impact of policy reforms.

B. Strategies for Promoting Industrialization

The growing recognition of the seriousness of the industrial development problems of the LDCs has prompted experimentation with and adoption of a wide range of basic economic strategies. The gamut of strategies that have been applied in the 1980s include those which are based on some combination of import substitution, export promotion and self-reliance. Other major emphases have been on increasing investible revenues, enhancing the role of the private sector, and structural adjustment. The experience of each of these approaches has been mixed, as is illustrated below.

1. Selective Import-Substitution Strategies

Although the indiscriminate pursuit of import substitution strategies has been a major cause of industrial failures among LDCs, an extreme reaction against import substitution would be equally counter-productive. In the face of falling export revenue and limited credit, some import substitution may be inevitable. There is a need to devise a selective import substitution strategy which concentrates on a relatively small number of potentially profitable branches and enterprises. Aid projects and programmes, which have been increasingly commercialized in recent years, could provide a framework for making some progress in selective import substitution.

2. Export-Oriented Approaches

The outlook for export market demand is more favourable given the spate of devaluations in the mid-1980s, which halted the tendency of LDC currencies to serious over-valuation and marked a return to more realistic parities. However, there are major constraints which diminish the growth prospects for manufacturing exports. Firstly, the slow-down in the engine of economic growth as represented by the growth rate of the industrial market economies has had a very strong impact on the manufactured exports of developing countries. Furthermore, studies which have been made of the income elasticity of demand by industrial countries for manufactured products from developing countries have invariably found that this is very high, much higher than unity and certainly higher than for food and primary commodities from developing countries where income elasticity may be quite low.

Even if growth accelerated in developed market economies, and trade liberalization measures (e.g. through the Uruguay Round, were achieved, the relative and absolute size of manufactured exports from LDCs is extremely small. Arithmetically this makes its growth potential greater, but its real economic impact would be limited. All these factors are likely to continue to exacerbate the problem of small markets. Furthermore, unfavourable trends in the terms of trade for primary products would seriously reduce the purchasing power of rural populations.

In general, the scope for developing an export-oriented industrialization strategy for most LDCs appears somewhat limited. However, expansion of export capacity has played an increasing role in recent policy packages, not least in the World Bank/IMF Structural Adjustment Loans. Export Processing Zones have been created in several LDCs, for example Bangladesh, export licensing has been liberalized in Nepal, and an Export Development Council created in the Sudan. Some success has been achieved by linking export initiatives to sub-contracting activities, for example the growth of the textiles sector. The prospects for further progress in this strategy, particularly given the adverse trends in the terms of trade for commodities, are not promising.

3. Self-reliant Development Strategies

A conception of development which focuses on endogenous development based primarily on a self-reliant integrated approach concentrated on rural commodities, agriculture and food self-sufficiency, has been chosen by many LDCs. This strategy includes an industrial component which would accompany rural development instead of trying to precede it. It introduces a new role and dimension for industrialization which would be based on local needs and resources, on domestic or regional markets, and on self-sufficiency rather than on exports.

Self-reliant industrialization will help significantly to: increase production of goods and services meeting essential requirements; increase employment and ensure a broader income distribution; multiply intersectoral links furthering self-reliance; develop local sources of saving to replace as far as possible external financing; develop human resources (manpower, management, training, research and innovation, technological adaption, spirit of enterprise, etc.) as a means towards progressive mastery of modern technology.

The slow pace of agricultural development and the lack of customers for manufactured products among the rural population are major factors blocking self-reliant industrialization in the LDCs. Priority must therefore be given to increasing rural productivity so as to obtain a larger surplus; and to assuring that the rural population receives a larger share of that surplus, which will result in greater purchasing power to be used on agricultural inputs and consumer goods manufactured in the country.

Commitment to this self-reliant strategy would necessitate incorporation of appropriate objectives and instruments in a revised SNPA for the 1990s. There is a danger that the strategy could result in a delinking process between manufacturing units in LDCs and their industrial market partners, even from the limited contacts so hard fought to establish, for example, in export and import substitution activities in the 'modern' urban sector. Furthermore there is a new recognition by both development partners of the need to encourage private investment. The question must be raised whether developed economy firms would become involved in a self-reliance strategy given the narrow profit-margins for satisfying low-income rural-dweller markets, and the gulf in technology and marketing which would exist, at least in the short term until adaptations were made. Furthermore, evidence for some countries which shows that domestic demand has already been the overwhelmingly important source of growth for manufacturing output, and when set against the dismal sector performance, must raise doubts whether further reliance on domestic markets would lead to any significant growth in the near future.

4. Increased Investible Resources to the Industrial Sector

If the prospects for manufacturing are to improve, action needs to be taken to reverse the trend of declining investible resources. There are positive indicators that domestic resource mobilization can be improved; for example, the experience of the Grameen Bank in Bangladesh is evidence that the rural poor can, and do, save. Some LDCs have actually introduced measures to curb capital flight, and to improve taxation systems. The Government of Botswana has gone further; it provides grants for the establishment of industry, particularly in the rural areas. However, in most LDCs investment is in urgent need of revival, and in the immediate and long term future, international resource flows must be increased to supplement domestic savings.

Measures have been taken to improve efficiency in the public sector and to cut budget deficits. By dint of recruitment freezes, stringent selection procedures, cuts in pay or redeployment measures, some governments have managed to reduce the public sector wage bill. Many countries have overcome considerable misgivings to set in train the process of reducing subsidies on staple food items and agricultural inputs. The reform of public sector firms has also permitted significant reductions in deficit subsidies. Several countries have thus succeeded within the space of two or three years in cutting overall public sector deficits by half, to under 5 per cent of GDP.

The commitments made in the SNPA on increasing official financial flows and on improving aid modalities still remain to be fulfilled. Given the limited assistance directly allocated to the industrial sector (2 - 3 per cent for DAC and 5 per cent for OPEC aid), there may be a case for both development partners making greater efforts to switch a higher proportion of their assistance to industry. Consideration should be given to creating more special windows in multilateral and bilateral financial institutions to allocate funds to industry.

Given the emphasis placed on small-scale endogenous industry, sector loans to financial intermediaries in LDCs would seem the most appropriate means for channelling such external loans to industry in the LDCs. Access to risk capital for local businessmen needs to be improved. Efforts have to be made to develop and/or strengthen those institutions that do exist, as they have a crucial role to play.

A major impediment to investment in LDCs has been inadequate insurance coverage, as the scope of the national systems and the private sector has been limited. Attempts have been made to establish a multilateral system which would provide much broader coverage of investments against risks, including the World Bank's Multilateral Investment Guarantee Agency (MIGA), and the IFC's Guaranteed Recovery of Investment Principal (GRIP).

5. Upgrading Industrial Capabilities in the Private Sector

Increasing importance is being attached to the role of the private sector in industrial development, with due recognition of the human element, in terms of skill, motivation and innovation. Experience has, however, shown that care needs to be taken whenever a political decision is made to privatize. Without co-ordination, there is the danger that LDCs will end up competing against each other for a relatively small amount of foreign private investment and foreign assistance for public enterprise. Although LDC governments adopting privatization policies have been turning to domestic business circles with their proposals, it has become apparent that the capital outlays required for the take-over of public enterprises often exceeds available domestic resources, and hence calls for foreign investors. Even this alternative encounters serious limitations in the case of LDCs, as their ability to attract foreign investment is impeded by small domestic markets, lack of skilled labour, and inadequate infrastructure. Given the great number of public enterprises in need of rehabilitation, governments must decide how much, if any, of the country's manufacturing sector should be allowed to remain in foreign hands, and on which discounts they are prepared to sell the enterprises built up with substantial capital outlays. Some LDCs (e.g., Togo) have found it necessary to make very large concessions in order to induce private buyers to take on weakening assets, thus increasing the risk that the immediate, once-and-for-all benefits to the national budget may be outweighed by the longer-term effects on the economy as a whole. In addition, for a number of LDCs with a heavily subsidized public enterprise sector, privatization through foreign investment is not a viable option, as no investor is likely to buy loss-making enterprises whose long-term profit prospects are doubtful without enormous local subsidies and long-term concessions.

6. Structural Adjustment

In several LDCs, structural adjustment programmes are being implemented to rehabilitate a devastated industrial sector. The reforms usually embrace expanding the role of the private sector, improving the performance of those enterprises that remain in the public sector, liberalizing the import regime, and adopting a flexible exchange rate policy and incentives to promote exports. The government of Bangladesh undertook one of the more thorough structural adjustment programmes, under the Revised Industrial Policy of 1986 While the process may have gone further in Bangladesh than in many other LDCs, several other countries (e.g. Uganda, Somalia and Togo) have embarked on similar programmes.

Regional co-ordination of national privatization strategies could serve to increase the attractiveness of potentially viable enterprises to foreign investors, since it could serve as a mechanism for widening the market and eliminating production duplication. Regionally based public firms (created out of the amalgamation of national public enterprises) would enjoy similar advantages. An effective privatization programme in the LDCs would require not just the reorganization of national ministries, development financing corporations, and parastatals, but the creation of a regional institutional network for policy co-ordination and the establishment and support of regional privatization and regional public sector reorganization programmes.

Chapter III

PROSPECTS FOR IMPROVED INDUSTRIAL PERFORMANCE IN THE 1990s

A. Prospective Strategies for the Industrial Sector

During the 1990s, the prospects for industrialization in LDCs should not depend on one single strategy common to all of them, but rather should be determined by a diversity of alternatives and possible approaches reflecting the situations of the countries concerned. In order to assure more positive results toward the attainment of the forthcoming SNPA objectives, UNIDO is preparing an action plan in the field of industry oriented toward the medium-and long-term structural improvement of the LDC economies. Key elements for a successful regeneration of industry would include analysis of industrial potential and reassessment of industrial development priorities, special incentives for industries strengthening domestic linkages, improved management capabilities and vocational training, etc.

With debt service problems and declining commodity prices leading to import strangulation in the LDCs, the macro-environment is hardly conducive to industrial development; industry in the LDCs faces not a problem of development but of survival. In the 1990s, one major objective should be to arrest the decline in the manufacturing sector and to achieve a positive growth rate in MVA throughout the decade. Failure to achieve this minimalist target would imply de-industrialization and/or stagnation, a continuation of the acknowledged failures of the 1980s.

The industrial sector, which has remained small in most LDCs, cannot be the main driving force, by itself, to transform LDC economies in the short run. Even high rates of growth in MVA will initially add a small amount to GDP. Only when the LDCs become involved in the manufacture of intermediate and capital goods, as a few LDCs have so far started to do, will structural transformation be accomplished. In all LDCs, however, manufacturing will have an important role to play, not only in the production of consumer goods, but also in providing inputs to and processing the output of agriculture and other primary sector activities. Moreover, it can help to provide jobs in LDCs characterized by rapid population growth and increasing urbanization. In Bangladesh, which has the largest industrial base among the LDCs, the rapid growth of the industrial sector is essential to continue to provide adequate future employment opportunities. Even in countries Haiti and Lesotho, where there are few linkages between the industrial sector and the rest of the economy, the manufacturing sector can at least contribute significantly to reducing unemployment rates.

However, if any significant shift in the growth prospects of manufacturing in LDCs is to be achieved in the 1990s, much of the burden of responsibility lies with the international community to agree to urgently needed measures as part of a revised Substantial New Programme of Action. This approach was adopted in the 1981 SNPA in order to lay the groundwork for effective implementation of the SNPA, and to ensure that medium- and longer-term development was not prejudiced. The situation of the manufacturing sector at the end of the 1980s, characterized by 'import strangulation', widespread capacity underutilization, and other destructive trends call for an Immediate Action Component to significantly improve its prospects similar to that which was agreed upon in the 1981 SNPA.

B. Priorities for Immediate Action

At the industrial level an Immediate Action Component would include the following types of measures:

- Provision of assistance for overcoming critical bottle-necks in management, maintenance, repair and physical facilities in order to obtain better use of existing infrastructure and industrial plants;

- Immediate provision of additional financial support for the identification of industrial projects, undertaking of feasibility studies and detailed preparation of investment projects as well as projects relating to the industrial strategy;

- Substantially enhanced supply of inputs necessary for rural development, agricultural implements, fertilizers, etc. in order to increase production and productivity in food processing;

- Financial support for activities at community levels which create jobs, including support for local small-scale, labour-intensive rural public works projects, and for non-governmental organizations;

The key elements needed not only for rehabilitating existing enterprises but also for regenerating industry in the LDCs would include the following elements, some of which may already be found in the present industrial policies of many LDCs:

- reassessment of industrial development priorities in the light of the medium-term overall outlook (which may entail closure of plants);

- special incentives for industries which strengthen domestic linkages (present regulations often favour import-dependent industries);

- identification of new ways of supplying import-dependent industries with essential inputs and spare parts;

- more attention to the development of medium- and small-scale industry (i.e. movement away from large-scale, capital-intensive manufacturing in most cases);

- infrastructural improvement, including the institutional infrastructure;

- better vocational and high-level (technical, managerial) training, within the context of overall educational improvements;

- stimulation of agriculture, and meshing of industrial and agricultural projects where this is possible;

- greater flexibility or abolition of price regulation;

- simplified administrative procedures, including price controls;

- decentralization of economic decision-making within public sector industries;

- encouragement of private entrepreneurship and industries;

- involvement of private sector representatives in the policy-making process;

- reduction of regional trade barriers;

- rehabilitation of enterprises which have viable, long-term prospects even under the present, relatively unfavourable conditions.

Industrialization in the LDCs should no longer be viewed in isolation, but as being integrated within a process of comprehensive development in which the rural population and agriculture provide the motive force. Within this new strategy, progress towards industrialization would warrant special attention to the supply of agricultural inputs and processed products adapted to the needs and tastes of the urban consumer as well as the basic requirements of the rural population. The improved producer prices paid to farmers on the other hand have meant a growing purchasing power for the rural citizens - the majority of the population - and have had a stimulating effect on demand for consumer goods as well as for agricultural implements and some intermediate goods needed in the countryside. These factors have particularly benefited small-scale industries located in rural areas whose production is based on domestic inputs and geared to rural markets.

Commitment to this self-reliant strategy would necessitate incorporation of appropriate industrial objectives and instruments in a revised SNPA for the 1990s. There is a danger that the strategy could result in a delinking process between manufacturing units in LDCs and their industrial market partners. Although there is a new recognition by both development partners of the need to encourage private investment, the question must be raised whether developed economy firms would become involved in a self-reliance strategy given the narrow profit-margins for satisfying low-income rural-dweller markets, and the gulf in technology and marketing which would exist, at least in the short term until adaptations were made. Furthermore, evidence for some countries which shows that domestic demand has already been the overwhelmingly important source of growth for manufacturing output must raise doubts whether further reliance on domestic markets would lead to any significant growth in the near future.

A key feature in pursuing industrialization through encouraging entrepreneurial development and private investment is that priorities for industry are determined primarily by the private sector. However, in influencing the priorities of the public sector and in co-operating with the private sector, certain issues may be specified:

<u>At the national level</u>:

a) As a matter of policy, LDCs should give high priority to industrial development as a powerful engine of overall growth and as a necessary component in the resolution of a wide range of pressing problems, such as that of food security.

b) In the industrial planning process, LDCs should concern themselves with certain crucial areas including agro-industries, small-scale industries, entrepreneurship development, investment promotion, and training.

c) LDCs should aim at moving their production capabilities gradually from consumer goods to intermediate and capital goods industries.

d) In conjunction with the development of the industrial sector, LDCs should concentrate on the development of the agricultural sector, as both complement each other in the pursuit of self-sustaining growth.

e) In planning and designing of industrial projects, before industries are established, LDCs should ensure the establishment of inter-industry linkages and the availability of raw materials and other inputs and markets.

f) LDCs, particularly those solely dependent on domestic markets, should examine the possibilities for developing export-oriented industries, particularly those that might fill existing or potential market niches.

g) LDCs need to give the highest consideration to more efficient management of industrial plants at all levels. This can be achieved by developing human resources, particularly managerial, engineering and other technical skills.

h) LDCs should develop institutional arrangements, including the adoption of greater incentives, to improve the efficiency of the public sector.

<u>At the international level:</u>

(a) To achieve the expected results, and as a prerequisite for increased private funding, the flow of Official Development Assistance (ODA) and concessional loans to industry should be substantially increased to meet the growing requirements of the adjustment programmes of LDCs;

(b) Increased transfer of technology should be facilitated by providing the necessary expertise, training, credit and loan facilities to LDCs;

(c) The developed countries should give preferential treatment to exports of manufactured goods from LDCs by opening their markets to those countries and refraining from protectionist policies.

(d) LDCs should be encouraged to process their raw materials, to use their installed capacities more economically, and to acquire assistance in training and management through sub-contracting arrangements.

Chapter IV

INDUSTRIAL ACTION PLAN FOR THE LEAST DEVELOPED COUNTRIES

UNIDO continues to regard the main objectives of the original SNPA as still valid, although adjustments must be made for the policies, needs and endowments of individual countries. Recognizing, however, that the manufacturing sector in most LDCs in the 1980s has not even come close to achieving the originally targeted rate of growth, UNIDO points to the need for more precise and effective instruments to bring about a rate of growth which can approach or meet these objectives.

UNIDO has therefore prepared to undertake a more detailed and comprehensive Industrial Plan of Action for the LDCs in the 1990s. The proposed Action Plan follows closely the recommendations of UNIDO's Industrial Development Board, most recently elaborated at its November 1989 plenary meeting, at which it called for the Director-General of UNIDO to continue to accord highest priority to the LDCs in its technical co-operation programmes as well as in the use of relevant types of financial assistance which are made available through UNIDO. It also specifically requested the Director-General to take the necessary measures to ensure UNIDO's active participation in the preparatory work of the Second United Nations Conference on the Least Developed Countries, including the development of a special strategy for promoting the industrialization of the LDCs in the 1990s.

Referring to the above, UNIDO has formulated a project which aims to analyse the key issues relating to the industrialization of the LDCs and to prepare recommendations for national and international action in this field. In particular, UNIDO intends to engage in a new and thorough analysis of the critical areas of industrial policy with respect to the LDCs, so as to define more clearly the steps to be taken and the responsibilities to be assumed by each party concerned.

The project involves conducting a set of studies which will address four key industrial development issues: human resources development; improvement of industrial capabilities; industrial rural development and promotion of the indigenous sector; and international support for industrialization in the LDCs.

Among the elements to be financed by the project are: sending of international experts to the LDCs to assist in the preparation of the studies; review and analysis of these and other relevant reports and studies; and organization of an international workshop on industrial strategies for the Least Developed Countries. UNIDO staff members and the international experts recruited for the project, assisted by local experts in the LDCs, will collect and analyse available data to be used in preparing the key studies. The international workshop will bring together representatives of all 42 LDCs, representatives of relevant UN organizations and financial institutions, and selected specialists of developed and developing countries who may contribute to the success of the workshop. Workshop participants will discuss the results of these studies in order to make constructive comments and suggestions for finalization of the Industrial Plan of Action. The final draft of the Plan of Action, which is to be presented to Fourth General Conference of UNIDO in 1991, will thus take into account the comments and suggestions of the workshop as well as the recommendations which arise from the Second United Nations Conference on the LDCs in Paris, September 1990.

The proposed studies would be focused on the identification of specific difficulties and obstacles to industrialization and the means by which these problems could be resolved. The recommendations of the Action Plan could involve steps by the LDCs themselves, other countries concerned, UNIDO and other international organizations, NGOs, and public and private sector institutions. These actions will be classified and integrated into a series of precise and mutually supportive actions and recommendations which constitute the Industrial Action Plan. The components of the Industrial Action Plan will make clear distinctions with respect to main industrial sectors, problem areas addressed, timing and resource requirements.

The Industrial Action Plan will take fully into account the heterogeneity of LDCs in terms of size, geographical location, economic structure, natural resources endowments, etc., as well as their varying industrialization possibilities. Accordingly, the Plan components will also distinguish among LDCs on the basis of such factors as natural resource endowments, size and content of the manufacturing sector, existing and potential linkages with other sectors, degree of openness of the economy, regional co-operation, etc.

In line with the GC.2/Res.9 concerning the preparatory work for the Second United Nations Conference on the LDCs, UNIDO considers the preparation of the proposed Industrial Action Plan as an important step toward elaborating a more appropriate industrial development strategy for the LDCs. UNIDO intends to implement this Industrial Action Plan in close consultation with all concerned UN system organizations, countries and intergovernmental organizations which may contribute to achieving the agreed industrial development targets for least developed countries in the 1990s.

ANNEX 1: UNIDO'S TECHNICAL ASSISTANCE DELIVERY TO THE LDCS

	1986	1987	1988	1989
Africa				
Benin	227,406	241,547	129,042	21,083
Botswana	191,881	470,929	481,936	452,834
Burkina Faso	452,783	401,272	435,912	691,869
Burundi	452,539	334,094	118,224	78,895
Cape Verde	274,757	414,587	305,586	280,578
Central African Republic	25,549	48,968	(3,907)	-
Chad	403,180	676,597	970,727	603,483
Comoros	108,252	595	-	-
Equatorial Guinea	27,531	(1,090)	-	-
Ethiopia	3,961,367	2,046,904	3,601,566	4,701,142
Gambia	35,512	112,609	57,945	38,030
Guinea	832,769	553,045	812,341	843,592
Guinea-Bissau	43,759	196,887	134,688	160,074
Lesotho	352,442	126,199	123,661	286,498
Malawi	183,762	141,392	585,202	1,193,322
Mali	834,777	885,685	441,590	384,940
Mauritania	..	35,995	23,156	149,390
Mozambique	..	..	..	903,043
Niger	379,849	424,099	640,074	705,887
Rwanda	321,167	579,759	92,281	462,210
Sao Tomé and Principe	17,253	4,631	303,723	114,717
Sierra Leone	677,217	372,822	462,370	442,765
Togo	772,907	547,720	1,041,290	398,376
Uganda	344,877	620,786	716,969	941,064
United Republic of Tanzania	842,468	929,614	349,969	489,054
Americas				
Haiti	47,720	75,795	15,235	45,742
Arab States				
Democratic Yemen	226,346	313,889	402,629	274,904
Djibouti	55,567	(9,725)	33,855	69,549
Somalia	780,125	538,597	751,110	715,002
Sudan	268,350	250,425	601,057	771,612
Yemen Arab Republic	104,549	125,127	942,295	844,284
Asia and Pacific				
Afghanistan	24,323	(589)	-	-
Bangladesh	1,976,819	1,660,439	1,135,263	2,411,802
Bhutan	389,967	360,054	189,059	148,528
Kiribati	..	19,134	(30)	62,832
Lao People's Democratic Republic	255,910	82,584	(584)	49,577
Maldives	30,879	116,195	5,827	(162)
Myanmar (Burma)	..	..	..	566,284
Nepal	763,119	882,887	1,289,295	1,645,056
Samoa	..	..	..	17,508
Tuvalu	..	..	78,475	-
Vanuatu	..	214,078	24,442	56,216
Other LDC projects	324,564	419,749	(55,589)	319,981
Total, all LDC projects	17,012,242	15,214,285	17,031,307	22,341,561

ANNEX 2: COMPOSITION OF UNIDO TECHNICAL ASSISTANCE*

	1986	1987	1988	1989
Regular Programme of Technical Co-operation	1,563,882	598,284	627,748	1,671,964
Indicative Planning Figure	12,580,256	10,587,253	13,480,605	14,167,162
Special Industrial Services	902,052	737,797	611,369	526,892
UNDP Special Measures	-	284,999	26,402	154,922
Industrial Development Fund	717,795	2,380,463	851,456	2,937,967
Other sources**	1,248,257	625,489	1,436,727	2,882,654
Total, all LDC projects	17,012,242	15,214,285	17,031,307	22,341,561

Notes: * Data for 1986 covers 37 LDCs. Data for 1987 cover 40 LDCs, with the addition of Kiribati, Mauritania and Tuvalu. Data for 1988 cover 41 countries, with the addition of Myanmar (Burma). Data for 1989 cover 42 countries, with the addition of Mozambique.

** Includes Trust Funds, IDA-financed projects, Voluntary Fund of the United Nations Decade for Women, United Nations Financing system for Science and Technology for Development, and United Nations Fund for Drug Abuse Control.

ANNEX 3: Examples of UNIDO Technical Co-operation Projects in LDCs

A. Food products (ISIC 311,312)

Food processing is the largest single manufacturing industry in developing countries, accounting for over 16 per cent of manufacturing industry. Output of processed food is also growing relatively rapidly, at a rate of over 4 per cent per annum since 1970, a rate which it will have to sustain or increase in order to help feed its fast-growing urban population, to reduce food imports, and to carry out food security measures.

The food products industry has received nearly 6 per cent of the total volume of UNIDO industry-specific technical co-operation. UNIDO has supported an integrated approach to the promotion and development of agro-industries (for example, in Niger and Vanuatu), as well as the rehabilitation of existing industries (Guinea and Uganda).

Selected UNIDO technical co-operation projects: food products industry

Country or region	Period	Project title
Bangladesh	1985-	Rice bran oil extraction plant
Democratic Yemen	1985-	Improvement of bread production and distribution
Ethiopia	1985-	Assistance in establishment of the national utilization scheme for slaughter-house by-products
Ethiopia	1986-	Feasibility study of a baby food manufacturing complex
Guinea	1982-	Assistance à la preparation d'un programme pour la réhabilitation, la modernisation et l'expansion de l'agro-industrie
Guinea-Bissau	1987	Assistance in performance improvement of fish-processing plants
Mali	1982-	Assistance à la Société des conserves alimentaires du Mali
Niger	1985-1986	Development of agro-industry for essential industrialization
Uganda	1981-	Rehabilitation of Mukisa Foods Limited
United Rep. of Tanzania	1986-	Preparatory assistance in the field of food testing and quality control in food-processing industry
Vanuatu	1986	Assistance in the development of the food-processing industry
Yemen	1979-	Establishment of food testing and quality control laboratory.

B. Textiles (ISIC 321) and Wearing Apparel (ISIC 322)

The textile industry contributes nearly 10 per cent of the total manufacturing output of developing countries. Textile industry output increased by about 2.4 per cent per annum between 1970 and 1985, and increased by an even higher rate in recent years (e.g. 4.8 per cent per annum in 1988). This resulted in an increase in the output of the textile industries of developing countries, which now account for about 25 per cent of world output. The clothing industry contributed another 3.5 per cent to manufacturing output in developing countries, and has been increasing at a rate of 4 per cent per annum. The developing countries' share of world output has risen to about 16 per cent.

UNIDO implemented many large-scale technical co-operation projects in the textile industry, accounting for about 6 per cent of UNIDO expenditures in developing countries. Particular attention has been given to value-added processes involving local products such as jute (Bangladesh) and sisal (Tanzania), and to rehabilitation of the garment industry in countries such as Lesotho, Mozambique, and Vanuatu.

Selected UNIDO technical co-operation projects: textiles industry

Country or region	Period	Project title
Bangladesh	1985-1986	Jute products research
Bangladesh	1982-	Strengthening of the College of Textile Technology
Bangladesh	1984-	Private textile mills - production management system
Bangladesh	1984-	Promotion of hand-knotted woollen carpet industry
Botswana	1987-	Establishment of a knitwear factory
Democratic Yemen	1986-	Assistance in marketing of cotton cloth
Kiribati	1989	Assistance to the garments factory
Lesotho	1985-	Assistance to Peacock Garment Company Ltd. in improving its production techniques
Mozambique	1986-	Assistance to OMM garment co-operatives in production organization and financial management
United Rep. of Tanzania	1984-	Assistance to Kurasini Women's Tailoring Society
Vanuatu	1986	Improvement of garment designing and manufacturing activity
Yemen	1989-	Techno-managerial appraisal of the Yemen Weaving and Textile Corporation

C. Wood and wood products (ISIC 331) and paper and paper products (ISIC 341)

Wood and wood products account for only about 2.3 per cent of manufacturing output in developing countries, although the annual increase in output was much faster in developing countries (nearly 4 per cent per year). UNIDO technical co-operation encourages efficient use of wood resources, as well as the substitution of local wood resources for imported steel and other products in the building industry. UNIDO designs for prefabricated modular bridges which were developed in Kenya have been introduced into Central African Republic and other countries. UNIDO assisted Bhutan to preserve wood for the construction industry. UNIDO training programmes are concentrated on criteria for the selection of wood-working machines and production management in wood-processing industries.

The paper and paperboard industry makes a growing contribution to total manufacturing output as income levels rise. Between 1970 and 1985, value added in this industry increased twice as fast as in developed countries, resulting in an increase in the share of developing countries in world output from 7 per cent in 1970 to over 10 per cent in recent years. UNIDO seeks to assist developing countries in the use of local raw material other than wood (bagasse, bamboo), in selecting the pulping process most suitable for these raw materials and in rehabilitating or modernizing esisting pulp and paper works. UNIDO assistance has strengthened national centres for pulp and paper research in Myanmar and Sudan.

Selected UNIDO technical co-operation projects: wood and paper products

Country or region	Period	Project title
Bhutan	1984-	Low-cost modular prefabricated wooden bridges
Cape Verde	1986-	Assistance for quality control of imported wood
Myanmar	1977-	Establishment of a pilot plant for pulp and paper research and training on tropical raw materials at the Central Research Organization
Sudan	1982-1986	Cellulose Chemistry and Technology Research Centre
Togo	1986-	Techno-economic feasibility study for a wood-based panel plant
Uganda	1981-1986	Assistance in pulp and paper production - Pulp and Paper Company
Asia and Pacific	1981-1986	Regional coconut wood training programme
Caribbean	1986-	Development of integrated industry programme for the woodworking and furniture industries
Global	1979-1986	Pilot plant for long/short fibre separation in bamboo pulp (Ashok Paper Mills Ltd. India)

D. Non-metal mineral products (ISIC 361, 362, 369)

About 5 per cent of total manufacturing value added in developing countries is accounted for by pottery, china and earthenware (0.5 per cent), glass and glass products (0.9 per cent) and building materials such as bricks, tiles, pipes, cement, lime, and plaster. In the 1970s and 1980s output of these various products in developing countries increased at more than double the rate in developed countries. As a result, the developing countries share of world output of these products increased from about 10 to nearly 15 per cent.

UNIDO assists several LDCs (e.g. Democratic Yemen) in evaluating their clay and other raw material resources and developing local ceramic industries based on them. It has also assisted countries such as Bangladesh in establishing plants manufacturing sheet glass and glass containers, and a number of countries in establishing both large and small projects for cement plants (Botswana), brick works (Burkina Faso) and slate works (Bhutan).

Selected UNIDO technical co-operation projects: non-metal mineral products

Country or region	Period	Project title
Bangladesh	1983-	Assistance to glass factories
Bangladesh	1983-	Upgrading and development of indigenous building materials manufactures
Bhutan	1981-	Development of Bonsegeoma slate deposit
Burkina Faso	1983-	Rehabilitation of the brickworks VOLBRICERAM
Chad	1983-	Assistance á la relance de la production des matériaux de construction
Democratic Yemen	1983-	Assistance to heavy clay and ceramic industries
Ethiopia	1981-1986	Assistance to the marble and stone industry
Ethiopia	1985-1986	Assistance to Ethiopian Electricity, Light and Power Authority in ceramic technology
Gambia	1982-1986	Establishment of a small-scale brick-making plant
Guinea-Bissau	1985-	Etude pour l'établissement d'une cimenterie dans le Mayo-Kebbi
Haiti	1979-	Projet intégré de développement de la pierre
Malawi	1986-	Utilization of linthipe ceramic clays
Niger	1981-	Renforcement des activités de la briqueterie SONICERAM
Yemen	1985-	Assistance to the Amran Cement Company

E. Iron and steel (ISIC 371)

The largest number of UNIDO technical co-operation projects are executed in the iron and steel industry, covering technology for processing iron ore, basic steel manufacture, manufacture of a range of steel products and special steels and foundry operations. The following examples illustrate the wide range of UNIDO projects, including assistance in establishing new facilities (Lesotho), rehabilitation or modernization of existing plants (Afghanistan), and evaluation of raw materials for the iron and steel industry (Niger).

Selected UNIDO technical co-operation projects: iron and steel

Country or region	Period	Project title
Afghanistan	1981-1986	Technical assistance for the rolling mill in Pul-i-Charki industrial areas
Benin	1985-	Etude de préfaisabilité pour l'installation d'une mini-aciérie
Democratic Yemen	1978-	Modernization of the foundry and associated mechanical workshop at the Revolution Workshop Foundry
Ethiopia	1984-	Technical assistance in electric arc-furnace steel-making
Guinea	1982-	Assistance au renforcement du Centre d'entretien et de réparation des équipements industriels
Lesotho	1986-	Mini-foundry casting facility
Mozambique	1984	Preparation of a detailed project design and execution programme for establishment of a network of metal production/processing units
Niger	1981-	Création d'une installation de fonderie et de forge pour la production et la démonstration
Niger	1985-	Technical investigations of the production of sponge iron for steel-making utilizing indigenous iron ores and coals
Sierra Leone	1983-	Technical assistance to the National Workshop
Somalia	1985-1986	Technical assistance in upgrading of production efficiency and local skill of the foundry mechanical workshop
Sudan	1986-	Assistance to Sudan Mint Foundry in improving the operation of induction melting furnaces
United Rep. Tanzania	1980-	Establishment of a Small Industries Development Organization foundry with integrated mechanical workshops