

Annual Report of the Administrator for 1983

2. Project Results: Global/Interregional Programme and Special Funds

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P R O J E C T R E S U L T S : G L O B A L / I N T E R R E G I O N A L
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PROJECT RESULTS: GLOBAL/INTERREGIONAL PROGRAMME
AND SPECIAL FUNDS

1. In addition to examples drawn from the country and regional framework for UNDP assistance discussed in Part I, the Programme also provides special categories of assistance through its unique global and interregional activities and the diverse special funds it administers. This section of the Annual Report for 1983 sets forth a sampling of the results achieved from some of these endeavours during the year. Additional information on each of the special funds administered by UNDP is contained in addendum 2 of this report.

Global/Interregional Programme

2. A significant feature of the UNDP global/interregional programme is its ability to attract complementary financing for vital development activities affecting a number of developing countries. The continuation of this trend during 1983 was particularly welcome in view of UNDP's financial constraints, and made it possible to sustain momentum in a number of areas.

3. In its role as chairman of the Steering Committee for Co-operative Action of the International Drinking Water Supply and Sanitation Decade, UNDP supports a wide range of collaborative activities at the country and regional levels with its Steering Committee partners -- the United Nations, the United Nations Children's Fund (UNICEF), the World Bank, the World Health Organization (WHO), the International Labour Organisation (ILO), the Food and Agriculture Organization (FAO), the United Nations Educational, Scientific and Cultural Organization (UNESCO), the United Nations Environment Programme (UNEP), the United Nations Centre for Human Settlements (HABITAT) and the United Nations International Research and Training Institute for the Advancement of Women (INSTRAW). These activities are further reinforced at the global and interregional levels of UNDP programming. During the past five years, for example, UNDP and the World Bank have co-operated in a joint programme to demonstrate and promote investments in lower-cost approaches to the provision of clean drinking water and adequate sanitation. The joint programme, funded from the global and interregional IPF, encompasses activities in some 40 countries in five broad areas: low-cost sanitation, rural water supply hand pumps, assistance in preparation of investment projects, information and training, and resource recovery. UNDP support of these activities totals close to \$12 million. An equal amount in cost-sharing and parallel financing is being provided by bilateral and multilateral agencies, as well as by national and regional IPFs. Investments resulting from these activities are expected to exceed well over \$150 million during the next few years.

4. Under the interregional Field Testing and Development of Rural Water Supply Hand Pumps project, field trials of at least 3,000 hand pumps of different designs were underway or about to begin in 16 developing countries by the end of 1983. Funds for the tests were being provided by host Governments and ten donor countries -- Belgium, Canada, Denmark, the Federal Republic of Germany, Finland, Netherlands, Norway, Sweden, Switzerland and the United Kingdom -- and the

project was operating with a direct budget of over \$20 million. The focus is on village-level operation and maintenance (VLOM) hand pumps which are cost-effective and can be readily manufactured and maintained in developing countries. Those being field-tested are among 30 types which have already completed extensive laboratory tests for design, performance, endurance, ease of installation, and use and suitability for local manufacture. In promoting the development and manufacturing of hand pumps and the choice of the most appropriate pumps for individual circumstances, the project is playing a vital supporting role for providing clean drinking water to the 1,500 million people in rural areas of developing countries who are currently underserved.

5. One of the major constraints to the achievement of the Decade's goals has been inadequate management of the sector and insufficient numbers of trained personnel, in particular, planners and engineers with knowledge and experience of available low-cost technologies and management. Under the interregional programme UNDP, together with the World Bank and the Canadian International Development Agency (CIDA), has initiated The Information and Training Programme in Low-Cost Water Supply and Sanitation. This programme is preparing three sets of materials:

(a) A "Decision Package" intended for policy-makers and planners in developing countries and senior staff of bilateral and multilateral agencies;

(b) A "Technical Package" for practising and student engineers and project personnel such as economists, managers and designers;

(c) A "User (Community) Participation Package" for community workers and other project field personnel.

6. Each set consists of audio-visual presentations and other materials. Altogether the series comprises 40-50 slide-sound shows, four films, training manuals and other written materials. The packages were nearing completion at the end of 1983. After review, field testing and adaptation, their wide-scale dissemination is planned to begin in early 1985.

7. The programme is closely linked to the rural water supply hand pump project described above, as well as to UNDP/World Bank projects on Development and Implementation of Low-Cost Sanitation Investment and Integrated Resource Recovery, in that the experiences gained through these field activities have furnished most of the information on which the training materials are based. The audio-visual packages, in turn, will support training activities related to the objectives of the three projects and associated global and national programmes.

8. In addition to the assistance from UNDP, the World Bank and CIDA, cost-sharing and in-kind support has come from the United Nations Centre for Human Settlements (UNCHS), UNICEF, the Asian Development Bank (AsDB), the Federal Republic of Germany, Finland, Switzerland and the Canadian Film Board.

9. An interregional project funded by the Government of Norway to promote and support the increased participation of women in water and sanitation projects is now being implemented with several United Nations agencies after six months of preparatory work. Proposals to involve women in community-based projects have been identified in several African and Asian countries, as well as in Latin America. Work is also in progress to prepare technical advisory notes and training and information materials for engineers, technicians and community extension workers which take account of womens' roles in project planning and implementation.

10. Substantial advances in the field of energy were also made during 1983, by the Joint UNDP/World Bank Energy Sector Assessment and Energy Sector Management Assistance Programmes. These programmes aim to help developing countries establish a realistic strategy for energy sector development and management and to assist these countries, as well as donor agencies and private investors, in implementing the priority investment and technical assistance activities included in this strategy.

11. The Energy Sector Assessment Programme, which began in November 1980, produces reports diagnosing the most serious energy problems faced by individual developing countries and evaluates options for alleviating these problems. To date 29 assessments have been completed and a further 19 are underway. The programme is expected to cover 70 countries by the end of 1985.

12. Governments are making extensive use of the advice provided by the assessments. The reports are increasingly being used as a framework for the energy-related activities of donor agencies and investors, as well as serving as basic documents for aid co-ordination meetings (e.g. World Bank Consultation Group meetings for Uganda, Sudan, Nepal, Bangladesh and Indonesia).

13. Based on assessment recommendations, Governments have implemented major policy changes in the pricing of energy (e.g., Kenya has reduced import duties on coal to remove an artificial deterrent to fuel oil substitution); and in the reorientation of energy sector strategies (e.g., greater use of indigenous resources is being encouraged: geothermal (Indonesia and St. Lucia), small/medium hydro (Papua New Guinea, Seychelles, Malawi), lignite (Turkey)). Significant changes have also been made in organizational and institutional arrangements (e.g., Peru has established a National Energy Commission).

14. In addition, there has been a growing emphasis on the rural and household energy sector, with increased attention given to woodfuels and other renewable forms of energy (e.g., recommendations of woodstoves are being implemented in Burundi, Rwanda and Nepal).

15. The Energy Sector Management Assistance Programme (ESMAP), which began in April 1983, assists countries in implementing the main investment and policy recommendations of the energy sector assessment reports by formulating and justifying priority pre-investment and investment projects and by providing management, institutional and policy support. Twenty-six specific activities

have been completed or are in progress in 13 countries under this programme. Nearly all projects generated by ESMAP reports thus far are under consideration by donor agencies for possible financing.

16. Financing for the two programmes, for which 1981-1983 expenditures were \$7.6 million, has come from the World Bank, the UNDP interregional programme and the UNDP Energy Account. The latter has given priority to the financing of these programmes (see below). A total of \$14 million has been pledged for activities in 1984-1987, although, as it is anticipated that these will cost \$39 million, an additional \$25 million is needed. Donors which have made or pledged initial contributions to the programmes through the UNDP Energy Account, or through other cost-sharing arrangements with UNDP, are Australia, Denmark, Finland, Netherlands, New Zealand, Norway, Sweden, Switzerland and the United Kingdom. The Division for Global and Interregional Projects was also successful in mobilizing collateral donor support for projects in other fields.

17. The decision of the Government of Norway to increase its parallel financing from 60 to 80 per cent for fishery survey work carried out by the Norwegian vessel, Dr. Fridtjof Nansen, and related scientific analysis, was a case in point. Under the global project, Survey and Identification of World Marine Resources, this vessel is conducting acoustic surveys and trial fishing in exclusive economic zones (EEZs) of selected participating countries, improving acoustic survey techniques in these countries and providing on-the-job training to biologists and acoustic engineers.

18. The World Maritime University (WMU), which aims to increase the role of developing countries in world shipping by training maritime teachers, surveyors, inspectors, technical managers and administrators, opened in Malmo, Sweden on 4 July 1983, with an initial class of 72 students. UNDP's contribution of \$800,000 a year for 1983 and 1984 from interregional and regional funds has been more than matched by the Government of Sweden's pledge of \$1 million a year for five years towards the WMU's running costs, and the provision of \$100,000 for start-up costs through UNDP. The city of Malmo is providing facilities for the University and a hostel for students, while other assistance is coming from the State University of New York (United States) which is organizing the WMU's special language courses and planning its library; the United States Naval Institute, which has donated a substantial number of books; and the Raytheon Corporation (United States), which is offering equipment and instruction in the use of different kinds of radar, satellite navigation systems and other navigation and communication devices. Developing countries will raise \$10,000 per academic year for trainees they sponsor.

19. Since 1975 Special Public Works Programmes supported by UNDP and the International Labour Organisation (ILO) have provided jobs for more than 1.5 million unemployed and underemployed men and women in 19 developing countries, at the same time equipping rural areas with productive assets needed for long-term development progress. By the end of 1983 the interregional project assisting the special public works programmes had been responsible for

follow-up investments totalling \$71.6 million. Of this amount, \$51.6 million (72 per cent) had come from sources outside UNDP -- \$43.6 million from 11 donors and \$8 million from recipient Governments themselves. The funds are used to build such facilities as irrigation and water supply systems, new forestry plantations, health centres, feeder roads and storage and marketing facilities.

20. In view of growing needs to increase world food supplies, the 1983 results of UNDP global programme assistance to research and training activities underway at 13 international agricultural research centres supported by the Consultative Group on International Agricultural Research (CGIAR) are especially meaningful.

21. In December 1983 an independent evaluation mission reviewed the performance of the International Rice Testing and Improvement Programme, which has its headquarters at the International Rice Research Institute (IRRI), Los Banos, Philippines. UNDP has provided support since 1975 for this programme, which involves rice testing, innovative breeding techniques, biological nitrogen fixation, rice-weather studies and training. The mission lauded the research undertaken as "relevant to the main objective of establishing a co-operative global network on the international rice testing, genetic evaluation and utilization, and on biological nitrogen fixation and transformation under paddy rice culture, involving scientists from the national, regional and international rice improvement programmes." Among the many achievements since the programme's inception singled out for special mention were:

(a) Establishment of a global International Rice Testing Programme (IRTP) network involving over 600 scientists working at over 300 stations in 75 countries. Numerous national programmes and such regional institutions as the International Centre for Tropical Agriculture (CIAT) in Latin America and the International Institute of Tropical Agriculture (IITA) and the West African Rice Development Association (WARDA) in Africa have been involved with IRRI and IRTP implementation;

(b) Creation and distribution of some 8,300 IRTP nurseries to various regions of the world;

(c) Distribution of around 1.34 million seed packets of various rice varieties and breeding lines to over 75 countries for growing in IRTP nurseries;

(d) Issuing of 389 publications on the IRTP;

(e) Training in:

(i) Advanced research for seven senior research fellows, 18 postdoctoral fellows, 34 M.S./Ph.D. candidates and eight non-degree candidates from various developing countries;

(ii) Genetic evaluation and utilization services for 367 scientists from 29 countries;

- (iii) Rice testing for more than 400 scientists from 37 countries through participation in IRTP workshops and monitoring tours to 140 rice research stations/institutes;
- (iv) Biological nitrogen fixation for 106 researchers from 14 countries;
- (v) Innovative breeding techniques for 21 scientists from six countries and IRRI, who attended two courses in hybrid rice training held in China, by IRRI and the Chinese Academy of Agricultural Sciences.

Other contributors to the IRTP are the World Bank and USAID.

22. Cassava, potatoes and sweet potatoes are a basic component of the staple diets of many people throughout the world. Prior to the 1970s research on these root and tuber crops had been scant. Recently, however, it has been recognized that these crops provide important sources of energy in regions affected by malnutrition, and that they can be adapted to adverse conditions with minimal cash inputs. These characteristics make them vitally important to efforts to alleviate world hunger.

23. Research on root and tuber crops is undertaken by three international agricultural research centres -- the International Centre for Tropical Agriculture (CIAT) in Colombia; the International Potato Centre (CIP) in Peru, and the International Institute of Tropical Agriculture (IITA) in Nigeria -- which are part of the Consultative Group on International Agricultural Research group. Over the last ten years this research has been oriented towards developing improved germ-plasm adapted to various soil and climatic conditions, as well as encouraging new cultural practices, which will result in superior quality products at minimal cost. The centres also transfer technologies to national programmes, through which farmers are ultimately reached.

24. Since June 1980, UNDP has supported a project implemented by the three centres which aims to transfer innovative technologies to strengthen national programmes. Key areas of activity include the development and transfer of methods to improve cassava production, storage, processing and utilization; the evolution of new research methodologies; field testing and evaluation of new varieties; production of disease-free potato seed and improvement of potato storage techniques; and collaboration with national quarantine services. Over 780 scientists from 55 countries have received training in over 30 courses and workshops held at the centres, and in individual countries with national personnel participating as instructors.

B. United Nations Capital Development Fund (UNCDF)

25. UNCDF continued in 1983 to assist low-income countries in meeting basic needs such as those for food, water and shelter, and in developing their productive sector and economic infrastructure. In Bhutan, a \$1 million project approved in 1979 is supporting the Government's first major attempt to

introduce credit to small farmers, nationwide. By the end of 1983 almost 8,000 short-term seasonal loans, averaging about \$95, had been made in 14 of the country's 17 districts for the purchase of seeds, fertilizers, livestock, farm equipment and other seasonal inputs. Other farmers will receive credit through a revolving fund as repayments are made. A \$1.2 million second phase will enable 2,000 subsistence farmers to purchase improved livestock and farm implements and undertake terracing, fencing and cash-crop cultivation.

26. Half of the 200,000 inhabitants of Kigali, Rwanda's capital, are not covered by an adequate potable water distribution network. They have therefore had to purchase expensive but low-quality supplies from private distributors or collect water from polluted streams. A project which began in 1981 and is now nearly completed is extending the present water supply network by eight kilometres and installing 85 water fountains, each of which is expected to serve approximately 1,200 persons daily. Completely executed by Government agencies, this project has significantly strengthened national water supply capacities.

27. St. Martin, a very poor quarter in Haiti's capital city of Port-au-Prince, has been the target of a 1979-1983 urban renewal project for which UNDP and UNCDF have each provided \$1.3 million in linked technical and capital assistance. Key results include the creation of a revolving fund for low-cost housing; provision of security of land tenure to resident householders; the reduction of per hectare population density from 1,525 inhabitants to 1,370 in old St. Martin and 800 in new St. Martin; the promotion of co-operative efforts for development and maintenance; the construction of 755 dwellings; and the provision of basic infrastructures and related services including access service roads and footpaths, water fountains, fire hydrants, sewage, public lighting and garbage collection. While helping to solve some of St. Martin's housing problems, the project has strengthened Government urban renewal services and has served as a showcase to both the local population and potential donors. It is to be replicated on a larger scale in other areas of Port-au-Prince with assistance from the Federal Republic of Germany and the World Bank.

28. UNCDF is co-ordinating with the United Nations Sudan-Sahelian Office and the Federal Republic of Germany to build 155 kilometres of priority secondary roads in a densely populated area of the Casamance in Senegal. The roads are being constructed by an autonomous, specialized, mechanized brigade, established within the Ministry of Public Works, to which UNCDF has provided equipment, vehicles and spare parts to complement those furnished by the Government, UNSO and the Federal Republic of Germany. This comprehensive financing package has also assisted the Government in preparing technical surveys, supervising construction work, training, and operating and maintaining equipment. The monthly rate of construction has averaged seven kilometres. By the end of 1983, 128 kilometres of road had been completed, linking several small towns and villages to the main commercial circuits. (For additional information on the work of UNCDF in 1983, see DP/1984/44.)

C. United Nations Volunteers (UNV)

29. The activities of the United Nations Volunteers are aimed at meeting the needs of the poorest and most neglected segments of society, particularly in rural communities. By extending external assistance provided from more traditional sources both geographically and substantially, UNV is providing the much needed linkage between central planners and grass-roots beneficiaries. The programme not only increases resources available for development at the village level, but does so through a mechanism which is likely to respect existing traditions and constraints while blending into community structures. Especially successful/innovative activities were carried out during 1983 in Guinea, Kiribati, Sri Lanka and Mali.

30. In Guinea, a project supporting 360 FAPAS (agropastoral farms) provided the services of UNV specialists in bio-gas, hydraulics and fish culture from the People's Republic of China, along with an interpreter. Applying Chinese technology, the bio-gas specialist constructed Guinea's first bio-gas digester. Its introduction has already had considerable impact on this energy-poor country; bio-gas is proving to be an excellent substitute for wood and grass, the exploitation of which represents both a threat to the ecological balance and a continual drain on the labour force. Information on the digester is being disseminated via press and radio and the volunteer involved has prepared a booklet on bio-gas in Guinea for widespread distribution. Training has been provided for farmers, as well as for ten national personnel who will help to introduce the technology throughout rural areas. The Government has now decided to construct bio-gas digesters in all 360 FAPAS and train additional technicians.

31. A UNV boatbuilder was provided to Kiribati under an FAO-supported project designed to construct prototype outrigger canoes, test and evaluate their seaworthiness and performance and train local boatbuilders. Better boats are needed in the atolls to expand fisheries and thereby reduce population drift from outlying islands to urban areas. The volunteer entirely refitted the boatshed, after which the two prototypes were constructed and successfully tested. Considerable interest was shown by local fishermen who responded to the fact that the boat's design followed the basic principles of traditional boat building and that the cost was relatively modest. Training of local boatbuilders began and news of the "Kiribati boat" spread not only locally but to other island countries in the South Pacific where the prototype may be replicated. The short-term consultancies in boatbuilding originally envisaged in the project have subsequently been cancelled.

32. In Sri Lanka a team of UNV doctors has been helping to alleviate an acute shortage of middle-level medical personnel in rural areas. During 1983, 120 UNV doctors, most of whom were general practitioners, served for a total of 1,440 months in the country. They were assigned to district or rural hospitals where they were often the only medical officers. These doctors, the majority of whom speak the local language, attended more than 20,000 patients every day -- from 50 to 300 out-patients as well as a number of in-patients.

33. The UNV doctors have also been active in preventive health care. They have been involved in family health clinics and school health work, trained local volunteers, participated in immunization programmes, presented films on various health matters and encouraged the improvement of hospitals through "Shramadana" (communal work) efforts.

34. The presence of the UNV medical team has instilled a sense of public awareness of health issues into Sri Lanka. While the Government is taking steps to relieve the shortage of national doctors, it has expressed the view that without the contribution of UNV, there would have been detrimental, long-term effects on the country's health service delivery system, particularly in the rural areas.

35. Two volunteers in domestic development services from Sri Lanka -- a husband and wife team -- promoted co-operation for development among the inhabitants of Toko, a village of about 500 in central Mali which had no school, was lacking in basic health facilities and had serious erosion and water supply problems.

36. As a result of their demonstrations and motivational activities, villagers: (a) constructed a pre-school facility, now attended by 56 children, and donated grains and vegetables (in addition to milk powder provided by UNICEF) for the children's daily meal; (b) built a health centre and a mosque and repaired the main road; (c) planted kitchen gardens and 1,200 tree seedlings; and (d) established savings accounts to purchase tools, fertilizer, seedlings, etc. With Government assistance the UNVs were also instrumental in training two village girls to run the pre-school facility, instituting literacy classes, opening a small pharmacy, securing a doctor to examine all village children and to organize a seminar on preventive health care, and training two traditional midwives and two men in first aid and basic pharmacy. Activities were carried out with minimal outside assistance. There was present an increased receptivity on the part of the villagers to both co-operative enterprises and Government development initiatives. Neighbouring villages were impressed by the changes in Toko and requested UNV to help them start up their own programmes. (For additional information on the work of UNV in 1983, see DP/1984/43.)

D. United Nations Revolving Fund for Natural Resources
Exploration (UNRFNRE)

37. In 1983, the United Nations Revolving Fund for Natural Resources Exploration successfully completed Phase II of the first United Nations assistance programme for offshore phosphates. This exploration programme off Pointe Noire, Congo, which began in 1982, using advanced technological methods, delineated the areal extent and thickness of the seabottom phosphate deposits in order to evaluate economic potential for export and domestic use. Industrial application studies are continuing in order to outline feasibility study requirements, if any. For its Phase II exploration programme, the Fund was successful in obtaining co-financing from the United States.

38. Important results were also obtained in projects in Kenya and Suriname. In the former, after the conclusion of a three-year detailed exploration programme, copper-silver mineralization was discovered. While sub-economic under present market conditions, it constitutes an exploration success in an area where no previous mineralization was known to occur. Upon the conclusion of the three-year exploration programme in Suriname, ore-grade gold in quartz veins was discovered. Although of limited tonnage, a small-scale mining operation could be profitable whereby gold can be recovered while underground exploration through actual mining would proceed.

39. As follow-up assistance to the successful gold-silver discovery at Huemules, in Argentina, preparatory feasibility study work was completed by the Fund in 1983 and infrastructural requirements were also provided by Government. The work accomplished by the Fund has attracted the interest of Argentina's private mining sector and the new Government is considering all options for the future development of this deposit.

40. Follow-up testing by the Fund on the successful kaolin discovery in Benin has shown that the material is suitable for normal ceramics production. With treatment it can be applied to various industrial uses including tiles, paper, cement and paints for local and export markets. Further work by the Fund is being considered to increase and upgrade mineable resources. (For additional information on the work of the Revolving Fund in 1983, see DP/1984/45.)

E. UNDP Energy Account

41. As mentioned in Part I of this addendum, the UNDP Energy Account has given priority to financing the joint UNDP/World Bank Energy Sector Assessment and Energy Management Assistance programme. Other significant achievements since the last annual report of the Administrator include:

(a) Completion of a set of training modules for energy management in enterprises, produced in co-operation with the ILO's International Centre for Advanced Technical and Vocational Training, Turin, Italy. Training techniques and instructor manuals were tested by bringing a group of developing country experts to Turin;

(b) The joint UNDP/UN/DTCD Coal Symposium for Electricity Generation in Developing Countries, held in Sydney, Australia in December 1982, which provided approximately 25 developing country specialists with the latest information on world-wide technology and developments. As an added benefit, Australian coal suppliers entered into contracts with several developing countries for the supply of coal, which could lead to the replacement of high-cost imported oil for power generation;

(c) A training seminar in energy and power, instituted by the World Bank's Economic Development Institute in Istanbul, Turkey, in February 1983. This will be followed by two further seminars in energy assessment and planning in March 1984 for African countries, and in May 1984 for selected participants from countries where there has been an energy sector assessment survey;

(d) Approval of a World Bank-executed global project for monitoring of biomass gasifiers;

(e) Approval of a World Bank-executed regional project which will assist Caribbean countries in negotiations in petroleum exploration, contracting, legislation and promotion.

F. United Nations Sudano-Sahelian Office (UNSO)

42. Under its regional programme for secondary road construction in the Member States of the Permanent Inter-State Committee on Drought Control in the Sahel (CILSS), UNSO constructed 34 kilometres of all-weather feeder roads in 1983. These roads, which cost \$6.7 million, are in the Gambia, Mali, Mauritania, Niger, Senegal and Upper Volta.

43. This project stresses optimum use of local resources and the gradual transfer of overall responsibility of the various programme activities to national government services. All the roads are built by brigades mobilized by local authorities, while the equipment and the operating budget are provided by UNSO. Senegal's Sine Saloum region has thus benefited from four new roads. The 26-kilometre road from Samba Dia to Djifere has provided access to at least 2,500 people and to an important recently constructed fish processing plant. Similarly, the 11-kilometre road from Loul Sessene to Faoye has provided access to an important fishing village. None of these areas was previously accessible by road.

44. Another focus of UNSO work was the development of new and renewable energy resources as a method of reducing pressure on forests and thereby limiting desertification. In this context, UNSO financed projects in: (a) the conversion of ground-nut shells and peat to fuels suitable for household use; and (b) wind energy exploitation.

45. These activities provided an important supplement to 15 afforestation projects which are providing shelter-belts, soil and water erosion control, agro-forestry, fodder and fuelwood. One of these projects for restocking the gum belt in Sudan established 4,900 hectares of Acacia senegal seedlings on a farmer self-help basis. 1983 was the third and final year of this project, during which 11,000 hectares were planted. A second phase is now being planned. (For additional information on the work of UNSO in 1983, see DP/1984/50.)

G. United Nations Financing System for Science and Technology for Development (UNFSSTD)

46. In its relatively short history, the Financing System has striven to adopt working methods and procedures which ensure cost-efficient delivery. These methods and procedures played an important role in the System's accomplishments in 1983, and are worth noting here:

(a) As a rule, project assessment, approval and start-up take only six months -- an unusually quick response time;

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(b) Project overhead averages between 5 and 8 per cent;

(c) Like other Special Funds, the System co-operates closely with UNDP and draws on its world-wide facilities -- multiplying its effectiveness and reducing its costs;

(d) The operation has a built-in "self-reliance" component. Nearly 50 per cent of projects are executed by the Governments concerned -- an unusual ratio. Developing country experts and institutions are deeply involved in all projects;

(e) Most projects have a specific budgetary provision for disseminating results and carrying out evaluation; they also rely mainly upon the use of external consultants and national experts;

(f) Small outlays by the Financing System often generate sizeable amounts of follow-up investment from both public and private sectors.

47. Science and technology policy and planning activities have emerged as key areas within the overall Financing System programme. The Financing System has promoted a results-oriented approach to ensure that concerns with the design of policy, procedures and institutions are closely linked to the practical purposes of economic and social development.

48. In Costa Rica, for example, the Financing System has assisted the Government in the design of a national science and technology system which includes mechanisms and instruments for policy formulation, exchange and absorption of science and technology information, and efficient transfer of technology based on modern industrial property legislation. Similar projects in Africa seek to assist Governments in articulating their national science and technology priorities and strategies and in strengthening national machinery for science and technology planning. In Botswana, Sierra Leone and Zimbabwe, the assistance provided is focused on a comprehensive assessment of the state of science and technology, involving the Government, non-governmental organizations and the private sector, with a view to factoring science and technology considerations into development planning. In addition to this overall approach, a special focus has often been adopted, for example, on the agro-industry and capital goods sectors in Sierra Leone and on chemical industries in Zimbabwe. These projects, though relatively modest in financial value, have sparked an active national debate in each country on science and technology priorities and the institutional arrangements necessary for a dynamic contribution by science and technology to economic and social development. In the case of Botswana, the results of the assessment report and the science and technology policy planning seminar have led national authorities to request additional funds to prepare a legal framework for a science and technology policy of the country. In Zimbabwe, the modest input by the Financing System has led to a major science and technology planning exercise involving other Southern African Development Co-ordination Conference countries.

49. A variety of research and development projects are being supported by the Financing System. The research and development effort in Malawi is developing high-yield, pest-resistant tea clones, discovering ways to extract tea-seed oil for use in cooking and cosmetics manufacture, and raising output through more effective fertilization. In Pakistan, the Financing System has initiated a combined research and production programme in alternative energy at the National Development Centre for Silicon Technology. The object of this programme is to familiarize national physicists, metallurgists and technicians with a complete range of options for the production of silicon-based photovoltaic cells and their subsequent application. The project offers Pakistani scientists exposure to some of the latest research on the refinement of metallurgical-grade, ferro-silicon while introducing local technicians to production methods in water and module fabrication.

50. Through the \$1.5 million project INTERACT, Indian and other developing country scientists are developing customized software systems for complex applications. These include railway traffic management, electric power distribution and early warning weather forecasting. A training programme is underway in which 100 Indian nationals and an equal number of professionals from abroad are acquiring hands-on experience in both software and hardware computer technology. With the full technical and administrative load of carrying out these activities borne by the Government, INTERACT provides Indian personnel with start-to-finish, on-the-job training in all aspects of project management.

51. The Financing System has supported activities to ensure timely flow of scientific and technical information, which is critical for developing countries in their effort to accelerate social and economic development. A good example is the project in Kenya which has helped articulate an information policy for the country and supported the first effort by the Government to set up a science and technology information and documentation service with the co-ordinating focal point located at the National Council of Science and Technology. The Financing System has also addressed this important subject at the subregional, regional and interregional levels to promote the international exchange of information. An ambitious project of this type supported by the Financing System is in the Andean subregion, where the five member countries of the Andean Pact have joined together to form the Andean Technological Information System (SAIT) expanding on conventional information network practices. SAIT is an important component of the emerging Regional Technical Information Network in Latin America. The Financing System has assisted in the final design and helped to bring the network into effect.

52. At the interregional level, the Financing System has made a substantial effort to define, negotiate and launch the Technological Information Pilot System (TIPS) project at the request of a number of developing countries throughout the world. This two-phase project is being financed as a "non-core" activity through a trust fund arrangement financed by the Government of Italy. It will test the technical and economic viability of a user-oriented mechanism for the exchange of scientific and technological information on a current basis among developing countries. The project is

not, therefore, aimed simply at linking data banks, but at promoting the exchange of information of work and activities in progress between countries on a continuing and timely basis. The focal points of the project will be National Bureaux in each of an initial ten participating countries linked through a global operational centre. The topics provisionally selected, subject to confirmation through detailed user surveys in the participating countries and elsewhere, are focused on energy and industrial technologies. The project also makes provision for evaluation and design of a wider system if warranted by successful results.

53. In the field of strengthening co-operation in science and technology, a number of successes have been achieved in the international exchange of project results. A project on science and technology policy and programming in the Dominican Republic has been the focus of close study by policy makers and experts from other developing countries. Similarly, the international Conference on Carbon Fibre Applications, recently held in Brazil to familiarize participants from other developing countries with the results achieved from the UNFSSTD-supported project, is an example. It was agreed that the laboratory and pilot plant facilities created in Brazil might be used as a training ground for scientists and technicians from interested developing countries.

54. In 1983, two major initiatives were undertaken by the Financing System to launch and reinforce co-operation links between science and technology activities in a given region or country and international science and technology bodies in both developed and developing countries. The initiative in Africa resulted in part from a preparatory assistance project with the African Regional Centre for Technology (ARCT), which recognized a clear need for closer partnership among scientific and technological organizations -- both public and private -- in developed countries with their counterparts in developing countries. To address this need, an unusual meeting on International Co-operation for African Technological Development was held in Dakar, Senegal in December 1983, jointly sponsored by the African Regional Centre for Technology and UNFSSTD. The meeting brought together a wide range of interested parties including representatives of African Governments and of African scientific and technological organizations, together with representatives of international organizations, Western donor Governments, and private banks, enterprises and research and academic institutions from developing countries. The purpose of the meeting was to identify and reinforce opportunities for practical co-operation between African science and technology activities and international and national capacities in other countries, so that skills and resources could be systematically mobilized to support African efforts.

55. In Asia, an innovative approach was chosen to assist the People's Republic of China in the improvement of its science and technology policy and planning capabilities. Three different delegations, each representing different ministries and organizations in China and comprising a total of 33 top policy makers, were given the opportunity to visit over 100 institutions in seven developed and developing countries. After digesting and

disseminating the principal conclusions reached regarding policy options and practices of other countries and calling a major national symposium, an International Conference on Science and Technology Policy was held in Beijing, co-hosted by the State Scientific and Technological Commission of China and by the Financing System. Some 35 international experts and around 80 Chinese policy makers and planners were involved, contributing through 40 discussion papers to a genuine interchange of ideas. (For additional information on the work of UNFSSTD in 1983, see DP/1984/49.)

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