



**Governing Council  
of the  
United Nations  
Development Programme**

Distr.  
GENERAL

DP/CP/EGY/4  
28 October 1986

ORIGINAL: ENGLISH

Special session  
February 1987, New York  
Item 4 (a) of the provisional agenda

PROGRAMME PLANNING

COUNTRY AND INTERCOUNTRY PROGRAMMES AND PROJECTS

FOURTH COUNTRY PROGRAMME FOR EGYPT\*

<u>Programme period</u>	<u>Actual resources programmed</u>	<u>\$</u>
January 1987-December 1991	IPF for 1987-1991	29 400 000
	Other resources programmed	<u>11 500 000</u>
	Total	40 900 000

CONTENTS

	<u>Paragraphs</u>	<u>Page</u>
I. DEVELOPMENT TRENDS, STRATEGIES AND PRIORITIES .....	1 - 25	2
A. Current economic trends .....	1 - 8	2
B. National development strategies .....	9 - 15	3
C. Technical co-operation priorities .....	16 - 20	4
D. Aid co-ordination arrangements .....	21 - 25	5
II. THE COUNTRY PROGRAMME .....	26 - 117	6
A. Assessment of current country programme .....	26 - 38	6
B. New programme proposal .....	39 - 116	9
C. Unprogrammed reserve .....	117	25
<u>Annex.</u> Financial summary .....		26

\* Detailed listings of projects and other related data prepared as part of the country programming exercise are available on request. These listings include: (a) ongoing projects; (b) proposed projects; (c) distribution of resources by objective; (d) distribution of new country programmes by sector.

I. DEVELOPMENT TRENDS, STRATEGIES AND PRIORITIES

A. Current economic trends

1. Among the principal features of the economic profile of Egypt are the scarcity of arable land and the population growth. Agricultural land is limited mainly to the Nile Valley and the Delta, with a few oases and some arable land in Sinai. The cultivated area is 5.8 million feddans (one feddan = 1.05 acres), which represents about 3 per cent of the total land area. Furthermore, population pressure on cultivated land and heavy concentration of population in the Nile Valley and Delta have resulted in the diversion of a large area of arable land for construction. Over the last three decades, land reclamation of 900,000 feddans has been offset by approximately 700,000 feddans of cultivable land lost to urbanization. The current rate of population growth of 2.7 per cent continues to aggravate the balance between population (currently 49 million) and arable land.

2. In the early seventies, Egypt embarked on a strategy for economic development based on a more open, market-oriented economy with new trading and investment partners, especially in the private sector. A far-reaching adjustment in domestic policies and in the economic structure was required, which brought about a new era of sustained economic growth. The main stimulus underlying the high rate of growth was the very rapid increase of external resources available to the economy after 1974: Suez Canal revenues; oil exports (which rose from 7 million tons in the 1970s to over 32 million tons in the early 1980s); remittances from expatriate Egyptian workers; tourism receipts; and, to a lesser extent, free capital flow.

3. In late 1985 and early 1986, these external resources underwent a sizeable reduction. The fall in oil prices has reduced revenues by about \$1,200 million per year. Tourism has been affected by international events and has declined very steeply. Workers' remittances have experienced a marked decline and the income from the Suez Canal has flattened out. Reduced revenues have aggravated the debt crisis. By September 1985, foreign debt had reached \$US 24.2 billion.

4. To cope with this difficult situation, the Government reviewed its development priorities and called for a National Economic Reform Programme. In the medium term, the Government will adopt measures to curb the budget, which has reached an aggregate figure of 5,400 million Egyptian pounds, with a net deficit of LE 1,200 million. This will be attained by decelerating the increase of wages and salaries which account for LE 3,200 million and by rationalizing the subsidies of basic commodities and subsidies to public sector companies. The Government will furthermore review the investment account, liberalize the terms on which banks attract workers' remittances, tighten domestic credit, and further develop tourism as a foreign exchange earner. Great emphasis is being placed on export-oriented manufacturing industries, rehabilitation of the public industrial sector and increased agricultural production, especially of basic commodities.

5. Concerning the progress of the current Plan to date, implementation reports indicate that during the first three years (1982-1985), an average increase of gross domestic product (GDP) of 7.8 per cent at current prices was achieved. Total investments amounted to LE 20.8 billion, of which LE 15.7 billion was in the public

sector. The deficit in the public account was reduced from LE 2.2 billion at the beginning of the Plan to LE 1.3 billion at the end of the third year. Current deficit in the balance of payments was also reduced in the same period from LE 1.8 billion, approximately. About 400,000 new jobs were created during this period.

6. The recently revised draft for the last year of the Plan (1986/87) provides for investments amounting to LE 7.4 billion, of which about 70 per cent is in the Government and public sector and 30 per cent in the private sector. GDP is expected to increase to LE 28.3 billion, compared to LE 26.6 billion expected for 1985/86, a growth of 6.6 per cent. Investment will concentrate almost exclusively on the completion and overhaul of existing projects.

7. Growth rate in agriculture is set at 3.6 per cent through an increase in the average yield per acre of specific priority crops, the reclamation of new lands and the renewal of the equipment of the reclamation companies. In industry, production valued at LE 14 billion (1981/82 prices) is envisaged during the year, resulting in an increase of LE 1.2 billion or 9.7 per cent over 1985/86. The public sector contribution is estimated at 55.7 per cent. Major activities in this sector will cover ready-made garments and shoes (12.1 per cent increase), metal products (15.2 per cent) and non-metal products (16 per cent). In the private sector, emphasis will be on plastic production, engineering industries, food industries and building materials.

8. Furthermore, production of 44.2 million metric tons of crude oil is planned against 42.6 million expected under the current year 1985/86 (a 3.7 per cent increase). The target for construction/completion of housing units is 160,000, of which 154,000 units or 96 per cent will be handled by the private sector; 86,000 units or 54 per cent will be for middle-income people. The total investment will be LE 1171.1 million of which only 3.5 per cent will be in the public sector. The last year of the Plan also seeks to curb commodity imports, particularly consumer goods, to LE 6,380 million, a decrease of 6.7 per cent over the current year. Agricultural exports are to be increased by 3.1 per cent and industrial exports by 7.9 per cent over 1985/86.

#### B. National development strategies

9. The next five-year Development Plan 1987/88-1991/92 is currently being prepared. It is expected to be finalized by 1 January 1987. While some specific measures and targets are still under review, the broad direction of the Plan is already sufficiently clear: it will be in harmony with the National Reform Plan launched by the Government in early 1986 as a response to the economic crisis, as well as with the last year of the current plan (1986/87). It will emphasize the increasing role of the private sector in the development effort, particularly in meeting investment needs. The private sector is expected to provide about 50 per cent of the investment programme. The increasing role of the private sector will also assist in alleviating the burden of foreign debt for the Government.

10. The Plan aims at 5 per cent as an average rate of growth, a lower target than the current plan. However, an additional increase of 1 per cent is anticipated, thanks to better utilization of the installed capacity established during the current plan (idle capacity is estimated to have reached 30 to 40 per cent of installed capacity). This will not require major additional investments.
11. Suitable monetary policies, coupled with market forces, will increase the effectiveness of the economy in rationalizing the use of national resources. Receipts from tourism which account at present for \$1 billion, are expected to increase significantly.
12. The Plan assumes that revenues from oil, the Suez Canal and remittances from Egyptian workers abroad should gradually become supplementary, rather than principal, sources of income.
13. The new Plan will seek to curb the deficit in the current budget by rationalizing subsidies and encouraging investment through bonds and other financial instruments. The capital markets will play an important role by promoting the participation of the small investor in the productive process.
14. While the present Plan has emphasized infrastructure as a priority for development, the new Plan will focus attention and direct the development effort towards increasing production and strengthening productive capacity, particularly in agriculture and industry. In agriculture, the main thrust will be achievement of food security by increasing food production through new technologies and applied research, improved agricultural methods and better utilization of marginal lands or newly reclaimed lands. In industry, the Plan envisages a growth rate of 9.7 per cent, with concentration on agro-industries, ready-made clothes, metallic and non-metallic products, capital goods, and electrical industries.
15. The Plan accords priority to export promotion, particularly agricultural and industrial products, whose share declined during the early 1980s from 14 per cent of the GDP to only 6 per cent. To maintain a high rate of GDP growth, the Plan will achieve a substantial structural transformation of the economy through intensive investment effort directed at export expansion and viable import substitution, with a view to generating net foreign exchange earnings to make up for the declining external resources.

#### C. Technical co-operation priorities

16. Egypt receives a considerable volume of bilateral and multilateral assistance. Most bilateral assistance has a major component of capital assistance, but some technical assistance requirements are also covered.
17. At the request of the Governing Council, UNDP organized a study of recipient Government perceptions as to the future needs and modalities for United Nations technical assistance. Direct consultations were carried out with the Government by a UNDP mission in late 1983. These consultations provided useful insights into the country's needs for technical assistance and have been taken into account in the preparation of the country programme.

18. Egypt has reached a fairly advanced level of development and has an abundant supply of technical, scientific and administrative personnel in most areas. However, the brain drain to neighbouring countries persists, causing occasional shortages that are more frequent at the intermediate technical level, since the formation of technical cadres at this level has lagged behind somewhat. It is commonly recognized that Egypt does not need the sustained level and broad range of technical assistance required by less developed countries. Rather selected high calibre expertise is required and for a relatively short time in specific areas such as genetic engineering, remote sensing, systems analysis and capital markets. This implies a nearly exclusive emphasis on top, short-term consultants, a trend which is already quite evident in the current country programme, but will be even more accentuated in the 1987-1991 programme. Concerning training abroad, emphasis will be on very advanced short-term training and short study tours.

19. The requirements for equipment will remain reasonable in view of the limited level of UNDP resources and the high volume of capital assistance flowing into the country from bilateral donors, the European Economic Community (EEC) and some of the development banks. Some assistance will be required to finance national experts and national consultancy firms, of which there are many in the country. The current financial stringency may make it increasingly difficult for organizations receiving UNDP assistance to provide the funds for this input, as has generally been done up to now. The necessary flexibility will be introduced in the 1987-1991 programme.

20. A priority for technical co-operation will be the transfer of advanced technology. The country has made good technological progress and in many areas know-how is up to date and compares well with that available in more developed countries. There are gaps, however, and the quick pace of technological advance in the industrial countries requires continuous updating and adjustment on the part of the Government, which is not always easy to bring about within the resources available. The country also needs to expose the scientific and technological cadres to the latest developments in the leading countries of the world and to familiarize them with the state of the art in disciplines crucial to economic development. In the Administration, the rationalization of the decision-making process and the enhancement of the management function are top priorities for technical co-operation.

#### D. Aid co-ordination arrangements

21. The task of aid co-ordination falls to the Government, which programmes and co-ordinates assistance to ensure that it has the maximum economic return both for the Government and the donor. All capital assistance is co-ordinated by the Ministry of Planning and Economic Co-operation, Department of International Co-operation. This applies to all bilateral donors, EEC, the World Bank and development banks. Technical assistance included in the programme of these donors is also co-ordinated by the Ministry of Planning.

22. Technical co-operation with a number of United Nations agencies including UNDP, the World Food Programme (WFP), the United Nations Children's Fund (UNICEF)

and the United Nations Fund for Population Activities (UNFPA) is co-ordinated by the Ministry of Foreign Affairs, Department of International Co-operation for Development, in consultation with the Ministry of Planning. Technical co-operation under the regular programme of the specialized agencies of the United Nations system is generally co-ordinated by the respective substantive ministry in consultation with the Ministry of Foreign Affairs.

23. Within major ministries, one of the under-secretaires is responsible for the co-ordination of all foreign aid to the sector in consultation with the Ministry of Planning or the Ministry of Foreign Affairs, as the case may be.

24. Co-ordination among donors is ensured through individual contacts. Occasionally, when several donors appear to be interested in assisting in certain areas, the Government may call a donor meeting (e.g. for the development of the Suez Canal area or of the north-west coastal area).

25. Among organizations of the United Nations system, co-ordination is ensured by periodic meetings called by the Resident Co-ordinator and by frequent ad hoc contacts among agency representatives. Additional co-ordination meetings take place periodically among UNDP, UNICEF, WFP and UNFPA in pursuance of the special co-ordination agreement among these four organizations. An example of the result of these co-ordination efforts is the project Drinking Water and Sanitation (EGY/82/002), which is co-financed by UNDP, UNICEF and the World Health Organization (WHO), both in Phase I and Phase II. Project development of the north-west coastal zone and Siwa Oasis will be closely co-ordinated with substantial WFP activities in the same area.

## II. THE COUNTRY PROGRAMME

### A. Assessment of current country programme

26. Two major factors affected the implementation of the 1982-1986 programme. The first factor was the reduction of the indicative planning figure (IPF) from 80 per cent to 55 per cent in 1982/83. This reduction created a considerable disruption at the onset of the country programme. The depth of the resource deficit necessitated drastic adjustments across the programme. About \$2.2 million of the deficit was made good by the third party cost-sharing (i.e. the Arab Gulf Programme for the United Nations Organization (AGFUND), French Government) and about \$US 3 million by Government cost-sharing. The UNDP ability to absorb a certain amount of cost-sharing contributions in Egyptian pounds greatly facilitated the promotion of Government cost-sharing, mostly in the sectors of industry, irrigation and electricity/energy.

27. The second factor affecting the implementation of the 1982-1987 country programme was the 1985/86 economic crisis. The Government responded to the crisis with a re-assessment of the major development priorities and a selective adjustment of development objectives through a national economic reform programme adopted in early 1986. The major features of this programme are described in paragraph 4 above.

28. As a result of this re-assessment, UNDP was able to assist the Government in some of the new requirements. A number of new projects were approved between late 1985 and early 1986 to cater to these requirements, for example, Rationalization of the Import System and Import Regulations, Export Promotion Studies, Fertilizer Development Programme, Establishment of a Central Economic Information System in the Ministry of Cabinet Affairs, Rehabilitation and Improvement of Irrigation Systems, Strengthening of the Capital Market Authority, Food Development Centre, Study of Feeder Industries for the Automotive Industry, Computerization of Foreign Debt and Strengthening Textile Design and the Garment Industry.

29. Several of these projects will continue into the fourth cycle. Others, catering to very urgent needs, will end in 1986. These projects must be considered as forming the link between the two programming cycles. Since they are all new in conception and design they could, in fact, be considered as part of the new country programme, including those that terminate in 1986 and are technically part of the 1982-1986 programme.

30. The 1982-1986 country programme was reviewed in depth between late 1984 and early 1985 by the Government and UNDP as a first step in the preparation of the next country programme. This review lasted from October 1984 to March 1985 and included joint visits by the Government Co-ordinating Organization and UNDP to the site of nearly all projects. The joint conclusions reached in the course of the review and briefly described below form the basis for the conceptual approach and execution modalities of the present programme.

31. The trend towards the increasing employment of short-term experts and consultants vis-à-vis long-term experts was deemed to be positive, and a means of stretching limited resources. With good national technical and scientific personnel locally available, only top-level, short-term technical inputs were required from the outside.

32. The past contribution by national experts was found to be generally excellent, resulting in the increased utilization of national experts and national consultancy firms. This not only permits economies of UNDP resources, but also contributes to increased self-reliance.

33. The UNDP programme was found to be rather dispersed over a vast number of generally small or medium-size projects. The merits of concentration versus dispersion were carefully analyzed. Given the substantial volume of aid available to the country and the limited size of UNDP resources, it was concluded that UNDP assistance should continue to focus on small, but well selected and decisive projects having a catalytic role. The crucial point was quality rather than size.

34. The performance of national project directors was also assessed. In Egypt, the trend has been to entrust to national project directors responsibility for the delivery of the UNDP inputs on behalf of the United Nations executing agency. This trend has gradually intensified: there remain very few international project managers or chief technical advisers. The arrangement has worked well and has contributed to the full integration of the UNDP inputs into the large Government setting.

35. Throughout the programme, there appeared to be no major problem with the availability of suitable counterparts, who were present in good number in most projects. Salary supplements provided through the project by the Government helped to attract and retain the required counterpart staff. Counterpart staff required only short-term, very specialized training abroad; little or no basic training was required. Study tours were a frequent arrangement. In several cases, project documents had been formulated not by visiting experts, but by the counterpart authorities themselves upon return from a study tour arranged for the purpose.

36. The number of really innovative projects was found to be rather limited, and it was felt that the new country programme should show more innovative features. The transfer of advanced technology, modernization of traditional structures, improved managerial ability and facilitation of contacts with scientific and technological institutions of excellence should be given more prominence in the future.

37. Government execution was also reviewed. So far, this modality of execution had been chosen for five projects, with positive results. This arrangement will be applied more widely in the future, whenever counterpart organizations are deemed ready to undertake the additional responsibilities involved.

38. Among the substantive achievements of the third cycle programme, the following can be mentioned:

(a) The Beef Industry Development project (EGY/82/007), which introduced and successfully demonstrated a number of new feeding technologies based on domestic feed resources. In the light of project results, EEC is providing a financial investment of about \$1.5 million for an expansion of the project in six governorates;

(b) The Plastics Development Centre (EGY/81/029), has been instrumental in promoting the use of plastics in agriculture. A recent decree by the Ministry of Agriculture assigns the Centre the responsibility of providing the technology for the establishment of 350,000 greenhouses;

(c) The project for Managed Maintenance in Metallurgical Industries (EGY/81/012), has had a major impact on Egyptian industry. The project staff has duplicated the project achievements in six major complexes, training 120 engineers;

(d) In Alexandria, the Aquatic Environment Pollution project (EGY/73/058) has been successful in identifying the major sea pollutants. As a result, measures for pollution control are being proposed;

(e) Important results have been achieved in other projects, such as Energy Conservation in Industrial Plants (EGY/83/001) and establishing an Electricity Data Bank (EGY/81/037), which addressed the critical need to rationalize the energy sector;

(f) The Nile Valley Farming System project (EGY/81/040) has fully achieved its pilot study objectives. A proposal to set up a Village Comprehensive



Improvement Authority in the Ministry of Agriculture to spread the achievements of the project gradually to all Egyptian villages undergoing agricultural mechanization, is being considered.

B. New programme proposal

39. Following the assessment, UNDP formulated a note on the preparation of the country programme in August 1985, which the Government found useful. With the exception of a UNDP/Food and Agriculture Organization of the United Nations/IBRD mission which reviewed the technical assistance requirements of the agricultural sector in January 1986, no direct participation by the United Nations specialized agencies was requested. However, a dialogue with several agencies, particularly the International Labour Organisation (ILO), FAO, UNIDO, WHO, IBRD and the International Trade Centre (ITC) was carried out by the substantive ministries through UNDP or the agency representative office in Cairo.

40. The broad areas of concentration of the new country programme identified through this process were as follows:

(a) In agriculture, an increase in productivity through the introduction of advanced technologies, for example, bio-engineering and remote sensing, new methods of production such as protected agriculture, and better management;

(b) In industry, an increase in the productivity of the public sector through research and development and other supporting services such as food processing, fertilizers, and textile design; the enhancement of the utilization of locally produced capital goods; the introduction of new technology, for example, plastic, energy conservation; the promotion of medium- and small-scale industries and assistance to the public and private sectors through advisory services;

(c) In irrigation, the rehabilitation of irrigation systems, water management and water research;

(d) In the health sector, drinking water and sanitation and training of paramedical personnel;

(e) Other areas of priority should be the modernization of the administrative machinery and the enhancement of the management function in the public sector, manpower development and training in specific occupational or technical areas and improved management and conservation of energy resources. In all areas, one of the main objectives should be the transfer of advanced technology.

41. During the next cycle and in its National Economic Reform Programme, the Government is stressing the need for further involvement of the private sector. In this connection, many of the new programme proposals directly or indirectly address this theme. Primary among these are projects for Feeder Industries and Production of Capital Goods. Other projects in the industrial sector, as well as those concerned with Export Promotion, Import Management, Controlled Environment Agriculture and Fisheries Development will also affect the private sector.

42. Furthermore, some of the projects will involve grassroots participation. It is anticipated that the UNDP inputs to the Development of the North-West Coastal Zone and Siwa Oasis will be catalytic in attracting major resources to develop these areas in all aspects, including community development. By the same token, the project for Drinking Water Supply and Sanitation is directed at people living in rural areas, with the idea of introducing least cost technologies which will lead themselves to grassroots participation.

43. Several projects aim specifically at a greater involvement of women in the development process, for example, Fashion Design and Development of Ready-made Garments Specialization in Secondary Schools, and Nurses Education. Many projects anticipate a substantial involvement of women in the role of counterparts, especially research projects and those dealing with information systems.

44. Concerning Technical Co-operation among Developing Countries (TCDC), in addition to several bilateral agreements with African as well as Arab countries, the Government has established, from its own resources, a special fund of about \$1 million to finance technical co-operation with the African countries through which technical assistance needs such as expert services and fellowships are financed. Similarly, a large programme of agricultural training has, for many years, been providing training opportunities to fellows from Arab and African countries under the auspices of the Ministry of Agriculture. A survey is being carried out to match Egyptian capabilities and needs vis-à-vis the African continent with a view to strengthening technical co-operation activities. In addition to resources available from TCDC, part of the unprogrammed reserve may be used to promote such activities.

45. With regard to the resource base, in addition to the Government contribution in kind and the \$29.3 million IPF of which \$1.4 million having been borrowed by the previous cycle the third country programme rested on several converging financial sources: Government cost-sharing in convertible or local currency - \$4 million; Government cash counterpart contribution (GCCC) - equivalent to \$6.5 million; and third-party cost-sharing - \$3.5 million.

46. The 1987-1991 programme will safely count on at least an equivalent GCCC as well as third-party cost-sharing. Government cost-sharing, especially in local currency is, however, expected to reach much higher levels. One ministry has already pledged the equivalent of \$6 million in local currency for the projects in its sector. It is anticipated that at least an equivalent amount will be contributed to the programme in total by other sectors. Specific contributions to projects will be decided at the time of project formulation. The overall resource base for the fourth country programme is thus estimated at \$40.9 million, composed of an IPF of \$29.4 million (after discounting \$1.4 million for over-commitments in the third cycle); \$8 million in Government cost-sharing, and \$3.5 million third-party cost-sharing. The total GCCC is likely to be at least \$US 6.5 million.

#### Increased production in agriculture and attainment of food security

47. During the past decade, growth in Egypt's agricultural sector has averaged 2 to 3 per cent per annum. At the same time, GDP grew rapidly and there was a marked

increase in consumers' income, with a consequent sharp rise in the consumption of food. Slow output growth, combined with rapidly increasing domestic demand, turned the agricultural external trade balance from a surplus of \$0.3 billion in the mid-1970s into a deficit of \$2 billion in the early 1980s. Nevertheless, agriculture remains the largest sector in the economy, both in terms of its contribution to GDP (20 per cent) as well as in terms of employment (40 per cent).

48. The draft 1987/88-1991/92 Plan aims at achieving an accelerated annual growth rate of 3.6 per cent for the purpose of: (a) attaining the desired level of food security for a rapidly increasing population, as well as bridging the gap between agricultural supply and demand; (b) achieving self-sufficiency in all major crops except wheat; (c) generating foreign currency through improved marketing and a substantial increase in export-oriented crops; and (d) meeting the needs of industry and other sectors.

49. The growth targets of the Plan are expected to be achieved through: (a) increasing productivity in land already under cultivation (i.e. vertical expansion) by means of the effective use and management of natural and human resources, the application of advanced technology, intensive production methods and the provision of economic incentives; and (b) economic exploitation and expansion of newly reclaimed land (i.e. horizontal expansion). The Government aims at reclaiming 500,000 feddans over the Plan period and 2.8 million feddans by the year 2000.

50. Emphasis is placed on improved water management, the rehabilitation and maintenance of irrigation and drainage, as well as the rationalization of the overall water distribution system in both the established and reclaimed land. The Plan also stresses the active participation of the private sector and the importance of investment opportunities. The projects concerned are given below.

#### Ongoing projects

##### Application of Remote Sensing to Agriculture (EGY/85/002)

51. The arable land has decreased in recent years because of urbanization and there have been other changes in land use which have not been recorded. The project aims at creating an inventory of and monitoring the country's agricultural land by applying remote sensing techniques and executing efficient soil surveys and land evaluation studies.

##### Rehabilitation and Improvement of Water Delivery Systems in the Old Lands (EGY/85/012)

52. The improvement, rehabilitation and modernization of the farm application and water delivery systems in the old lands are prerequisites for the adoption of higher yielding varieties and better agricultural practices. Accordingly, this project is designed to strengthen the capacity of the Ministry of Irrigation to plan on-farm systems and rehabilitation measures, in addition to reducing water losses and upgrading crop production. Project results are expected to generate follow-up investment by the World Bank.

## New projects

### Controlled Environment Agriculture

53. There is a great deal of interest in this field in Egypt, including that of the private sector. It is projected that there will be from 12,000 to 60,000 acres under greenhouses by the year 1990. This project is meant to provide the research base for a more extensive use of new technologies in the above field. The objectives are to increase crop yields and quality, to control weeds, to improve water-use efficiency, to prevent soil erosion, to attain earlier plant maturity, and in general to extend the boundaries of production, basically through the use of plastic greenhouses, plastic tunnels and plastic mulches. Particular emphasis will be placed on seed production technology, on crop utilization, and on marketing.

### Fisheries Development

54. The fisheries subsector can play an important role, particularly in filling the protein gap. The project aims at improving the diet of Egyptians by increasing the production of fish in the fresh waters of the Nile and contributing to the saving of foreign exchange through the transfer of the latest technologies on fish-cage production and modular hatcheries.

### Assistance to the Water Research Centre

55. Through a recent re-organization, water research activities carried out by a score of organizations covering specialized areas have been brought under the general co-ordination of the Water Research Centre, Ministry of Irrigation. UNDP assistance to the Centre will cover a number of requirements, including the production of hydrogeological maps of the Sinai, the Nile Valley, the Delta and other areas. Additional requirements for assistance will be identified in the near future.

### Development of the North-West Coastal Zone (NWCZ) and Siwa Oasis

56. The Government attaches priority to the development of this semi-arid area, which stretches from Alexandria to the Libyan border. It has limited rainfall (100-150 mm) and limited groundwater deposits. Development activities will focus on agriculture, especially on horticulture and livestock production, as well as tourism. Several bilateral donors have expressed an interest in investing in the area. The Government will utilize UNDP as a framework for the co-ordination of bilaterally sponsored activities. Concrete plans will be formulated in late 1986 after the external resource base for this project becomes clearer.

### Linkages

57. The United States Agency for International Development (USAID), the World Bank and EEC represent the major sources of external aid in this sector. The overall objective of USAID support (\$320 million) is to improve agricultural productivity by raising the quality of the technologies available to farmers. Assistance is directed mainly to agricultural research, agricultural mechanization and the

irrigation sector. World Bank support (\$300 million) is concerned with mechanization, fish farming and drainage as well as agro-industries. EEC assistance (\$276 million) involves activities in soil amelioration, improved irrigation practices, upgrading of storage facilities and livestock and fish production. Close collaboration will be established with activities financed by these and other donors.

Increased industrial productions through research and development, improved services and better utilization of installed capacity

58. Total industrial production will reach \$14 billion in 1986. Half of it is the responsibility of the Ministry of Industry, which co-ordinates 117 companies affiliated to six general corporations, namely Food, Textiles, Chemical, Metallurgy, Engineering Minerals and Building Materials.

59. The public sector continues to play a predominant role but greater emphasis is being placed on the private sector. Export of industrial products reached \$643 million in 1985. Export promotion has become one of the top Government priorities. To this effect, the Government has launched a new drive to upgrade management in the parastatal sector, to increase the utilization of installed capacity (which is seldom more than 40 per cent) and to improve productivity. A major process of modernization and rationalization will be required.

60. Traditionally, UNDP assistance to the industrial sector has concentrated in the establishment or upgrading of research and development institutions. More than a score of such institutions have benefited from UNDP assistance. Many have achieved a degree of sophistication that enables them to assume the role of Centres of Excellence in the Region and are increasingly utilized for training African and Arab scientists and technicians. The Government has also decided to continue to take advantage in the new programming cycle of the unique opportunities offered by UNDP and the United Nations Industrial Development Organization (UNIDO) in this area. Co-operation with UNDP is sought in four areas: food processing research; fertilizer development; research on the use of plastic in construction; and garments design.

61. In connection with the current and planned efforts to boost industrial production and increase self-reliance in the production of capital goods, UNDP assistance is sought in two areas: the local manufacture of capital goods; and the upgrading of small- and medium-scale feeder industries to the automobile manufacturing industry. Finally, continuation and expansion of UNDP co-operation in energy conservation programmes in industry has also been requested.

62. Government cost-sharing in local currency for an amount equivalent to \$6 million has been pledged by the Ministry of Industry on behalf of the counterpart organizations benefiting from the co-operation activities proposed in the country programme. Details of projects are given below.

### Ongoing projects

#### Feeder Industry (EGY/86/004)

63. The car manufacturing industry, within the General Engineering Corporation, is experiencing a major reshuffle in view of the recently concluded joint venture of General Motors with El Nasr Automotive Company. This change calls for an increased role on the part of the feeder industries servicing the car manufacturing sector. A small-scale project was approved in 1986 to recommend concrete measures to develop small- and medium-scale industries and to assist with problems facing entrepreneurs in the field of production techniques and management procedures. The activities started under this project will be continued and enlarged in the new programme.

#### Energy Conservation in Industry (EGY/85/002)

64. A small-scale project was launched in 1985 to stimulate the participation of companies in energy conservation programmes. Two companies were selected: El Nasr Glass and Crystal Company and Alexandria Copper Works. It is expected that energy savings of at least 10 per cent will materialize and that the project will have a snowball effect on the public sector exercise to cover five additional industrial establishments. There are very concrete possibilities of third-party cost-sharing in this project from several bilateral donors.

### New projects

#### Food Development Centre

65. The project is designed to assist the companies engaged in food production and the processing of agricultural products. Pilot facilities will enable the promotion of development work in canning, dehydration, concentration, refrigeration and freezing of food products. New types of food production will be devised, which will encourage further investments in food processing. About \$0.5 million in cost-sharing contribution from a bilateral donor is expected. Some preparatory assistance activities were started in 1986.

#### Fertilizer Development Centre

66. Although Egypt is the major producer of nitrogenous phosphatic fertilizers and urea, only limited development work has been carried out to study the requirement of agricultural crops for the application of specific fertilizers. The Centre is expected to undertake research and development of new products suiting the specific climatic and ecological conditions of Egypt.

#### Plastics in Construction

67. The Plastics Development Centre, assisted by UNDP, has made significant contributions to agricultural development. The Centre will switch emphasis to plastic in construction, an essential field of applied research, considering the magnitude of the building industry in Egypt and the volume of building materials

imports. The project aims at providing practical solutions for the production of substitutes for building materials in the form of plastic panels, sanitary articles, roofing, flooring, etc. This is particularly significant since a new petrochemical complex will start production by 1987.

#### Textiles and Fashion Design

68. The Textile Industry remains the major export earner within the Ministry of Industry. The trend has been ultimately to process textiles into ready-made garments, thus increasing value added. The project aims at improving the quality and design of textiles and at establishing a core of fashion designers and stylists within the General Textile Corporation, both for the local market and for export.

#### Production of Capital Goods

69. The expansion of Egyptian industry entails heavy investments in capital goods, part of which could be manufactured locally. The Ministry of Industry has established, within the General Corporation for Engineering Industries, a technical body to investigate investment projects and promote utilization of locally manufactured capital goods. The project aims at strengthening the organizational and technical facilities within the engineering corporation to co-ordinate and promote indigenous production of imported machinery and equipment.

#### Strengthening of Research Laboratories for Semi-Industrial Services

70. The Academy of Scientific Research, currently engaged in fundamental research in areas such as chemical industries and agricultural waste, will require some modest assistance in upgrading the research programme to include some practical applications through applied research.

#### Establishment of a Manufacturing Base for Electricity/Energy-Related Technologies

71. The current trend is to establish industries which will render the economy independent of imported technology transfer restrictions. Focus in the energy sector will be on the manufacture of electric capacitors, electric transformers and renewable energy equipment such as solar heaters, wind turbines and photovoltaic pumps.

#### Linkages

72. Quite a number of linkages exist with activities financed through Special Industrial Services (SIS) and Industrial Development Funds (IDF). For instance SIS was instrumental in formulating the Genetic Engineering project currently included in the programme (see para. 110). Linkages will be established with bilateral programmes for a number of projects, e.g. Food Development Centre (Netherlands); Production of Capital Goods (Italy); Energy Conservation in Industry (Canada). Negotiations are under way.

Human resources development and training

73. The education and training system in Egypt has, over many years, been effective in developing the country's human resources. It was, nevertheless, a system to which relatively few people had access. The disadvantaged groups had limited opportunities of receiving any kind of education or training. In the past four decades, however, the demand for education and training has increased at an unprecedented pace. Rapid population growth, industrialization, free education and a slow but sustained change in perceptions have all contributed to this increased demand. To accommodate it, the educational infrastructure has been vastly expanded. Egypt spends 5 per cent of its gross domestic product on education, which is rather high, considering the level of per capita income.

74. The traditional education system had a strong leaning towards formal, university-oriented education. Labour market imbalance and maladjustments resulted, causing shortages of technical and skilled labour, accompanied by a surplus of non-technical labour in the public sector. To meet the ever-increasing demand for technical and skilled labour generated by economic growth and industrial and agricultural expansion, the Government reoriented its approach towards vocational and technical training. Emphasis was placed on increasing the provision of industrial training programmes; improving the quality and relevance of the skills of the new and existing labour force; distributing training opportunities equitably with special attention to the needs of the regions; and strengthening the institutional base for manpower development, including the improvement of the quality and provision of basic education.

75. A High Council for Training was established in 1984, with an allocated annual budget of LE50 million to formulate a national training strategy, to co-ordinate national policies and sectoral training plans and to organize pilot and multi-disciplinary training programmes.

Ongoing projectsIsmailia Tourism School (EGY/81/002)

76. Notwithstanding the setback that occurred between late 1985 and early 1986, it is anticipated that demand for trained personnel in the tourism sector will increase. The requirement of trained personnel has been estimated at 46,000 for the period 1982-1987. Emphasis is currently on the development of non-traditional resorts such as Ismailia, the Red Sea shores, and touristic sites in Sinai and Mersa Matruh. To cater for well-trained staff in the hotel business, the Ismailia School will produce middle-level technicians in food production, food and beverage services, front office management and house-keeping. UNDP assistance, mainly in the form of expert services and training, will continue during the 1987-1991 programme.

Civil Aviation Training (EGY/81/005)

77. The Civil Aviation Training Organization has been the recipient of UNDP assistance for over a decade. UNDP assistance was related to the establishment of



a Civil Aviation Academy, catering for training in management, aviation sciences and aircraft maintenance, flying and air law. Due to administrative difficulties, the creation of the Academy has been delayed. UNDP assistance will continue on a limited scale during the fourth cycle, to assist in the establishment of the Academy and to strengthen specialized aviation subjects such as avionics maintenance, air-traffic automation, and airport planning and design.

#### New projects

##### Development of Air-conditioning and Refrigeration Specialization in Secondary Industrial Schools

78. This project is in support of the Government efforts to expand technical education as a strategy for development to overcome the shortage of skilled workers and technicians and to meet the increasing demand generated by industrial growth. It aims at developing the air-conditioning and refrigeration specialization at Secondary Industrial Schools offering a three-year education in this particular engineering trade and at producing graduate skilled workers and technicians for the repair and maintenance of equipment.

##### Development of Ready-made Garment Specialization in Secondary Industrial Schools

79. This project aims at meeting the country's need for technical education in this particular field, with a view to achieving self-reliance in the ready-made garment industry. Curricula design and development, and teaching methods and application adapted to local needs will be the main thrust of the project. Education and training of skilled workers for the production of ready-made garments will be undertaken in secondary schools offering a three-year training course.

#### Nursing Education

80. The health system is characterized by serious shortages in skilled intermediate manpower, including paramedical and nursing staff. In developed countries, the doctor to nurse ratio is 1:3; in Egypt the ratio is practically reversed. The annual output is 5,000 doctors and 3,500 nurses. The nursing profession needs to be strengthened and expanded to meet the country's needs. The project aims at reviewing and developing educational curricula for secondary technical nursing schools, and at producing/adapting relevant learning materials and manuals. It will also provide training for nursing school educators and trainers through workshops, on-the-job training by visiting consultants and fellowships at specialized nursing education institutions.

#### Port Training Centre

81. The purpose of the assistance required is to strengthen the management training capacity of the Port Training Centre in Alexandria; to adapt and organize courses developed by the Training Programme and the United Nations Conference on Trade and Development (UNCTAD) port training programme; to organize regular courses specific to the needs of the port sector; and to participate in the interregional exchange and dissemination of training materials and co-operation at regional and international levels.

### Linkages

82. To maximize the Government efforts in this field, assistance was given by several donors - especially USAID, which provided the Government with \$109 million to upgrade managerial and related training and to increase productivity, and the World Bank, which has extended loans to upgrade seven technical institutions specializing in various engineering trades. In May 1984, the British Council assisted the Ministry of Education in carrying out a survey of the system of three-year industrial and vocational schools, with recommendations for their upgrading. The Port Training Centre project will be assisted with the regional TRAINMAR centres in the Arab countries.

### Development information systems and other management tools to strengthen the Government decision-making process and improve efficiency

83. The Government economic and social development plans are complex, as is the administrative machinery entrusted with their execution. A reliable and timely information network is regarded as a prerequisite to accelerate development, improve performance and fulfil objectives. Equally vital is efficient management in both the private and public sectors of the economy. With this awareness, the Government has become increasingly involved in developing and upgrading computer-based information systems and in introducing modern management techniques in its machinery.

84. Informatics is spreading to all spheres of socio-economic activity in Egypt. Some subjects recognized as key factors are the introduction of new information technology into industry and informatics in relation to the efficiency of public administration. Education and training in informatics are recognized as essential for self-dependence. Over the past three years, the computer sector in Egypt has been growing at an annual rate of 20-30 per cent.

85. Concerning management development, the successful experience of other countries is under study and a number of national centres in key sectors are to be established for the purpose of imparting up-to-date management styles and identifying techniques applicable to the Egyptian environment at all levels. Key management centres are planned for the following sectors: Industry, Oil and Mineral Wealth; Agriculture and Land Reclamation; Trade and Distribution; Construction; Transportation and Communication; Finance and Banking; and Tourism.

### Ongoing projects

#### Electricity/Energy Data Bank (Phase II) (EGY/81/37)

86. The second phase of this ongoing project aims at upgrading the current management information system into a modern computerized system and linking it with others, particularly with that of the Organization for Energy Planning of the Ministry of Petroleum. It also aims at establishing data collections and a partial processing system in each of the eight planning regions and linking them with other data banks.

Information Systems for Feasibility and Other Studies - Ministry of Cabinet Affairs  
(EGY/85/006)

87. The Government has developed a comprehensive plan for the use of modern information and decision-support systems to assist in the process of decision-making at the Cabinet and the Presidency levels. The UNDP project will assist in the implementation of this plan and will concentrate on the design, development and implementation of advanced computer-based methodologies and the promotion of computer-based data management techniques. The project includes sizeable Government cost-sharing.

New projects

National Informatics Centre (NIC)

88. Despite the serious needs for information processing, the introduction of computer applications was generally treated on a piecemeal basis and therefore the contribution to the management and strategic planning of organizations has not been up to the level required by policy-makers. A National Informatics Centre will be established with the objective to develop and deliver training in computer-related disciplines; to carry out system development activity; and to undertake research and studies in informatics. A feasibility study has already been carried out with the technical and financial assistance of the Canadian International Development Agency (CIDA). CIDA and USAID have expressed willingness to contribute to the project along with UNDP.

Construction Management Development Centre

89. Under the National Plan for the Development of Managerial Skills 1985-1990, the Government designated the Arab Contractors Management Training Centre established in 1979 as the key Management Development and Training Centre in the Construction Sector. The project will develop managerial skills of qualified personnel in most areas of the construction industry. It will act as a source of future managerial staff for construction companies. The project includes a Government cost-sharing component.

90. A number of projects approved in the last few months will contribute to the achievement of the objective mentioned in this section. Although the projects may technically be considered as part of the third country programme, they are new in conception and closely related to the preparations of the fourth country programme. They could, therefore, quite legitimately be considered part of the fourth programme also, especially since several will continue beyond 1986. These projects are listed below.

Ongoing projects

Export Promotion Studies (EGY/86/011)

91. UNDP will finance two studies in late 1986 relating to export promotion in connection with a World Bank loan for export development. These studies will

contribute to encourage investment directed at export expansion and generate foreign exchange earnings through reducing constraints to export growth.

#### Import Management (EGY/85/007)

92. Savings in foreign exchange amounting to 1 per cent of the import bill could be achieved through the rationalization of import regulations, procedures and practices; in addition, savings of up to 20 per cent on the total cost of an imported item (in foreign exchange and local currency) could be achieved through the improvement of procurement and materials management practices. To this effect, a two-year project was formulated in 1985. The project also includes the establishment and development of an information base for decision-making in the management, planning and administration of the import process.

#### New projects

##### Debt Monitoring Analysis and Management

93. In the endeavour to improve management of the foreign debt, the Government will adopt improved practices with regard to external loans and their debt servicing. A UNDP project will assist in the centralization and computerization of the external debt data maintained in the Central Bank and in the improvement of the procedures for approving, contracting, and servicing debt and in evaluating its economic costs and benefits in the various Government agencies involved.

##### Rehabilitation of Thermal Power Stations

94. This project will assist in upgrading the management of thermal power stations through a number of co-ordinated measures.

#### Linkages

95. In general, UNDP activities are relatively modest and aim at playing a catalytic role and having a multiplier effect. This tends to involve them either directly or indirectly with other bilateral and multilateral programmes. USAID and CIDA furnish the major bilateral sources and foreign financing for activities falling within the scope of this development objective; the World Bank, EEC and, on a small-scale, the International Bureau for Informatics (IBI) supply multilateral aid. A USAID grant of \$109 million has been directed to the development of managerial skills, training and information systems. Canadian aid is directed to informatics. EEC and the World Bank have been closely linked to the development of exports and training connected with export promotion.

##### Improved delivery of public services in selected areas

96. Egypt devotes about 15 per cent of its gross domestic product to public services, including education, social services, health, water and sanitation, and the technical services. A steep increase in population of about 1 million every nine months calls for the continuous expansion of already overburdened services. As the available resources cannot match this increase, there is a gradual lowering

of the quality and effectiveness of many public services both in the social sector and in the technical sector. A number of UNDP projects will assist the Government in improving the quality of public services in selected areas in the fields of health, water and sanitation, social services and port and postal administration.

#### Ongoing projects

##### Drinking Water Supply and Sanitation (EGY/82/002)

97. Environmental sanitation will have to be markedly upgraded and access to potable water and adequate sewage facilities more widely available, especially in rural areas. It is estimated that at least 40 per cent of the total population (most of whom live in areas of provincial Egypt) have to rely wholly or in part on open canals, the Nile River, or private, and often highly polluted, water sources. A serious gap in skilled manpower has been identified. Over 1000, additional trained persons per year will be needed from 1981 to 1990 to prepare and implement projects and to man the various organizations in charge of water supply and sanitation.

98. The purpose of this project is to provide effective support to the development of the water supply and sanitation sector, which has been considerably accelerated during the first five years of the International Drinking Water Supply and Sanitation Decade (IDWSSD). Cost-effective water supply and sanitation technologies will be introduced and demonstrated in rural areas. The capabilities of local Governments will be upgraded in water plan operation and maintenance, sanitation, management, information system and analysis of water and waste-water.

#### New projects

##### Suez Regional Research Centre

99. This project aims at the establishment of a Regional Research Centre for comprehensive integrated community research directed to development areas of agriculture; animal, poultry, and fisheries production; natural resources; land reclamation; water and sewage; environment; pollution; and industrial development. The main objective will be the identification of problems hampering the development of the region and maximizing the use of regional resources through the effective application of science and technology. This project will complement the activities supported by UNDP since 1976 for the development of the Suez Canal Region.

##### Upgrading Communicable Disease Services

100. The Egyptian health-care network comprises four levels of services: village health units; district health centres; hospitals; and the university hospitals and teaching institutes in Cairo and Alexandria. Improved effectiveness of the health delivery system requires both better management of available resources and upgrading in the quality of the care provided. The project aims at upgrading national capabilities for the early detection, diagnosis and treatment of various communicable diseases. The efficiency of the laboratories of fever hospitals will also be upgraded.

Development of Self-financing Systems in Social Services and Social Rehabilitation Institutions

101. Development efforts during the last three decades have led to the establishment of a network of social service units in both urban and rural areas. The Government is helping local initiatives and community establishments to bear the burden of a wide range of social activities and programmes with the provision of technical and financial support. Emphasis is now being placed on the reorientation of present social activities into investment and income-generating processes to lighten the burden on the Government budget.

102. The project will assess present production and income-generating activities and suggest means to upgrade their quality and promote necessary marketing channels. New products will also be introduced, together with the provision of training facilities for these products. The self-financing system will be introduced to help the social services institutions, improve and expand the services they render and develop their self-financing abilities.

Development of Social Defence Sector - Rehabilitation of Juvenile Delinquents

103. The project is expected to study crime among young people and to introduce appropriate programmes for the rehabilitation of juvenile delinquents, including vocational training. The implementation of such programmes will require the availability of financial means, which could be generated by the juvenile delinquents themselves through activities geared to production. This project relates to an ongoing project focusing on the rehabilitation of adult delinquents through production activities.

Development of Disaster Preparedness Planning and Mitigation

104. The project aims at the mitigation of the impact of disasters in order to save human life and alleviate economic losses. It is expected to establish a national capability for planning and for providing technical advice with respect to disaster preparedness and mitigation. The project will train a group of scientists in methods to deal with disasters and will provide technical advice to authorities on ways and means to prevent or mitigate natural disasters.

Ports Administration

105. Development of the transport and communication sector has not kept pace with the rapid growth in economic activities in the 1970s. The basic problems have been underinvestment in transport and communications infrastructure, inadequate maintenance, poor planning and low taxes and tariffs. The priority needs now are to rehabilitate the facilities, rationalize the planning of new investments and sector policies and introduce efficient user charges. A UNDP project will assist the port administration in the discharge and management of the big containers, which has recently become a handicap at the Alexandria port. This will require policy changes and upgrading of personnel working in the departments handling containers' clearance and discharge.

### Electronic Express Mail Services

106. This project will upgrade the electronic express mail service recently introduced by the postal administration. This service is based on the need of customers to dispatch documentation and legal documents that they may not wish to send through the ordinary mail service. For this purpose, the administration has concluded agreements with 16 countries in Europe, the USA and the Arab countries which have such service.

### Linkages

107. The Drinking Water Supply and Sanitation project emanated from activities related to IDWSSD and is linked to interregional project INT/83/003, of which some of the activities will be administrated by the country project. The Development of the Social Defence Sector - Rehabilitation of Juvenile Delinquents will have strong linkages with a large bilateral project carried out with the assistance of the Italian Government, which in turn is the outcome of previous UNDP/United Nations Social Defence Research Institute activities in this area. The project Development of Disaster Preparedness Planning and Mitigation has linkages with an ongoing USAID bilateral programme centred in Upper Egypt.

### Transfer of advanced technology

108. Egypt has a well-formulated national policy for technology, which identifies the priority areas for technology transfer and for research and development, and formulates appropriate guidelines, rules and regulations. The promotion and implementation of the policy is entrusted to the Academy of Scientific Research and Technology (ASRT). The Academy is endowed with considerable manpower and budgetary resources. Activities related to the transfer of technology or the development of new technologies are of paramount concern to the Academy.

109. The description that follows does not by any means exhaust the transfer of technology content of the new UNDP programme. It only exemplifies it. Most UNDP activities have an element of transfer of technology. This is quite evident in numerous other projects included in this country programme, e.g., Protected Agriculture, Electricity Data Bank, Computerization of Postal Services. These and several other projects could have been suitably listed under this objective.

### Ongoing projects

#### Assistance to the Patent Office (EGY/84/005)

110. This project aims at modernizing the existing Patent Office so that it can act as an effective machinery for the process of technology transfer and development for both private and public sectors.

#### Radiation Processing Technology (EGY/78/011)

111. This ongoing project aims at the introduction of electron beam processing in industrial applications for food commodities, sewage and sludge effluent, textile

fabrics, rubber vulcanization, plastic treatment, electrical cables and wire cross-linking, etc. It also aims at the introduction of nuclear and radiation techniques for quality control in certain industries including iron and steel, chemicals, plastics, paper, petroleum, and petrochemicals. Some equipment has been provided under the current project. In the future, the project will concentrate on consultants and training abroad in connection with the applications of this new technology.

### New projects

#### Genetic Engineering and Biotechnology

112. A National Institute for Genetic Engineering Research will be established under the auspices of ASRT to conduct a genetic engineering research programme for agricultural, medical and industrial application. Research results will be closely monitored and implemented by the end-users and co-ordination will be maintained with the Agricultural Research Centre, the Organizations for Biological and Vaccine Production, the universities and the industries. The project aims at conducting a three-year training programme in genetic engineering to train and qualify staff required for the purpose. A further major activity will encompass Applied Genetic Engineering and Biotechnology for Crop Production. In this connection, a new institute for Applied Genetic Engineering and Biotechnology was established in early 1986, within the Agriculture Research Centre, Ministry of Agriculture and Food Security, to transfer knowledge in some genetic engineering technologies so as to increase productivity of high value crops from both domestic and export markets. The two activities will be closely co-ordinated and will be placed under the overall management of a Government interdisciplinary Committee for Genetic Engineering and Biotechnology.

#### Establishment of a National Network for Technology Development

113. To expedite technological change and innovation throughout the Government Organization, an integrated national network for technology development will be set up, with a central co-ordinating and planning organization affiliated to ASRT and sectoral nodes in selected production and services sectors. This network will be responsible for the promotion and implementation of the national technology policy of its integration into the scientific and technological activities of the various sectors.

#### Mathematical Models

114. The Ministry of Irrigation has developed many mathematical models which are considered as valuable planning tools for water-related activities. This project, which is closely related to an ongoing project which it complements (Water Master Plan), aims at monitoring and forecasting water resources to permit a more efficient development of irrigation, drainage, hydro-electric power production, navigation and provision of community water supply through establishing a national and regional monitoring centre.



### Linkages

115. The Technical Information Pilot Systems (TIPS), supported by the United Nations Financing System for Science and Technology for Development (UNFSSTD), will provide assistance to the Academy of Scientific Research and Technology (ASRT). This \$4.5 million project links ten developing countries, including Egypt, through existing telecommunication techniques that maintain continuous exchange of information on recent and ongoing research results, information on commercial applications, multilateral procurement actions, and other opportunities for developing countries to participate in international science and technology activities.

116. In the third country programme, an umbrella project for consultancies and training in the industrial sector proved to be extremely useful as a flexible tool to cater to unforeseen requirements of the sector. Several ministries have expressed interest in a project of this kind for their sector. To ensure maximum flexibility and equal access by all sectors to this facility, the Government has decided to allocate the sum of \$1 million for an umbrella project covering unforeseen requirements of all sectors for expert advice and training during the fourth cycle. On the Government side, the project will be administered by the UNDP co-operating agency, the Ministry of Foreign Affairs.

### C. Unprogrammed reserve

117. Considering the fluidity of the present economic situation as described in paragraphs 2-4 above, and the fact that the 1987-1991 Plan has not yet been finalized in all specific details, the Government deems it prudent not to programme the totality of available resources at this stage, but to set aside \$2,281,000 as reserve, to adjust, if necessary, some of the projects included in the country programme or to meet unforeseen requirements. The reserve could also be used to cover activities that cannot be specifically programmed at this stage, such as TCDC activities or activities recommended at international fora, such as the African Environment Conference of December 1985.

Annex

FINANCIAL SUMMARY

I. ACTUAL RESOURCES TAKEN INTO ACCOUNT FOR PROGRAMMING

<u>A. UNDP-administered sources</u>	<u>\$</u>	<u>\$</u>
Third cycle IPF balance	(1 400 000)	
Fourth cycle IPF	30 800 000	
Subtotal IPF		29 400 000
Special Measures Fund for Least Developed Countries	-	
Special programme resources	-	
Government cost-sharing <u>a/</u>	8 000 000	
Third-party cost-sharing <u>a/</u>	3 500 000	
Operational funds under the authority of the Administrator	-	
UNDP special trust funds	-	
Subtotal, UNDP non-IPF funds		11 500 000
<u>B. Other sources</u>		
Funds from other United Nations agencies or organizations firmly committed as a result of the country programme exercise	-	
Parallel financing from non-United Nations sources	-	
Subtotal, other sources		-
TOTAL ACTUAL RESOURCES TAKEN INTO ACCOUNT FOR PROGRAMMING		<u><u>40 900 000</u></u>

II. USE OF RESOURCES

Ongoing projects	2 042 000	
New project proposals	35 577 000 <u>b/</u>	
Programmed reserve	1 000 000	
Subtotal, programmed resources		38 619 000
Unprogrammed reserve		2 281 000
TOTAL USE OF RESOURCES		<u><u>40 900 000</u></u>

a/ Cost-sharing will be negotiated on a project-by-project basis at project formulation stage.

b/ This figure includes estimated Government and third-party cost-sharing of \$11.5 million.