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SUPPORT

ANNUAL REPORT
OF THE ADMINISTRATOR
FOR 1982

PROJECT RESULTS,
PROGRAMME ACCOMPLISHMENTS
1. The impact of technical co-operation can be measured at two levels. One is in terms of global improvements in the human condition -- increases in literacy rates, life expectancy, numbers of school-age children benefitting from education, employment rates, health facilities and other cumulative indicators of expanding knowledge, skills and the quality of human life. Another is in terms of results at the project level -- the number trained, increases in yields per acre, area of land reclaimed, added institutional capacities, the number of children inoculated, etc. At both levels the full impact of technical co-operation is greatly circumscribed by factors which do not lend themselves to measurement or aggregation -- the quality of knowledge imparted, for example, the actual effectiveness of strengthened institutions, the practical value of research results in terms of their application. These are grey areas less easily quantified than the returns on capital assistance.

2. Yet facts about returns on technical co-operation are especially important at a time of declining resources for such co-operation. Faced with resource constraints of its own in 1982, UNDP canvassed its 114 field offices for a selection of results and outputs on projects supported by the Programme. The feedback, even in a year of great austerity for the Programme's network, was phenomenal. Details on the results of more than 600 projects flowed into UNDP headquarters, covering every size and sector and ranging in impact from good to better than expected, and in some cases substantially better than expected. (A separate report on results achieved under UNDP-supported global and interregional projects should be available in June 1983.) Field Offices also submitted a number of "post-project results", answering the fundamental question: what happens to UNDP-supported technical co-operation projects after UNDP support for the project ends?

Ex-post project results

3. It is these results which in many ways best gauge the performance of technical co-operation (or any kind of development assistance) in the long run. Sometimes the catalytic effect is unexpectedly rewarding in ways not initially envisioned. This has proved true in a major area of UNDP activity, agriculture and rural development. Over the years, roughly a quarter of all UNDP-financed inputs have gone to this sector, drawing mainly upon the implementation expertise of FAO. Thus Sierra Leone, despite the potential for self-sufficiency in rice production, was once faced with the prospect of increased imports of this staple in the diet of its 3.5 million people. Rice has been grown in Sierra Leone since time immemorial, both as a dry land mixed crop in rotation with bush fallow and in the swamps. But yields from traditionally cultivated areas have tended to decrease as bush fallow rotation declined below the ten years needed to regenerate soil fertility, while population and the demand for rice increased.

4. In 1972 the Sierra Leone Government asked UNDP's help. The main objective was the achievement of rice self-sufficiency in the country through applied research, training and extension services, and building upon existing programmes of the Ministry of Agriculture and the Rokupr Rice Research Station founded in 1934. Under a project executed by FAO and drawing upon
staff of the International Institute for Tropical Agriculture (IITA) in Nigeria (part of the UNDP-supported Consultative Group on International Agricultural Research), the Government began nationwide and on-farm trials, contributing $1.3 million to the $908,525 expended by UNDP. A team of seven local graduates and three international advisers, working with the Rokupr Station, identified diseases and pests requiring control. Naturally resistant strains were introduced to overcome these conditions, while suitable fertilizers and other requirements were tested for various growing conditions, including areas with iron or aluminum toxicity. For the uplands several profitable cropping rotations were identified. In addition, high-yielding sweet potatoes and mosaic resistant lines of cassava were selected from IITA seed.

5. The UNDP/FAO/IITA staff completed its work in December 1980. Since then, and despite severe budgetary constraints, research at the Rokupr Station has carried on at the same level with Government support. The Station acts as a focal point for mangrove swamp rice research studies under IITA for the West Africa region. It has drawn support for adaptive crop research and extension from USAID and, recently, from IDRC/Canada for post-harvest losses. Training under the UNDP-financed effort was given to 25 junior officers in Sierra Leone, Nigeria and Liberia, together with eight fellowships for Master of Science and doctoral studies. There is now a huge popular demand in Sierra Leone and Guinea for the Rocas and Ropot cassava and sweet potato strains introduced. And UNDP itself has recently approved a new FAO-executed project to help farmers apply recommendations of the Rokupr Station for developing inland valley swamps. With further assistance, the Sierra Leone Government plans to increase rice production by 4 per cent a year to 1998, doubling the current yield.

6. Similarly encouraging results have been attained from the UNDP-supported Aweil Rice Scheme project in the Sudan, completed in 1979 at a cost of $3.4 million (UNDP) and $1.37 million (Government). Here the problem was to curb damage caused by major floods, lack of drainage and tenancy problems to a potentially rich rice growing area, which had suffered as well from years of civil disturbance.

7. Under the project's duration (1978-1979), workshops, stores, offices and staff housing were refurbished and new equipment added. An existing rice mill was recommissioned and experimental work done on the most important aspects of rice production and the selection of varieties. Hydrological data were compiled and work carried out on the controlled introduction of irrigation water, on improved drainage and on pumping for supplementary irrigation. In 1978 a pilot area of 50 hectares, subject to reasonable water control, was allocated to 50 share-croppers. The results were excellent, with tenants obtaining an average yield of 3.5 tonnes of paddy per hectare. The project found that a gravity irrigation and drainage scheme was feasible on the Aweil flood plain, covering 10,000 hectares. One hectare per tenant was judged the optimal plot size to be allocated only when proper water control is provided. It recommended an initial area for full water development of 2,600 hectares, based on dry seeding, rain germination and plant establishment, with chemical weed control followed by irrigation.
8. When the project terminated at the end of 1979, an effective working organization had been established with a pool of trained professional and technical staff which still carries on. Additional milling and storage facilities were recommended, along with the development of a rice marketing system and additional engineering and hydrological studies for scheme expansion.

9. As a result of these findings, the European Development Fund (EEC/EDF) committed almost $15 million to the expanded goals of the project, with the Government of Sudan itself adding another $5.6 million. Almost 1,500 hectares are currently under development for more than 1,800 new tenants. Additional rice mills, housing, stores and feeder roads are part of this exceptional follow-up commitment to a project which proved it could be done.

10. Results are already impressive from a UNDP-supported, FAO-executed Brackishwater Aquaculture Development project completed in Indonesia in 1981, at a cost of $1.6 million to UNDP and $2.9 million to the Government. When the project began in 1973 brackishwater ponds covered about 170,000 hectares in Java, engaging 500,000 people and generating income of $14 million a year. Modern fishpond husbandry techniques introduced by UNDP and FAO have substantially increased yields of brackishwater shrimp and milkfish, raising farmers real income by 60 per cent. Today, with the help of some 900 fishpond farmers, extension workers and fisheries officials trained under the project, average production from brackishwater ponds has almost doubled and shrimp and milkfish output has soared in value to more than $100 million a year. As a result, late in 1982, the Asian Development Bank provided a $23 million loan for expanded brackishwater aquaculture development, expected to produce an additional 4,600 metric tonnes of shrimp (mainly for export) and 1,500 metric tonnes of milkfish annually, generating foreign exchange earnings equivalent to $40 million a year and raising the average incomes of 7,700 farm families from $600 to $1,900 yearly.

11. A different kind of impact resulted from the UNDP/UNIDO-supported project establishing an Experimental and demonstration plant for the processing of cashmere and camel hair in Mongolia (cost to UNDP: $2.3 million). Here was a case where a developing country exported raw material (cashmere goat and camel hair) abroad for processing by highly sophisticated technologies held in secret by the importing firms. Although the fibres constituted one of Mongolia's main export commodities, they were exported in the raw state until 1977. By then the experimental plant sought by Mongolia with UNDP's help had been established under a subcontracted arrangement with a Japanese firm, and 18 tonnes of fine quality, de-haired wool began to be processed annually, utilizing advanced technological processes. A second phase of the UNDP/UNIDO-supported project then began with the objective of fibre and yarn dyeing, blending, carding, spinning, winding, sewing and finishing.
12. Before 1977 Mongolia depended on modest and wholly inadequate cottage-scale spinning to gain export market advantages from one of its largest export commodities. With UNDP's help, in-country processing has considerably improved the quality of hair and increased its export price. The Mongolian Government has as a result established a large-scale enterprise for the local processing of cashmere and camel hair on the basis of a bilateral agreement with the Government of Japan.

13. In Bangladesh, the problem dealt with by one UNDP-assisted project was not the lack of a specific technology but the failure to apply properly the results of existing technology. While soil and hydrological surveys are important elements in agricultural development, particularly for a highly farm oriented country like Bangladesh, their results are notoriously difficult to evaluate. Too often the results lie hidden, like the foundations of buildings, and the success of the project must mainly be judged by the demand for the soil survey information created. Though a number of such surveys were undertaken in Bangladesh in the 1960s, it was found that agricultural planning, research and extension officials were nonetheless making little or no use of the information provided. Hence the Soil Survey Interpretation Project, financed by UNDP at a cost of $674,092 and carried out from 1974-1981 by FAO.

14. The evident success of the interpretation project can be judged by the demand for soil survey information which now characterizes all levels of agricultural planning and development in Bangladesh. Through some 70 project publications, through training courses, through participation in planning, monitoring and evaluation of crop production programmes, the Soil Survey Department has demonstrated its value to all levels of rural development planning. By the end of the project, the Government had opened soil survey offices in each of the country's four administrative divisions and in five of its 20 districts. During the seasonal five-year plan, 32 of the country's 65 sub-divisions were targetted for additional field offices.

15. In these field offices, soil survey staff are now involved in a wide range of support activities. In the Asian Development Bank-funded Serajganj Integrated Rural Development project area, sample site surveys have indicated to project staff how command areas around 150 deep tube-wells can be increased, often two or three fold, by a more appropriate alignment of distribution channels and choice of cropping patterns. Elsewhere, soil survey staff are participating as soils subject matter specialists in training village level extension agents under the World Bank-assisted Training and Visits System. Throughout the country, fertilizer trials and demonstrations are now sited and evaluated on the basis of soil survey information.

16. A direct outgrowth of the project was the institution of a system of thana (county) land use planning. Tested and developed under two successor projects, this system uses soil survey maps and crop suitability data to determine the agricultural development possibilities within thanas. Two Senior Soil Survey Department Officers assisted in giving two-week practical training courses to five officials plus the Chairman of the thana council from each thana. By June 1982, officials from more than 90 thanas had been trained. Under the Government's administrative reorganization plan, involving...
a considerable decentralization of rural development planning to district and thana levels, this system has a high potential for ensuring participatory planning based on a national assessment of local resources. The project's results continue to live on and expand.

17. Underscoring the great value of such projects is the ambitious Wadi Tuban Agricultural Development Project in Democratic Yemen, stemming directly from the UNDP-financed, FAO-executed project, Soil Water Utilization in the Wadi Tuban Watershed Area, begun in 1971 and completed in 1978 at a cost to UNDP of $1.4 million. The purpose of the UNDP/FAO assisted project was to provide the Government with data for the full development of land and water resources covering 16,000 hectares, using information from two pilot irrigation areas of 200 hectares each. Based on these results, the Government proceeded with its broader Wadi Tuban scheme, with financing of $3.2 million from IDA and $5 million from AFESD. So far the scheme has improved irrigation works on 2,000 hectares, provided drinking water supply for six villages, established a working distribution system for fertilizers and plant protection chemicals for an area covering 10,000 hectares, trained nationals in agriculture, engineering, farm management, extension and surveying services, replaced old cotton ginning equipment and established an engineering unit to carry out the scheme's construction and maintenance tasks, among other achievements.

18. Perhaps no UNDP-supported undertaking has had a broader impact or will touch the lives of more people than the Programme's Global low-cost water and sanitation project, launched in 1978 at a cost of $2.1 million and executed by the World Bank. The project sought ways of designing and implementing low-cost, alternative water and sanitation techniques for low-income urban and rural areas, in line with the goals of the International Drinking Water Supply and Sanitation Decade. A multi-disciplinary team of professionals -- sanitary engineers, public health specialists, health educators and social anthropologists -- was gathered to form a Technical Advisory Group, which worked closely with the Governments of 12 countries and with a number of bilateral and multilateral organizations on low-cost sanitation design, funding, sector advice, personnel training and support and the investigation of various technical issues.

19. Upon its conclusion in December 1981, the project had influenced sanitation policies affecting 80 million people, in orienting governments toward appropriate, low-cost sanitation technologies. India, for example, is now confirmed in its commitment to low-cost sanitation, and the concept of non-sewered, low-cost solutions has also gained acceptance in Botswana, Brazil, Lesotho and Tanzania. Existing or proposed low-cost sanitation projects costing $94 million were being assisted in seven countries, and co-operative programmes with U.S. and Canadian bilateral agencies, the World Bank and UNICEF were underway. These achievements will be further broadened under a $3 million UNDP-supported interregional project designed in part to extend applications of effective low-cost sanitation techniques stemming from the Global project's technical investigations.
20. Similarly striking post-project results are to be found in almost every sector of UNDP activity. A brief capsule of others recently submitted by UNDP field offices includes these high points:

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-- A UNDTCD-executed project to promote community development in the Central African Republic has resulted in the establishment of 130 Village Committees for Integrated Development, which have effectively organized village communities to raise agricultural and fish production, improve local health and water supplies, local education, and otherwise upgrade village infrastructures, while attracting additional financing from French and U.S. bilateral agencies, UNICEF and other development organizations.

-- UNDP's long-established interregional project for the development of special public works programmes, executed by ILO, continued to show extraordinary results in 1982. Under the programmes 14 developing countries provided employment for 120 to 150 days to some 250,000 rural men and women, mainly during the long dry or slack season when unemployment runs high. In addition, contributions from other donors for the programmes reached $42 million.

-- As a result of the UNDP-financed, ICAO-executed National Plan for Aviation project in the Yemen Arab Republic, completed in 1977, the Government, with Iraqi financing, has now finished engineering and technical works at the "New Hodeidah Airport", upgrading that facility to the capabilities required of an international airport, with all the accruing benefits to the country's economy which such status confers.

-- In pursuit of the goal of national self-sufficiency, the United Republic of Tanzania has sought to strengthen the indigenous management and technical capabilities of key national institutions, including in particular the establishment in 1972 of the Institute of Finance Management. In a three-phase project of technical assistance to the Institute, from 1973 to 1980, UNDP/UNDTCD concentrated on the provision of teaching services and materials and the overall development of the Institute's national staff, who have succeeded in greatly lessening the Government's dependence on expatriate financial and accounting services. At the same time, the Institute now runs highly effective short courses in such subjects "as accounting for non-financial managers", "project evaluation and capital budgeting" and "economic cost benefit analysis of projects" under which two hundred
nationals have already been trained. The progressive development of the Institute has drawn contributions from CIDA, the Rockefeller Foundation, the British Council, E.M. Clark Foundation and the Australian Government.

In Egypt much of the attention to UNDP assistance has been devoted to the massive follow-up investment generated by the Suez Canal Zone rehabilitation project. On a more limited scale, the $687,583 project financed by UNDP for the Co-ordinated Development of Areas West of the Noubaria Canal has seen equally rewarding results. Concluded in late 1977, the project confirmed that age old irrigation practices successful in the Nile delta were not transferable to semi-desert, reclaimed lands northwest of the delta, where irrigation, sewage, maintenance and other inadequacies were blighting the area set for reclamation. Tile drainage, furrow, sprinkler or drip irrigation methods and 24-hour scheduled pumping showed that crop yields could be raised by 60 per cent and by more than 500 per cent in terms of the water used. Watermelon yields jumped 200 per cent under these trials, while grape production advanced 400 per cent. Accordingly, on the basis of the extensive findings reached, IFAD provided some $30 million for rehabilitation and improvement in the area concerned, as recommended by the FAO-executed project.

The ceramics industry has a long tradition in the Lao People's Democratic Republic, though imported plastic and enamel containers have more recently undermined its survival. With help from UNDP/ILO, the traditional ceramics industry has been revitalized with new techniques, designs and training. When the UNDP-supported Ceramics training and production project concluded in 1980, a new modern ceramics centre in Vientiane was producing 15,000 pieces a year with 28 employees. Two years later, on its own now profitable course, the centre has 40 full-time employees turning out upwards of 60,000 pieces and forms a thriving new hub of activity in the country's capital.

Hearing difficulties afflict an estimated 8,000 children in Algeria, with only nine centres throughout the country designed to help them. Conscious of the need to assist these children and their potential contribution to the nation's development, the Government of Algeria asked UNDP to finance a programme to devise methods, including the use of electronic equipment, to evolve a cadre of trained personnel for the education of deaf children. The project, Formation de maîtres spécialisés pour les handicapés auditifs, concluded in 1980, provided for the training of a cadre and the upgrading of existing special schools on
behalf of deaf education. A key impact of the project has been to help heighten the sensibilities of a great number of Algerian institutions to the importance of the general problems of the handicapped, including their employment in various professional occupations.

Beginning in 1963, UNDP assisted Gabon in the preparation of feasibility and construction studies for the transgabonais railroad, which, by the early 1970s, had become a concern of highest priority to the Government. To facilitate exploitation of inland forestry reserves, UNDP-financed consultants had indicated that rail transport as opposed to highways would permit an increase of 50 per cent or more in lumber production. In 1972, UNDP-financed OPAS experts assisted in the construction of 332 kilometres of the railway from Owendo to Boue. Drawing upon the UNDP feasibility studies, the Gabon Government has since 1973 obtained follow-up investment from both public and private sources totalling $185 million for construction of the railway, the economic benefits of which have helped greatly to strengthen the oil-oriented export earnings of the country.

Once Lesotho depended for heavy clay-made bricks of approved quality on South Africa. As a result of the UNDP-supported, UNIDO-executed project, Development of Heavy Clay Industry in Lesotho, begun in 1974 and completed in 1978 at a cost of $36,540 to UNDP, Lesotho now exports such quality bricks to South Africa. The initial aims of the project were to establish the locale and size of heavy clay deposits in Lesotho, including quality considerations. On these foundations, the Loti Brick Factory was established near Maseru, currently employing 110 people with an output exceeding 500,000 bricks each month, a quarter of which are exported to South Africa. In addition, a Clay Products Technical Centre is now equipped to carry out various quality tests, including extrusion, shrinkage, water absorption, firing temperature ranges and crushing strength. The Centre tests brick samples for the highly productive Loti factory.

In every kind of development investment the long-term returns become apparent only when the external support is completed and withdrawn. The above examples show that developing country efforts and institutions supported by UNDP more than survive — indeed, they flourish on their own — well after UNDP's inputs have been fulfilled. This is the true meaning of self-reliance, and the ultimate goal of every UNDP-supported undertaking.
22. Few development investments provide a better return than investments in quality training. As the OECD/DAC Review for 1982 notes, "Skilled manpower at all levels is a critical factor in development and in many cases more critical than availability of capital or natural resources. Hence training assistance will continue to be central to economic and technical development programmes and must be a key factor in technical and capital assistance." The Review goes on to stress that successful training depends significantly on the effective selection of trainees, on on-the-job training, on the training aptitude of experts vis-à-vis their counterparts, on continued in-service training and upgrading of skills, and on appropriate job placement for training received.

23. UNDP’s own experience strongly underscores these observations. The joint UNDP/FAO evaluation study of agricultural training, issued in 1980, stated that "The study confirms the importance of the careful selection of trainees." The study found that, where projects had several immediate objectives in addition to training, the latter could be hindered by pressure on experts to achieve the non-training objectives. It stressed that training should relate directly to a farmer's production and economic needs, and that the timing of training should not interfere with work on the farm. It noted that rural women were too often neglected in agricultural training programmes, and that savings could be achieved by including trainees from several countries, to avoid duplication. It also found that, while middle and lower level trainees tended to stay with the job for which they were trained, higher level trainees too often sought more rewarding employment outside the jobs for which they were trained. In that sense, UNDP/FAO found that middle and lower level training had better results, although the OECD/DAC Review stressed the particular need for improvement at these levels.

24. A case in point is the UNDP/ILO project for Vocational Training of 2,000 to 3,000 workers to build the El Cajón hydroelectric dam in Honduras. Co-financed by IDB, the project is the single most extensive public works enterprise ever undertaken in Honduras. In this instance, however, the usual training problem -- will the trainee stay with the job? -- was reversed. Once the dam was completed in 1985, how would the training imparted continue to benefit the people trained? The answer lay in project design. Emphasis was placed on training which, besides meeting immediate needs, could be applied to different working environments at a later stage. Concurrently, efforts were made to identify alternative job opportunities, especially with (thought not limited to) other IDB-financed projects, in Honduras, such as the one for artisan fisheries.

25. Under another UNDP-financed, ILO-executed National Vocational Training project in Tanzania, the problem was to fill the gap created by an estimated need for almost 1,700 new skilled workers annually, while at the time of the project's inception in 1974, only 200 a year were being trained. With $1.2 million from UNDP and $7.4 million from the Government, the aims of the project were to determine industrial human-power and training needs below
middle management and technician levels; improve training methods and facilities, including the establishment of two new training centres at Tanga and Mwanza; organize a national apprenticeship scheme for skilled trades; and devise programmes to help unemployed school graduates.

26. Today the two training centres at Tanga and Mwanza are in operation, after construction assistance from the World Bank, and four additional regional centres are planned with assistance from Denmark, Sweden, the African Development Bank and the World Bank. Institute programmes combine one year of full-time study with four years of on-the-job training. Twenty skills are offered -- motor vehicle mechanics, machine operation, sheet metal work, welding, carpentry, painting, plumbing, masonry, refrigeration/air conditioning, shoe making and repair skills for office or electric motor equipment. The main institute in Dar-es-Salaam, constructed by building trades trainees with financial assistance from Canada, now metriculates 1,000 full-time and 3,000 part-time students, while the staff and director for the entire programme are, with the exception of several UN Volunteers, Tanzanian nationals. Instructors, now numbering 160 among the three operating institutions, have also been locally recruited, and there is a large instructor-training course going forward.

27. In Panama the objective of another UNDP/ILO-supported project was to improve the national vocational training institute (SENAFORP) by upgrading the technical knowledge of the industrial workforce, with particular emphasis on unemployed younger workers. With a working population of 525,000 in 1975, Panama was faced with the task of creating 25,000 new jobs a year for young people entering the workforce.

28. With this assistance, SENAFORP was transformed, with $552,800 in UNDP funding and approximately the same from the Panama Government, into the country's main vocational training institute, which has successfully negotiated technical co-operation projects of more than $10 million with Japan, the Federal Republic of Germany and Spain in the fields of electronics, engineering and hotel management. As a by-product, important TCDC agreements were signed by the institute with Costa Rica, Venezuela and Brazil, while a new phase of UNDP-supported activity calls for the deployment of mobile training units outside Panama City.

29. Somewhat different was the problem facing UNDP/ILO respecting Second generation migrants from Mediterranean Basin Countries in Europe, a regional effort designed to help European Governments in their efforts to train more than 4 million second-generation migrants under 26 years of age whose parents are employed as migrant workers in various parts of Europe. With unemployment rising within the European countries, these children of migrants often faced bleak futures because of language, vocational and other educational handicaps. The UNDP/ILO regional project seeks to complement national and bilateral European measures already underway to facilitate the integration of second-generation migrants, whether in the countries where their parents work or, in the event of voluntary return, in the countries of their origin.
30. So far the project has organized two major seminars, one in Lisbon and one in Granada, on the issues involved and has launched pilot schemes to implement desirable solutions. The University of Geneva has agreed to cover costs of a study on the identity of second-generation migrants, while the University of Paris has prepared a report on ways of training young migrants as inter-cultural "animateurs." Greece, Portugal, Turkey and Yugoslavia benefit directly from the project's activities.

31. The capital of Kenya, Nairobi, is host to one of Africa's busiest airports. UNDP/ICAO has trained over 600 of the airport's 10,000 personnel, increasing the efficiency of Jomo Kenyatta airport and contributing through its Training for the Aerodromes Department to the Kenyanization of airport staff. The training school, supported by $481,729 in UNDP funds, is helping Kenya become fully self-reliant in the operation and maintenance of this key national and continental communications centre.

32. In Bangladesh a major obstacle to the establishment of a primary health care system has been a critical shortage of middle-level health personnel needed to staff rural health centres. Under a UNDP/WHO-supported project, under way since 1977, 950 medical assistants have been trained, while added contributions to the training of medical assistants programme has been made by the Netherlands and the World Bank. Cost to UNDP: $559,112; cost to the Government: $2.3 million, with an added $225,000 thus far from the Netherlands.

33. Similarly, in Egypt, the Technical Teacher Training Institute has, with UNDP/UNESCO help ($1.7 million, with $3 million in support by the Government), become a centre for the development of national technical courses and teaching materials. Egypt's need for skilled workers has focussed on the training of workshop instructors for technical and trade schools in such areas as building construction, textiles, industrial arts and engineering. Since 1979 the training institute has, with UNDP/UNESCO help, been producing 30 instructors in nine engineering trades each year, with detailed weekly work schemes having been produced for nearly all technical subjects. The institute now exerts considerable influence on the quality of skilled national tradesmen and is the main source of workshop instructors for the Egyptian Ministry of Education.

34. By contrast, India is believed to have the world's largest reservoir of trained technical and scientific personnel. However, to expand and modernize its industry, India has sought to upgrade its training institutions to include new skills or ones in short supply. Under a five-year, $11.7 million project beginning in 1975, UNDP/ILO has sought to help. The objectives of the Advanced Vocational Training Institutes project were to establish five new institutes for instructors, add new fields of training, particularly in the chemical industries, upgrade 16 existing industrial training institutes and train a minimum of 12,000 skilled and highly skilled workers and technicians.

35. By July 1982, some 12,997 such workers had in fact been trained, while each of the five new instructor training facilities was in operation. Fifteen of the 16 industrial training institutes to be upgraded were also functioning satisfactorily and the 16th was coming into operation.
36. In the early 1970s the Brazilian Government asked UNDP to assess the output of national foundries, in order to speed the country's industrialization through the more efficient casting of essential copper, steel, aluminum and cast iron tubes, piping, joints and sheets and their many industrial applications. The resulting study found that, while some foundries were the equal of those in major industrialized countries, smaller foundries were in dire need of improved productivity and upgraded technical personnel. The result, in 1977, was the UNDP/ILO Foundry Vocational Training Centre at Itauna, designed to improve the skills of engineers, technicians and workers at all levels in the small foundry industry.

37. The Centre now provides one-year courses and a programme of 10-month, supervised, on-the-spot internships. It has developed teaching materials and technical information for each level of instruction. Some 743 workers have been trained, another 629 have participated in specialized seminars and 114 have completed intensive specialized courses dealing with casting, furnaces, treatment of running flows of liquids, cast iron fonts, fitting and lathe operation. Because of the high quality of its instruction, the Centre has provided technical assistance to Venezuela and received technical missions from Colombia, Nicaragua and Paraguay. Cost to UNDP: $588,236.

38. Indonesia's training needs were focussed at a more fundamental level. Between 1945 and 1969, school enrollment quintupled in Indonesia, and by 1978 22 million children were enrolled at the primary level with another 4.2 million in secondary schools. To meet a huge and fast growing demand for secondary school teachers, the Indonesian Government in 1978 launched a crash programme to train 20,000 secondary teachers a year, with particular stress on upgrading science and math instruction. In 1979 UNDP/UNESCO began a $2.5 million project (with Government contributions of $31.8 million) to improve science and math teaching in the secondary general schools, designed to upgrade the skills of 2,000 teachers in 11 provinces by 1983.

39. The project has more than exceeded its objectives. By the end of 1982, 18 provinces were involved, while 152 science and math instructors had completed fellowships. In turn, they helped train 430 assistant instructors and, in all, 4,735 science and math teachers were upgraded. An in-service/on-service training model developed under the project is now being adapted for all secondary in-service teacher training in Indonesia. Under an extension of the programme by the Government, 13,200 science teachers and 10,560 math teachers will be upgraded annually by 1985 and 1987, respectively.

40. In East and West Central Africa, where most of the national parks and game reserves are still in an early stage of development, UNDP has helped in the establishment of a regional wildlife training school in the Cameroon. In a $1.7 million project executed by FAO, two types of training are offered for all of Francophone Africa -- instruction for those already serving in park or wildlife management or veterinary service and elementary courses for auxiliary personnel. Thus far, 305 wildlife specialists from 18 countries have been trained, some supported on fellowships by the Federal Republic of Germany, France, the European Development Fund, the Rockefeller Foundation and the World Wildlife Fund.
41. The list of effective results from UNDP-supported training projects is long and varied. It includes:

-- twenty-four **Youth Training Centres** in the Sudan training 2,000 men and women a year;

-- 1,500 computer operators and programmers trained at **Burma's first computer training centre**;

-- 950 **medical assistants for rural health centres** trained in Bangladesh;

-- 4,000 technicians trained under an **aeronautical training and modernization project** in Brazil, including 124 from other developing countries;

-- 2,000 **community development workers** trained and now employed in Saudi Arabia;

-- 210 teachers already trained and awarded university-level degrees, with another 40 to 50 gaining such training annually, at the upgraded **Teacher Training Institute** in Bhutan;

-- the training of 1,000 **skilled and semi-skilled workers** in 12 different industrial, vocational trades in Egypt;

-- the establishment of four **milkfish demonstration and training centres** and the training of 400 extension officers in the Philippines;

-- 605 **data processing officers** trained for the Central Bank of Ecuador;

-- 530 people trained to operate **expanded telecommunications facilities** in Guyana;

-- 850 skilled technicians and engineers trained at the **Ma'alla Technical Institute** in Democratic Yemen;

-- 1,500 officials trained in **export promotion** under a regional project for Central America and the Caribbean;

-- over 1,000 beekeepers trained and 29 new apiaries established under a project to develop **beekeeping as a cottage industry** in Burma;

-- 770 operators, technicians and engineers trained in Haiti under an **expanded telecommunications network** project;
4,000 officers and other personnel trained at the modern merchant marine centre in Brazil;

3,000 trained, including trainers and supervisory personnel at Sudan's first facility for training in the management of co-operatives.

The Improvement of Planning and Administrative Capacities

42. Planning and administering development effectively are two of the most critical steps in the development process. The elimination of waste, duplication and poor results from project inputs is highly dependent on these steps, and technical co-operation plays an especially important role in strengthening Government capacities to plan and administer effectively. Thus the joint United Nations/World Bank/UNDP evaluation study on Comprehensive Development Planning, issued in 1979, stressed that the building of a self-reliant capability for planning was a process requiring much longer-term effort that hitherto supposed, that government commitment to the effort was an important and necessary condition to its success and that well organized and structured training programmes were essential ingredients of effective institution-building in the area.

43. UNDP itself has devoted steadily increased attention to its own development planning, administration and evaluation needs in line with its growing commitment to the strengthening of country capabilities in this area. Prior to 1982, for example, an in-depth sectoral evaluation of planning projects was completed by the Africa Bureau, and during 1982 reviews were conducted on the formulation and implementation of planning projects in Niger, Sierra Leone, Upper Volta, Zaire and Zimbabwe. In general, these reviews stressed the need for greater use of national expertise; for specific training, both formal and informal; for the designation of more precise responsibility for trained planners; and for a shift from macro-planning toward micro-planning to achieve improved concrete, short-term results. Along similar lines, UNDP's Regional Bureau for Asia and the Pacific conducted a Selected Project Implementation Review Exercise (SPIRE) in 1982 which examined 95 projects in 25 countries, involving 16 Agencies and 15 per cent of all on-going projects. The exercise (not limited to the field of planning) was designed to identify projects which were encountering operational difficulties and to trace the outcome of the remedial action undertaken through the regular tripartite review process. The exercise found that 33 large and three small-scale projects had design deficiencies which were negatively affecting project implementation and output. Some 60 large-scale and 10 small-scale projects suffered from one or more implementation problems, which were identified and corrected. Along similar lines, a UNDP-supported Peruvian project, Integrated Rural Development of the Province of Sanchez-Carrion was the subject of an evaluation mission which found, inter alia, that the lack of a spatially integrated development strategy for the region in which the province was located, together with a weak institutional infrastructure for planning at the national level, were major handicaps to the project's success. The formulation of a medium and long-term development plan for the region was recommended and undertaken as corrective action.
44. The success of UNDP in helping both to establish effective planning mechanisms and to strengthen development administration is well documented in the field office reports submitted for 1982. In Sierra Leone, for example, the share of the industrial sector in the national economy, estimated at 7 per cent, is small compared to its potential. World Bank studies have found that, with its rich mineral, water and land resources, Sierra Leone has good scope for industrial development, while other agencies have pointed out that industrial development has not been systematically organized in the country and that the absence of strong Government machinery to help direct industrial efforts has resulted in the present ad hoc industrial structure. Begun in 1980 at a cost of $652,000, UNDP/UNIDO assistance to the Ministry of Trade and Industry was intended to help bridge the gap in institutional capabilities, and some notable results are already being recorded. An industrial development department with three functional divisions has been established; a sectoral plan for manufacturing has been prepared; and training has been provided in the field of industrial planning and promotion. In addition, the Government has prepared both a new Development of Industries Act, setting out priority areas and concessions for both local and foreign investment, and a new Small Industry Development Act, detailing the programmes, extension services and training opportunities being made available to indigenous small entrepreneurs. The extension services are being offered in collaboration with voluntary aid agencies and the Government. Existing industrial units facing management or technical difficulties have been provided with expert rehabilitation assistance, while profiles of potential investment projects and proposals for small-scale, commercially viable pilot projects have been prepared and issued to bilateral sources of funding. The "gap" in Sierra Leone's national development efforts is being closed.

45. In Panama the "gap" to be closed was less sectoral than regional. Here earlier development efforts had concentrated on a build-up of economic activities in metropolitan areas, with consequent regional imbalances and heavy migration from less developed rural areas into Panama City and Colon, where half of the country's population now lives. Since 1972 UNDP has worked to assist the Government in correcting these imbalances through a Planning and Promoting Regional Development project, designed to establish a sound regional development infrastructure for the country. Major steps have now been accomplished in this effort. A central document, "Strategic Options for Panamanian Regional Development: 1980-1990", defines the framework for provincial development within the national plan, emphasizing the least developed regions. Panamanian personnel have been trained in required programming and project evaluation. A team has been created to co-ordinate the dual functions of the Directorate of Institutional Development and the Directorate of Planning and Regional Co-ordination. Pilot programmes have been established for two of the least developed provinces, Veraguas and Chiriqui, their provincial offices expanded and budgets developed to implement their increased responsibilities. Other key reports produced include: "A Framework for the Formulation of Priority Programmes of Regional Interest"; "The Provincial Plans: Tools for Synthesis and Management of Regional Planning"; "The Five-Year Plan of Development in Chiriqui Province"; "Regional Priorities by Province in the National Development Plan, 1981-1985"; and "Guidelines for the Investor in the Province of Veraguas." Cost of this project to UNDP: $789,025; to Panama: $1.3 million.
46. Still another variation in UNDP assistance to development planning and administration is exemplified in the Assistance to Central Planning project in Benin. Here the object was to assist the Government at the highest level in the formulation of a national plan for 1983-1987, together with preparations for a donor roundtable conference and the training of national cadres in modern planning techniques. Executed by UNDTCD, the $1.6 million project aimed not only at an integrated strategy leading to food self-sufficiency and a tripling of incomes by 1990 but also the establishment of a complex planning system, a flexible system of plan execution and a trained cadre of national personnel to carry out the plan itself.

47. Work has been carried forward by six "vertical" sectoral commissions (agriculture, industry, public works, transport, commerce, tourism) and three "horizontal" commissions (human resources, finance and balance of payments, public administration), comprised of national, provincial, public and private officials. Technical specialists and equipment provided by the project aided in the development of models and the analysis and processing of information. With added assistance from the project and the information centre of the National Institute of Statistics, sophisticated techniques of economic analysis were applied by Ministry personnel for the first time. Within 11 months, the project had supplied the Government with:

- a general report presenting an analysis of the development of the national economy over the past ten years; formulation of a new economic development strategy for the next five years; the volume of investments required and their sectoral distribution; and expected effects of these investments;

- five sectoral reports -- for rural development, industrial development, public works, services (commerce, transport, tourism) and human resources;

- a report on past and future evolution of public finances, the monetary situation and the balance of payments.

48. Since external assistance is critical to the development objectives of the Government, the project also prepared documents for the March 1983 donor roundtable:

- a general report outlining Benin's economy and proposing a pre-investment programme explained within the context of the overall national development strategy;

- three volumes presenting projects comprising the sectoral investment programmes.

49. Training has focussed both on a long-term plan for the training of upper-level specialized cadres in planning and development economics and on training seminars to acquaint personnel already employed in various ministries
with new techniques. Seven seminars, 3 to 10 days in length, were held for 120 senior-level economists and planners. The project had prepared for a complete takeover of activities by national personnel by the end of 1983. Cost to UNDP: $1.6 million.

50. Along similar lines, while helping the Yemen Arab Republic prepare its Second Five-Year Development Plan, UNDP and the World Bank have also strengthened the country's general planning capacities. The Yemen Arab Republic's first attempt at national development planning began in 1973, leading to the first five-year plan, 1976/77 - 1980/81. However, an acute lack of properly staffed Government departments and trained manpower made it impossible for the Government to make these efforts a truly national exercise, and the economic and social significance of the initial plans was therefore somewhat undermined. By and large, they were listings of development activities which were only broadly interrelated and which lacked interdependence due to the lack of a well-defined macro-economic framework.

51. In 1981, on the eve of the preparation of the Second Five-Year Development Plan, the Government requested UNDP support, primarily for the Central Planning Organization but also for the main sectoral ministries, to enable them to draw up a plan which would accurately reflect recent developments in the country and meaningfully address itself to existing issues and problems. In addition to drawing up the plan, the project was expected to reinforce and strengthen the mechanisms of Government institutions so that national personnel would acquire increased planning capacity. Improvements were called for in data collection, project preparation, implementation and appraisal, and the ability of central and departmental planning institutions to initiate proper plan preparation processes, undertake modelling work and consider optimum growth alternatives.

52. The World Bank, entrusted with project execution, provided high-level consultants to perform specific tasks prior to the preparation of the plan. The Government mobilized all sectoral ministries and organizations concerned, creating and developing new units, to provide the necessary human resources.

53. The plan took shape, and in April 1982, was presented at an international donor conference the Government hosted to seek outside comments and suggestions on the Yemen Arab Republic's development direction and solicit necessary donor support. This conference was recognized by all participants as highly successful in achieving its aims. The project also helped to train national staff in the elements of planning and encouraged the continuous involvement of the various sectoral ministries. This should be of vital importance in helping the Government prepare future development strategies on its own.

54. In addition to a close linkage with the UNDP-supported, UNDCTD/ECWA-assisted project, Strengthening Statistical Services, the planning project complemented such bilaterally assisted activities as Agricultural and Regional Planning (Federal Republic of Germany), Manpower Planning (USAID), and Development Advisory Service (the Kuwait Fund).
55. Planning and administrative capacities for development often focus on the needs of particular ministries. In the past, for example, educational development in Bangladesh has been mainly an expansion of the traditional system. This has led to a shortage of skilled labour and a surplus of persons with a liberal education for whom no jobs exist. In 1974 the Government sought assistance from UNDP/UNESCO to gear education more closely to the country's development needs. A project was designed which concentrated on the formulation of the education section of the Second Five Year Plan (1980-85), with particular reference to the introduction of universal primary education, development of a national policy for non-formal education and the strengthening of the Bangladesh Bureau of Education Information and Statistics (BANBEIS) and the Academy of Fundamental Education (AFE).

56. The project has made a substantial contribution to the formulation of the education section of the Second Five Year Plan, which was further consolidated by the Government in the Medium-Term Education Plan (1982-85). Both plans now provide the sector with a policy and programme framework for its future development. Preparatory work by the project in the field of universal primary education has led to an IDA-funded pilot universal primary education project to be carried out in 40 districts. Experts assigned by the project to BANBEIS and AFE have produced technical reports identifying comprehensive work programmes and structural changes required in their respective institutions which will enable them to bring about a qualitative improvement in education. In addition, the Government's overall capacities in the areas of educational administration and planning have been enhanced by the project's activities. Cost to UNDP: $1 million.

57. Sometimes the very basis for effective planning and development administration is the object of a UNDP-supported project. Such is the case with the project in support of statistical services training in Lesotho, with inputs of $333,653 from UNDP. This project was approved as an initial step to assist the Government in improving the quality and quantity of statistical data collection and compilation so as to strengthen development planning and administration generally. The objective was to provide reliable statistical data, and included funds to meet training costs of Basotho field officers to be selected and trained by the Bureau of Statistics, in order to establish a cadre of statistical personnel to improve basic data collection for use by planners.

58. The immediate objective was the provision of information on annual crops and livestock, as well as other yearly supplies; the information was to be used to evaluate and analyse agricultural production plans and targets. The long-term objective included the collection of data on the structural aspects of agriculture in Lesotho and the establishment of a permanent team of field staff trained in agricultural survey practice, including farmland crop and livestock production, economic and social statistics relating to agriculture and machinery, equipment and agricultural supplies. Annual surveys of agriculture were conducted from the 1973/74 crop year. Statistics of area and production of crops, livestock population and stock changes, production of meat and other livestock products were made available in separate reports each year and have proved valuable in the planning of the
agricultural sector and the monitoring of its progress. The contribution of agriculture to the G.D.P. is now estimated much more precisely than was previously the case. The Government is also giving increasing financial support to the continuation of the reporting service in agriculture and is looking to the expansion of data collection to meet statistical requirements in sectors other than agriculture.

59. Many other UNDP-supported planning and development administration projects are showing impressive results.

--- The Regional Centre for Labour Administration in Yaoundé, established under a UNDP/ILO-assisted regional project, has trained 413 middle-level and 184 high-level cadres for Francophone African countries and is now running autonomously, with a regional governing council and a Cameroonian director.

--- A UNDP-funded Public Health Engineer is co-ordinating aid for Botswana's sanitation needs from many donors, as well as advising the Government in the design, supervision and implementation of the urban sanitation programme.

--- Saudi Arabia's first comprehensive physical and regional development plans, with UNDP/UNTDCD assistance, now includes a series of Action Master Plans for the Kingdom's major metropolitan areas, together with a national settlement or spatial strategy for better defined regional planning.

--- A UNDP/ILO-supported training and technical assistance project for labour-intensive public works programmes in Cape Verde will soon be providing rural men and women with 26,000 jobs a year.

--- In Chad, UNDP has supported preparations for the First General International Conference on Assistance to Chad, a donor roundtable for rehabilitation and reconstruction held in November 1982 which gained firm commitments of more than 150 million.

--- Similarly, UNDP has assisted Equatorial Guinea in preparing a three-year economic reactivation and development plan, as well as documentation for a donor conference held in April 1982. Within six months, $90 million of the $140 million required had been mobilized, with trained planners and economists in place to ensure effective implementation.

--- While assisting the Government of Sudan with economic planning, UNDP and the World Bank have trained more than 100 Sudanese in planning techniques and strengthened Sudan's links with other developing countries.
-- Under a UNDP/HABITAT-supported housing development and planning project, Swaziland has seen 140 families moved out of slum areas and into new housing built by themselves under an experimental low-cost housing scheme, with many more units now going up.

-- Under a locally executed project, UNDP has since 1980 helped train all levels of the Zimbabwe Government in modern management techniques, and an Institute of Public Administration and Management is being planned.

Pre-investment and investment assistance projects

60. In recent years UNDP has taken a number of steps to strengthen the effectiveness of its investment support activities. It has established a special investment advisory unit within its Bureau for Programme Policy and Evaluation. It continues to expand its co-operative arrangements on investment activities with other development agencies and banks. In co-operation with the World Bank, it has trained growing numbers of Resident Representatives and Deputy Resident Representatives in pre-investment and investment-support requirements.

61. Many projects reported on by UNDP field offices in 1982 reflected the growing impact of the Programme's investment-oriented work. Results continue to expand, for example, from the three-phase, $1.5 million UNDP/UNDTCD feasibility studies on the exploration and development of geothermal power in Kenya. Follow-up investments totalling $118 million have been committed by three bilateral sources, the Kenya Government and the World Bank. The first 15 megawatts installation began operation in early 1982. A second 15 MW installation is to be commissioned in 1983 and a third should be completed by 1984. Based on the success of this project, the Kenyan Government has requested UNDP to support a second round of geothermal exploration under the 1982-1986 country programme, with $2.5 million already allocated to the new effort.

62. A range of UNDP-financed studies have so far generated some $320 million in investment follow-up in a number of sectors crucial to Burma's economy. Like all developing countries, Burma must prepare and present detailed feasibility studies to the international lending agencies from which it seeks assistance. Before 1973, the country had limited resources for financing such studies. In 1974 UNDP, with the World Bank as executing agency, agreed to finance a broad technical assistance programme aimed at mobilizing financial resources to meet Burma's development needs. Informally known as the Burma "Umbrella Programme", this project aimed to identify priority investment projects in Burma, undertake required feasibility studies, and carry out project proposal preparation. The programme was based in the Ministry of Planning and Finance, but was designed to carry out studies in any sector of the economy. It was extended into a second phase in 1979, with a total UNDP cost, thus far, of $6.7 million.
63. The Umbrella Programmes have been extremely successful in stimulating follow-up financing for development activities in Burma. By the end of 1982 they had generated a total of approximately US$320 million in investment for follow-up projects of which $230.8 million in loans and credits was coming from external sources. Additional loans were also under negotiation. Follow-up investment results by sector include the following:

* Electric Power Development ($88.2 million)
* Road Sector Improvement ($32 million)
* Rubber Rehabilitation ($5.1 million)
* Urea Fertiliser (Engineering Study) ($100 million)
* Seeds Multiplication and Distribution ($6.5 million)
* Groundwater (for Irrigation) Exploration and Pilot Development ($21 million)

64. Under a pre-investment project for the industrial development of capital goods in Mexico, UNDP/UNIDO has helped generate a remarkable $1.2 billion in follow-up investments thus far. The recent rapid growth of the Mexican economy was accompanied by a sharp increase in the importation of capital goods. While the Mexican economy was growing at an annual rate of 8 per cent, capital goods imported increased at a rate of 30 per cent. This disparity resulted in a foreign trade deficit for the machine industries surpassing $2.9 billion in 1977 and reaching $11 billion in 1981. At the Government's request, UNDP/UNIDO assisted NAFINSA, the Mexican National Finance Corporation in its effort to draw up a framework for capital goods industry development.

65. The NAFINSA project co-ordinated the development strategies for capital goods industries with the economic policies which helped carry them out. The project assisted in feasibility studies and the negotiations necessary to create enterprises. The most important industries developed were: welding, forging and heavy platework; large diameter steel pipes; tractors for agriculture; steam turbines and generators up to 350 megawatts (MW); hydraulic equipment; large capacity pumps and electric equipment.

66. From 1977 to 1982, $1.2 billion was invested in Mexican capital goods industries as a direct result of the activities of the project. Another $400 million in investments can be attributed to indirect efforts of the project.

67. Perhaps some of the most remarkable results from a UNDP-supported pre-investment effort are exemplified by the Tanzanian project, Assistance to Tanzania Petroleum Development Corporation (TPDC). Since early 1974, UNDP and UNIDO have been helping TPDC carry out a project designed to deal with the very serious situation caused by sharp rises in the prices of oil and gas products. Tanzania's crude oil import bill rose from $14 million in 1972 to $180 million in 1980, and there were corresponding increases in the prices of imported petroleum products.
68. Over the last eight years, the project has played an important role in all oil and gas exploration work in Tanzania, while gradually helping to build national capacity. It was directly involved in all operational decisions in seismic surveys, drilling and evaluation work, the cost of which had reached $54 million by the end of 1982. (Cost of the project to UNDP: $1.1 million.)

69. An outstanding achievement has been the discovery of two gas fields: Songo Songo with estimated recoverable proven reserves of 27,000 million standard cubic metres (SCM), worth $5,000 million; and Kimbiji, with prospective and probable reserves estimated at 130,000 million SCM, worth about $18,000 million. The latter, when confirmed, could be the largest gas field in Africa south of the Sahara, in which case Tanzania would seriously consider the export of natural gas.

70. In addition, the project has been instrumental in establishing development plans and monitoring exploration by such companies as Shell, the International Energy Development Corporation (IEDC), AGIP/AMOCO, and Petrocanada International; and in obtaining $10 million credit from the Government of Algeria and the use of that country's SONATRACH drilling rig on contract. The project's evaluation report is also forming the basis for the OPEC Fund Board's consideration of a credit for well drilling in the Kimbiji area.

71. Of the natural gas reserves at Songo Songo, 16,000 million SCM are to be used for a large-scale ammonia/urea plant, now under implementation, which will add three per cent to Tanzania's Gross Domestic Product when it becomes operational by 1984/85. This plant, which will produce 1,150 and 1,725 tons a day of ammonia and urea, respectively, requires total investments of $387 million, and a joint venture agreement has been concluded with Agrico, USA. The remainder of the gas is considered adequate for a large size methanol and MTG plant, now under study with assistance from NORAD.

72. Within weeks of the Kimbiji discovery, a pre-feasibility study was made for the utilization of gas for the hydrocracking of heavy residue at TIPER Refinery, only 35 kms. from Kimbiji. The study concluded that foreign exchange savings exceeding $20 million could be achieved.

73. An agreement for a joint venture between TPDC and AGIP for a lubricating oil blending plant to produce 30,000 tons per year has been concluded. Total investment cost is estimated at $10 million, and the Italian Government would provide a loan of $7.6 million (an estimated 85 per cent of the foreign exchange component), with the remaining 15 per cent being financed by AGIP.

74. A brief summary of results from other UNDP-supported pre-investment projects on which information was received in 1982 includes:

--- A private sector investment programme in the Caribbean region which has secured $16 million of investments in such key sectors as energy, transportation, tourism and agriculture.
-- $9.76 million in complementary assistance from 12 donor countries for the $4.7 million UNDP/OPE-supported Suez Canal Zone Feasibility and Design Studies in Egypt.

-- $30.52 million in investment follow-up from Canada, France, Japan, the Netherlands and the World Bank for a UNDP/ITU-supported project to help Rwanda develop a modern telecommunications system.

-- Over and above the self-help afforestation project in Benin which will plant 6,000 hectares, each with an annual 400 steres production of firewood and twigs for 20 years, an additional $33 million has been generated in forestry investments.

-- Mobilization of almost $800 million from Belgium, Canada, the Federal Republic of Germany, France, Iraq, Italy, Kuwait, Saudi Arabia, the United Arab Emirates and USA, in addition to AFDB and the European Development Fund, as a result of the $5.3 million, UNDP-supported regional project to develop the Senegal River Basin in West Africa.

-- $1 billion in investments generated by the $2.6 million project to assist the Metals Industry Research and Development Centre in the Philippines.

75. These results -- by no means comprehensive -- demonstrate the critical importance of technical co-operation to the development effort and the centrepiece role that can be played by UNDP in that effort. They show that, despite many problems and more disappointments, the results from modest UNDP-supported activities can prove enormous in impact and in development momentum generated. The results also show that UNDP has learned and continues to learn from and apply its great and growing reservoir of project and programme experience in the pursuit of greater impact and results. In short, the Programme accomplishments here documented testify to the effective, vital and often critical work on behalf of international development that continues to be performed by UNDP on a day-in-day-out basis.