

ANNUAL REPORT  
OF THE ADMINISTRATOR  
FOR 1984

**3** COUNTRY  
PROJECT  
RESULTS:

CO-ORDINATION BY PROJECT  
POST-PROJECT RESULTS IN  
INVESTMENT AND TRAINING  
WOMEN AND DEVELOPMENT  
PROJECTS







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

Distr.  
GENERAL

DP/1985/5/Add. 2 (Part I)  
2 April 1985

ORIGINAL: ENGLISH

Thirty-second session  
June 1985, New York  
Item 4 (a) of the provisional agenda

SUPPORT

PROGRAMME IMPLEMENTATION

ANNUAL REPORT

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COUNTRY PROJECT RESULTS : BY TOPIC

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## COUNTRY PROJECT RESULTS: BY TOPIC

1. This section of the annual report of the Administrator for 1984 maintains the practice of describing representative project achievements reported by field offices in the year under review. Results presented here are illustrative. A comprehensive account of the more than 4,500 UNDP and agency-supported projects that were under way in 1984 is clearly beyond the scope of this report. Resident representatives were, therefore, asked to provide information on results in the following three categories of interest:

(a) Co-ordination by project. Projects which, by their design and scope, have assisted in co-ordinating a variety of external and domestic inputs. In discussions of UNDP's co-ordinating role, attention usually centres on the global or country programme dimension of that function. Yet co-ordination by project constitutes an important, often overlooked, aspect of UNDP's technical assistance, frequently offering a practical cross-sectoral focus for recipient and donor efforts alike;

(b) Post-project results. Resident representatives were requested to identify concrete and continuing developments in project sectors where UNDP assistance had recently ended. Reported cases which reflect continuing government and external technical and financial support are described in this sub-section together with examples of sustained outputs from UNDP-established training programmes;

(c) Women and development projects. A look at the place of women in recent UNDP-sponsored projects, and the impact of development on their role, may be appropriate at the conclusion of the United Nations Decade for Women.

### A. Co-ordination by project

2. Development projects -- whether capital or technical in character -- are intended to represent units of activity within a planned, integrated whole: a sector, sub-sector or geographic area. In practice, however, the state-of-the-art in planning is seldom perfect. It thus falls to individual projects to "reach out" at their planning and operational stages to encompass and collaborate with neighbouring, related or separately financed projects which are mutually interdependent for the achievement of their medium-term results. UNDP's technical co-operation is both specially mandated to seek, and inherently in need of achieving, such interproject, cross-sectoral support. As the following examples indicate, such local integration of support factors can have far-reaching results.

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3. Egypt is essentially a desert country 1,002,000 square kilometres in area, of which a mere 25,600 square kilometres are actually cultivated. Yet agriculture represents 19.8 per cent of GNP, employs 40 per cent of Egypt's 45 million people and provides 34 per cent of foreign earnings. By any measure a major sector, agriculture must compete vigorously for limited water resources with other parts of the economy.

4. Over three phases of UNDP/World Bank assistance, the latest of which was approved in 1984, Egypt has undertaken a major water development programme based on hydrogeological surveys, mathematical models and data collection activities.

5. Initial findings of the programme prompted the United States Agency for International Development (USAID) to finance a rehabilitation scheme in the Nile Delta and the creation of a Project Preparation Unit in the Ministry of Irrigation, which conducts feasibility studies on specific components of the overall programme. Phase II activities concentrated on specifying a 250-station satellite telemetry network to gather data needed to improve water delivery from the Lower Nile. In 1984, USAID approved \$4.3 million for the implementation of this network which will help diversify current and future irrigation systems. Meanwhile, continuing UNDP assistance will finance the implementation of management systems developed to strengthen the Government's technical co-ordination of programme elements.

6. Despite all vicissitudes, the Sudan's Ministry of Finance and Planning is making determined efforts to strengthen and reform its planning capabilities. UNDP/World Bank assistance has been sought to provide institutional support and training as part of this effort. This assistance is also helping to shape three-year rolling investment programmes involving all major government departments and reflecting multi-sectoral planning approaches. As a result, a comprehensive policies and programmes package supporting these investment plans is annually presented to major multilateral and bilateral donors who, once committed to particular activities, then participate with the Government in a Joint Monitoring Committee in Khartoum to review the disbursement and utilization of investment funds in the context of national policies. The third such package was made available in 1984.

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7. Since 1974, when the Gambia joined the Permanent Inter-State Committee for Drought Control in the Sahel (CILSS), various efforts have been made to develop water resources including a UNDP/United Nations Children's Fund (UNICEF) project for ground-water investigation executed by the United Nations Department of Technical Co-operation for Development (UNDTCD). Activities were initially confined to the country's Upper Division but have since been extended to cover other areas as water shortages have spread further. Experimental deep-water wells sunk early in this period helped to assess potential water yields and led to the field testing of hand pumps, the training of drilling and maintenance teams and the standardization of well specifications.

8. Results spurred the establishment of the first national Department of Water Resources and a country-wide rural water supply initiative emphasizing ground-water exploitation and enabling UNDP's catalytic role to go into action in a number of ways. Between 1981 and 1984, the United Nations Capital Development Fund (UNCDF) financed the overhaul and replacement of original pilot equipment; the United Nations Sudano-Sahelian Office (UNSO) promoted the creation of new animal watering points; and the United Nations Financing System for Science and Technology for Development (UNFSSTD) sponsored the testing of wind and solar-driven pump systems. A major drilling effort is now under way with support from the European Economic Community (EEC), UNDP and UNICEF. Both the Saudi Fund and the Federal Republic of Germany have also contributed to this diversification of the Gambia's water supplies.

9. In Sierra Leone, similar multi-donor efforts have been facilitated through a Rural Water Supply Unit in the Ministry of Energy and Power supported by UNDP and UNDTCD. By 1984, seven national water and sanitation field projects planned by this Unit and integrated with health and agricultural measures, had won external funding from the World Bank, UNICEF and EEC. A full set of support programmes for maintaining rural water service has been devised in partnership with concerned ministries to deal with aspects of environmental education, sanitation, equipment maintenance and water quality analysis. Prospects for acquiring inexpensive, locally maintainable hand pumps, based on the successful India Mark II model and now being manufactured in neighbouring Mali, are being investigated by project personnel.

10. Africa's prolonged drought has, of course, brought sharp urgency to water development projects of all kinds and to ground-water exploitation efforts in particular. Throughout 1984, in the Sudano-Sahelian region and in eastern Africa, UNDP was called on to intensify its support for emergency

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drilling, pumping and piping operations, often co-ordinating at the request of Governments the relief efforts of other donors. In Mozambique, to take a single instance, a relief initiative co-ordinated through a \$330,000 UNDP/Office of Projects Execution (OPE)-supported project and with additional funding from the Governments of France, Italy and the Netherlands, resulted in 75 new boreholes being drilled and put into operation within the year. Maputo's water supply is estimated to have doubled as a result.

11. Drought-related problems are not confined to Africa's rural communities, as the farmers of Bolivia's Oruro and Potosi regions might attest. For years among the most depressed areas of Bolivia's Andean reaches, these two regions were hit hard by the 1983 drought which drastically affected traditional cultivation patterns. Within an ongoing UNDP programme for rehabilitating these remote areas, a subproject on small-scale irrigation became the focus of intense national and international effort in 1984. New wells sunk at high-altitude locations yielded water which, borne by gravity along existing canals, helped to recover an estimated 2,433 hectares of land. Communities were able to plant crops in time for the 1984 rainy season. Donor inputs from Sweden, the Federal Republic of Germany, Australia, EEC and the United Kingdom totalling \$1.7 million were channelled through the project for its relief objectives.

12. Whether under crisis or in normal conditions, natural resources development in general, by virtue of its cross-sectoral significance, is acknowledged to require particularly effective co-ordination. The weakness of such co-ordination had long handicapped the development of valuable minerals, oil and natural gas in Paraguay's eastern and western regions. At the heart of the problem were long-standing difficulties in obtaining the multi-sectoral inputs needed for the full elaboration of modern composite geological maps. In 1984, UNDP approved a project executed by UNDTCD with the explicit objective of bringing together appropriate public and private sector partners for this purpose. Personnel drawn from several ministries, the National University, private exploration companies and the Geological Association of Paraguay are now engaged in working out a uniform geological and institutional basis for preparing the country's first group of accurate mineralogical maps. Apart from these cartographic outputs, these preparations are expected to offer a basis for establishing a permanent inter-institutional national resources entity.

13. As these cases indicate, UNDP is often called on to help Governments to establish their own mechanisms for sectoral and cross-sectoral co-ordination. Establishing an Agricultural Research Authority in Yemen as the country's first national co-ordinating body for applied research in this sector was a

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long-term objective of a project assisted by UNDP and the Food and Agriculture Organization of the United Nations (FAO) beginning in 1973. By 1984, through successive phases of UNDP/FAO and other external assistance, the Authority was responsible for co-ordinating all major agricultural research programmes and projects in this least developed country, 80 per cent of whose 8 million inhabitants live in rural areas. Its present-day operations have secured credits from the International Development Association (IDA) and the International Fund for Agricultural Development (IFAD) as well as Italian Government financial assistance, while several specific programmes in cereal cultivation, livestock management, plant protection, extension services development and seed improvement are supported by the United Kingdom, the World Bank, the Netherlands and EEC.

14. In India, national industrial research for fibre production is co-ordinated by the Silk and Arts Silk Mills Research Association (SASMIRA). But in the mid-1970s when this group sought to branch out by establishing a modern synthetic fibre demonstration plant, a UNDP-sponsored survey revealed needs beyond the Government's and UNDP's available means. Survey findings, however, were sufficiently detailed and promising to secure 5 million deutsche mark in 1976 from the Federal Republic of Germany whose contribution financed training, expert services and the supply of a complete spinning unit. UNDP, in parallel, sponsored additional training and the establishment of a polymerization unit. In 1984, UNDP phase II funds went towards integrating these various inputs and for commissioning the total demonstration plant, now fully operational. Its 250-kilogramme capacity makes the pilot plant one of the largest of its kind anywhere in the developing world; and even in developed countries, similar capacity plants are generally found only as integral parts of full-scale industrial production units. Personnel from other developing countries are expected to participate in demonstration and training activities at the SASMIRA facilities next year.

15. South-South transfers of know-how and experience are in fact routinely co-ordinated through the mechanism of technical co-operation between developing countries (TCDC). In November 1983, following extensive preparations in China, representatives of nine country members of the Economic and Social Commission for Asia and the Pacific (ESCAP) met in Beijing to reach concrete agreements on potential TCDC projects. The external costs of these consultations which resulted in 35, mainly bilateral, agreements were met out of the TCDC allocation within China's indicative planning figure (IPF) and by ESCAP. UNDP and ESCAP also provided full logistical and technical support at the country level.

16. By end-1984, two-way technology flows -- 60 per cent from, and 40 per cent to China -- were firmly under way as a result of funding secured by partner countries themselves for 23 of the 35 projects covered by the Beijing agreements in such fields such as primary health care, tropical crop cultivation, aquaculture, grain processing and storage, animal husbandry and non-conventional energy use. Countries participating in these flows are Fiji, India, Maldives, Nepal, Pakistan, the Philippines, Singapore, Sri Lanka and Thailand.



17. No less important than intercountry transfers of skills and resources are the intracountry efforts of Governments to stimulate employment and income-generating opportunities for whole sections of their societies isolated from mainstream development. So-called "marginal rural populations" may in fact add up to a majority of people in a country as in Ecuador where 57 per cent are peasants and most of these lack productive work, proper dwellings, drinking water, sewage systems and electricity. This explains the importance attached by the Government to shaping new policies for improving rural living standards.

18. UNDP/FAO have helped promote the work of Ecuador's co-ordinating Secretariat for Integrated Rural Development (SEDRI) through project assistance since its inception in 1980. In addition to establishing a national clearing-house for information on rural conditions, this project has reinforced compact "executing units" -- teams of grass-roots community workers -- which identify specific subsectoral measures for alleviating rural poverty and raising living standards. Such measures have contributed to the design of three rural schemes for which external financing has been arranged from the World Bank, IFAD and USAID. A further three are under negotiation for funding by the Netherlands Government, the Inter-American Development Bank (IDB) and EEC.

19. Rural development schemes assume particular importance in Bangladesh where 80 per cent of some 95 million people are engaged in low-productivity subsistence farming. A Special Public Works Programme, supported by UNDP and carried out by the International Labour Organisation (ILO), is, among other things, strengthening the professional and managerial capabilities of planning officials responsible for administering 63 rural projects aimed at upgrading traditional skills, identifying employment opportunities and building up rural infrastructure. The project has played a major part in sustaining and focusing capital inputs of \$6.2 million from the Swiss Development Corporation, which have been made available to the Government for its employment objectives as a result of the demonstrable improvement in its implementation capacities attained through the UNDP/ILO effort.

20. Rural problems are susceptible of modern solutions, and in Rwanda a new rural telecommunications system is part of the answer. Communications between densely populated areas have traditionally been hampered by the country's mountainous terrain. A rural telecommunications system designed and initiated with UNDP/International Telecommunications Union (ITU) assistance has helped to overcome some of these difficulties. Launched in 1978, the project produced a complete plan for a national telecommunications network, enabling the Government to secure some \$40 million in capital funding for its implementation. Six donor countries have moved to support the installation of ancillary systems for the network, prompting the Government in 1981 to request

UNDP to approve a second project expressly for the purpose of co-ordinating sub-system activities. The project currently supports technical advisory services to national personnel engaged in system operations, management services for the preparation of tenders, contracts and work plans and provides a liaison point for ensuring equipment compatibility between diverse sources of supply. The design of an integrated rural subscriber service constitutes a further important objective.

21. It may be fairly claimed that co-ordination by UNDP-assisted projects encompasses a remarkably wide range of development activities: the targeting and integration of additional inputs, capital and technical, bilateral as well as multilateral; the formulation of cross-sectoral plans and the development of operational links within recipient country economies; the translation, in crisis, of international concern into appropriate relief measures linked to development; and the deepening of national absorptive capacities through the strengthening of central infrastructure. Modest in relation to their actual benefits, individual projects of this type serve, to a surprising extent, as the functional pivots on which larger national and international efforts -- and hopes -- continue to turn.

#### B. Post-project results

22. Two categories of post-project results offer clear evidence of the impact of UNDP's support. Follow-up investments triggered by technical co-operation constitute important net additions to development assistance and provide good indicators of recipient countries' absorptive capacities. Similarly, multiplier effects from training programmes and institutions which have become, following a period of UNDP assistance, largely self-sustaining, demonstrate the importance of that most durable investment -- human resources. Examples of results in both categories were provided in reports received during 1984.

#### Investment results

23. The management of electrical power generation and distribution in Panama comes under its Institute for Hydraulic Resources and Electrification. The Institute's 1973-1982 programme for developing Panama's hydro-electric potential as a substitute for petroleum-dependent thermal generation was based on a comprehensive power survey and feasibility study sponsored by UNDP and executed by the World Bank. The study's detailed examination of the engineering, cost and design factors of alternative proposals resulted in a master plan for the constitution from small, isolated power systems of a national grid and dispatch network based on three projected hydro-electric plants.

24. Post-project results have been impressive. Two hydro-electric plants were constructed with foreign credits in La Estrella (1978) and Los Valles (1979). A 400-kilometre transmission line interconnecting the country was laid down by 1979, financed partly through a \$22 million supplier's credit. To meet rising subscriber demand, a second-generation hydro-electric plant was established in La Fortuna at a total cost of \$599 million, \$73.3 million of which was loaned by the World Bank and \$98 million by the Inter-American Development Bank. The plant was commissioned and fully operational by 1984.

25. In only the first few months of operations at the La Fortuna plant, Panama saved \$39.8 million on petroleum imports. The country's switch-over from costly fuel-based electricity to hydro-power is almost complete. By 1984, the new system was meeting 85 per cent of national demand.

26. Promising similar benefits for Thailand's development is a recently completed set of feasibility studies on mini-hydro schemes supported by UNDP and UNDTCD. Begun in 1979, with the purpose of accelerating investment in the National Energy Administration's plans for bringing cheap electricity to Thailand's undeveloped northern provinces, the studies have already prompted a government earmarking in 1984 of \$5.8 million for small dam construction. Expected results from a \$72.2 million investment package, now under review for financing, include an additional electrical generating capacity of 24.7 megawatts, with an average annual production of 100 million kilowatt hours.

27. Demand for electricity in Kenya has risen steadily at an annual rate of between 10 and 14 per cent a year for the past 10 years and has been met largely through imported fossil fuels and electricity. Geothermal power represents a major prospect for reducing dependence on these costly measures. UNDP/UNDTCD-sponsored investigations in Kenya in the mid-1970s resulted in the discovery of a geothermal field with a probable potential of 700 megawatts, and have now led to investments of \$139.9 million for the construction of three power plants.

28. Based on three phases of geophysical and geochemical surveys, promising sites were identified in the Olkaria Area of the Rift Valley. Exploratory drilling uncovered a major geothermal field whose exploitation now continues to be undertaken through multiple external financing. Between 1980 and 1984:

(a) The World Bank approved a total of \$81.5 million for expanded development drilling, power plant construction and further explorations in adjacent districts;

(b) The Commonwealth Development Corporation provided a \$20 million loan for further expansions;

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(c) the European Investment Bank came forward with another \$8 million in loans;

(d) Kenyan Government equity participation in these activities reached \$29 million.

Meanwhile, further explorations in the Central Rift Valley are the object of a second UNDP reconnaissance project (1983-1988) which benefits from an Italian Government contribution of \$1.4 million and UNDP inputs totalling \$2 million.

29. Not only infrastructure projects but also fisheries offer attractive investment prospects coupled with rural income-generation and nutrition improvement as in Indonesia. Modern fishpond husbandry techniques introduced through a UNDP/FAO project which ended in 1981 have significantly increased yields of brackishwater shrimp and milkfish, raised farmers' incomes by an estimated 60 per cent and attracted an Asian Development Bank (AsDB) investment of \$23 million. The AsDB loan will have further ripple effects: it is expected to generate the equivalent of \$40 million a year in foreign exchange, tripling incomes for some 7,700 families from \$600 to \$1,900 a year.

30. In 1973, Indonesia's inland fisheries were based on brackishwater ponds covering about 170,000 hectares and yielding annually approximately 51,000 tons of milkfish and shrimp. The activity engaged some 500,000 people and contributed \$14 million to the national income. But production and returns from aquaculture remained meagre compared with income yields from off-coast fishing in the Malacca Straits and the Java Sea.

31. New husbandry techniques, technologies and research findings introduced with UNDP/FAO assistance led to dramatic improvements in traditional cultivation practices and results. It was established that annual per hectare yields of shrimp could, with only a moderate intensification of activity, rise to 1.5 tons which, at the prevailing retail market price of \$12 per kilogram, would result in a tenfold increase in farmers' net incomes.

32. Stimulated directly by these clear results, the Government in 1982 obtained the AsDB loan to finance the widespread adoption of improved inland fishing techniques. The loan will support the production annually of an additional 4,600 tons of shrimp for export and a further 1,500 tons of milkfish for domestic consumption.

33. In 1978, the Lao People's Democratic Republic produced only 873,000 tons of rice and was a food deficit country. Inefficient traditional milling methods in widespread rural use were held partly responsible. The success of a modern rice mill, piloted with UNDP/FAO assistance and capable of processing three tons of rice per hour, triggered co-ordinated investments in the modernization of the country's milling industry. In 1981, a UNCDF grant

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of \$825,000 helped to set up a second new mill and went towards rehabilitating 40 existing mills in three provinces. A World Bank/IDA loan of \$7.4 million was obtained by the Government to sustain these measures, and UNDP was requested to provide technical assistance to both efforts. By 1984, the country's total milling capacity had increased by 75,000 tons a year.

34. These recently completed measures focused principally on the capitals of rice-producing provinces. New mills appropriate for more remote rural areas have been identified in a study carried out by the project and a further \$825,000 in financing obtained from UNCDF for installing 30 of these in the next two years. The Netherlands Government has donated 100 small rice mills to be distributed in various provinces as part of this outreach effort for which a further AsDB loan of \$475,000 has also been secured.

35. A forestry strategy in Benin, based on the introduction of rapid growth tree varieties with multiple uses and the promotion of reforestation schemes, is gaining momentum as a result of follow-up support for two UNDP-assisted projects carried out at the village level with FAO and the United Nations Environment Programme (UNEP).

36. Long-term measures for arresting the denuding of Benin's scant forest lands (0.5 per cent of total land area) developed by these projects included the seeding of fast-growing species of trees capable of meeting village fuelwood needs; the creation of self-help agroforestry schemes through which villagers could establish nurseries for different tree varieties within their immediate localities; training programmes to instil conservation methods among communities in forest areas at high risk; and the formulation of government reforestation policies.

37. Three major programmes now under way have directly ensued from these efforts:

(a) A \$15 million firewood plantations project in south Benin, financed by the African Development Bank (AfDB), has undertaken the reforestation of 5,900 hectares of mechanized and village plantations;

(b) A \$1.6 million project to promote mixed variety plantations for multiple use (fruit, forage and wood) and direct villager participation has been supported by the Netherlands Government and UNSO;

(c) A World Bank/Federal Republic of Germany-supported project is currently equipping Benin's Directorate of Water and Forests to plan and execute a potential \$12.8 million reforestation programme for introducing rapid-growth species of trees and promoting charcoal production.

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38. Milk output from Malawi's dairy industry rose in 1984 to 5 million litres and is expected to reach 7 million litres in 1985. In 1969, the industry was virtually non-existent. Small commercial producers favoured Malawi's urban centres of Blantyre, Lilongwe and Zomba, retailing some 7,000 litres of milk a day. Surplus milk production from small holders went unprocessed, and dairy products accounted for \$1.07 million of the country's 1969 import bill. But a detailed dairy industry plan, a pilot milk processing plant, effective in-service training for dairy farmers and improved livestock management techniques, all introduced with UNDP/FAO support, paved the way for investments which have brought the industry to its present level. The most recent of these include a Danish Government investment loan (\$788,534 equivalent) and an EEC grant (\$2.7 million equivalent) for the construction of two modern plants with a combined processing capacity of 51,000 litres of milk a day.

39. Substantial government and private investments in Oman's industrial and manufacturing sector equivalent to nearly \$350 million have, since 1982, followed guidelines and technical recommendations laid down by the Ministry of Commerce and Industry which benefits from industrial advisory services provided by a UNDP/United Nations Industrial Organization (UNIDO)-assisted project. By 1984, development policies formulated by the Ministry's Directorate-General of Industry with project support, had led to the issue of 253 industrial licences to the private sector for investment projects valued at the equivalent of \$155.6 million. A further three public sector investment programmes had also been launched for the development of the Rusayl Industrial Area (\$24.1 million equivalent), the construction of grain silos for Oman's flour mills (\$6.1 million equivalent) and for a cement plant at Rusayl (\$162.3 million equivalent).

40. For some years, UNDP, in conjunction with the World Bank, has helped a number of Asian countries (Burma, China, Sri Lanka, Indonesia and Pakistan) to mobilize co-ordinated external investment through special "umbrella projects". These projects provide technical assistance for the preparation of feasibility studies, surveys and technical recommendations aimed at attracting investment in selected groups of priority projects. Investment commitments in the form of World Bank loans prepared for China by a \$1.4 million umbrella project now exceed \$1.28 billion. In Burma, three successive umbrella programmes had, by 1984, generated a total of \$680 million in investment for follow-up projects of which \$450 million in loans and credits have come from external sources. The latest subprojects developed for such follow-up include a ground-water irrigation scheme, the rehabilitation of Burma's existing irrigation network and a timber distribution/transportation system.

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Training results

41. Nearly all UNDP-assisted projects make budgetary provision for training activities related to their immediate objectives. To that extent, results from training are a steady, often unseen, factor in the impact of an enormous range of projects. Nevertheless, a number of projects reported on in 1984 make training of different types their main objective and their results illustrate a variety of post-project multiplier effects.
42. Paraguay's National Professional Training Service, based in Asuncion with five regional extensions, received UNDP/ILO assistance between 1977 and 1980. It has evolved into a major national skills centre catering to factories, enterprises, agriculture and various trades, and also offering management courses in accounting, marketing, finance, production and personnel management. Its expansion was further boosted by a World Bank loan financed by the Government through a 1 per cent levy on all enterprises in the country, an indication of its widely accepted importance. By 1984, the Service was providing consultancy services to 27 small and medium enterprises, sustaining a full complement of management and vocational training courses with its own staff, and could take credit for 52,000 trained personnel in various skills since its inception.
43. Skills-formation has also figured prominently in Thailand's development plans since 1968. Job-entry training, in particular, is recognized to be critical to Thailand's industrial strategy. Over the period 1969-1984, UNDP/ILO assistance to the National Service for Technical Skill Promotion has helped train some 120,000 foremen, supervisors and other industrial workers. Three regional institutes established with this assistance and operational in 1977, had, by 1979, trained over 6,000 candidates for industry. Bilateral assistance from Japan and the Federal Republic of Germany helped set up an additional three institutes on the UNDP/ILO pattern utilizing the same modular curriculum for providing mixed levels of skills-transfer to individual trainees, thereby encouraging broad as well as specialized competence. Pre-employment courses developed through this training network have been widely recognized by local industry. Ninety per cent of course graduates find jobs in the first few months after qualification.
44. In Bulgaria, 2,600,000 workers were enrolled in the country's national skills development system between 1976 and 1980. The qualitative improvement of teaching methods and materials used in this massive re-training programme was undertaken by a new Skills Development Centre and 11 associated pilot centres established with UNDP technical assistance. Since then, the Centre has continued to develop audio-visual communication methods, carry out industrial job requirement analyses and publish studies aimed at further stimulating vocational training in Bulgaria. New methodologies introduced by the Centre were acknowledged in a recent government survey to have considerably reduced training time and boosted the transfer of practical skills to Bulgaria's work force.

45. The training of primary school instructors and graduate teacher trainers has long been a major priority for technical co-operation. In Cape Verde, this was undertaken with UNDP assistance through the United Nations Educational, Scientific and Cultural Organization (UNESCO) between 1975 and 1982. Outputs included 660 instructors trained and placed directly within the primary school system, and 12 assistant inspectors who were assigned as teacher trainers to local parishes of the Archipelago in an effort to broaden this programme. Multiplier effects subsequently reported include the carrying out in 1983 of a general training course in teaching methods benefiting 1,450 instructors, and the specialized training by 1984 of 400 additional instructors in subjects formerly taught under the original project. Primary school failure rates (57 per cent in 1975) dropped below 40 per cent in 1984 despite considerable expansions in pupil intake.

46. Similar results have been reported from Sierra Leone's Bunumbu Teacher Training College (UNDP support: 1974-1982) which, since 1978, has graduated 350 certified teachers and a further 350 Higher Teacher's Certificate holders. Eighty-seven per cent of this output was found to have been placed in primary schools in a 1983 tracer study.

47. The rationalization of Lesotho's early educational system called for the merging of its widely dispersed teacher training colleges and the adoption of a more uniform curriculum serving development goals. The country's first National Teacher Training College was established with UNDP/UNESCO assistance in 1975 and was followed by two projects which offered in-service training for primary/junior secondary school staff and helped design a core curriculum for teacher trainers. Between 1979 and 1983, the College graduated a total of 99 diploma and bachelor-level students. An analysis of total placements in 1983 showed all had been absorbed into the educational system -- 12 primary school headmasters, 4 secondary school principals, 5 primary teachers, 14 secondary teachers, 32 faculty members of the College, 8 in the Ministry of Education and 24 in technical colleges and vocational institutes.

48. Industrial training forms a corner-stone of modern India's development. A five-year UNDP/ILO project which began in 1977 sought to upgrade 16 of India's industrial training centres, establish a further 5 new Advanced Training Institutes, develop additional programmes for the fast-growing chemical industry and train some 12,000 highly-skilled workers and technicians required by the production system.

49. This advanced vocational training scheme has played a key role in transforming traditional "once-and-for-all" training into continuous education, with its opportunities for rapid adaptation of human resources to new technological developments. Reported results to date indicate that 16,000 workers -- 4,000 more than originally foreseen -- have been trained, 5 central training institutes in Bombay, Calcutta, Hyderabad, Kanpur and Ludhiana have attained advanced institute status; and a further 15 institutes have been upgraded according to expectations. Industrial demand for the scheme's services has prompted the Government to review plans for establishing 50 additional centres of this calibre.



50. Three influential training institutions in Cyprus were originally set up with UNDP support through ILO and UNESCO in the years after independence. Today, the Cyprus Productivity Centre constitutes the industrial sector's principal vocational training centre; the Hotel and Catering Institute serves Cyprus' expanding tourist trade; and the Higher Technical Institute admits some 550 students a year in civil, electrical, marine and mechanical engineering. In addition to its vocational training activities in carpentry, joinery, plant maintenance, welding, automechanics and other trades, the Productivity Centre has established 10 skills centres in 5 refugee areas to teach employable skills to some 12,800 men and women annually. The Hotel and Catering Institute had, by 1984, trained nearly 2,000 hotel and catering staff while graduates from the Technical Institute totalled 1,371. All three institutes, now self-sustaining, offer important services to overseas students, qualifying them as regional centres of excellence.

51. The development of human resources for Saudi Arabia's agricultural sector is a major target of the Kingdom's third development plan, with large capital inputs allocated for the diversification of farming practices. Since 1979, UNDP and FAO have been helping the Government to strengthen the Training Department of its Ministry of Agriculture and Water to meet that objective. Three new agricultural training centres have so far been set up in Qassim, Hofuf and Wadi Jizan while an existing centre in Riyadh is under expansion. Courses developed for the new centres focus on farm equipment maintenance, irrigation and drainage, plant protection, soil analysis, fertilizer uses, poultry production and general agricultural practices. Two-thousand and eighty-four trainees are reported to have benefited from these courses up to the present time.

52. UNDP support for Burundi's Technical Institute for Agriculture dates back to 1967. A first phase saw the development of in-service technical training for personnel engaged in rural extension work and resulted in 94 qualified agricultural and veterinary technicians. Co-operative farming practices were also introduced at that time to strengthen poultry production and to improve water management and food crops cultivation. A second phase (1978-1984) concentrated on building up the Institute's Forestry Development Section. By July 1984, the Institute had trained 244 agricultural, 123 veterinary and 58 forestry technicians, continuing its important task of creating fundamental human capabilities in this key sector.

53. Finally, reports from Malta, Hungary, Burma and the Syrian Arab Republic further confirm the impact of recent UNDP-sponsored training activities. Malta's National Extended Skill Training Scheme, set up with UNDP/ILO support in 1980, has, in four years, brought the skills of 1,973 young workers with trades backgrounds up to industrial levels, filling a critical gap in the country's manpower requirements. In Hungary, a UNDP/UNIDO-assisted centre for the training of equipment repair technicians in the public health sector has delivered a fourfold increase in trained

personnel, turning out 674 biomedical technicians against an expected 150. In Burma, engineers from a UNDP/ITU-assisted training centre qualified in communications and broadcast equipment maintenance have proven instrumental in maintaining and servicing the country's recent Japanese-supplied television system without additional training costs to the Government. And in the Syrian Arab Republic, modern educational services for deaf children have been brought closer to realization through the special-purpose training of teachers at two Institutes for the Deaf organized with UNDP/UNESCO assistance.

### C. Women and development projects

54. Women represent a resource in development, not a separate category of its activities. As participants in UNDP-assisted projects through the medium of training programmes, as candidates for external fellowships and as key national project personnel, women in developing countries no less than men are active agents in a global effort to transform their respective societies. At the same time, a number of recent technical co-operation projects have attempted to tap the resources of women facing more traditional constraints of culture and situation in an effort to bring their contributions to bear on major development issues.

55. Medium- and large-scale enterprises in many developing countries must await solutions to considerable shortages of capital, production know-how and management skills, as well as deficiencies in supporting infrastructure. Cottage industries offer a viable alternative investment with the promise of realizable short-term benefits. Rural women have an evident role in such home-based activities, and a number of Governments have sought UNDP's assistance to involve women more efficiently in such economic production.

56. One obstacle to all such community-based production is scarce venture capital. Women, in particular, encounter severe difficulties in obtaining start-up credit. In Honduras, a UNDP/FAO project has established a revolving fund to guarantee rural women access to as much as \$12,500 each, at maximum interest rates of 6 to 8 per cent, to meet the initial costs of establishing their own income-creating occupations. Begun in 1980, this 100 per cent locally-run project had, by 1984, assisted some 350 women in three economically depressed areas of Honduras to undertake non-traditional, self-sustaining, productive enterprises. These include poultry and fishpond farming, beehive culture, small-scale sugar milling, market gardening, candy and preserve production, leather-processing, bakeries and consumer co-operatives. The project now attracts support from farmers' associations and provides a focus for non-governmental and other internationally supported rural development schemes in the country.

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57. Recent efforts in Indonesia to pull together fragmented and low-yielding cottage industries have been based on a wider appreciation of women's potential contributions in this field. UNDP funds have, in the last four years, supported a government-executed project designed to enhance women's productive roles in 12 villages of 9 provinces. Activities have centred on creating new job opportunities for low-income rural women; the diversification of cottage industries based on local raw materials; organizing women's producer co-operatives for the marketing of goods; upgrading technical skills in the light of market demand and creating new marketing support mechanisms; and overcoming various constraints in enterprise management, credit availability, product design and quality control.

58. Reported enterprises undertaken by women as a result include: the fabrication of ready-made clothing, batiks, woven silk and bamboo-plaited products; and the production of palm sugar, roof tiles and embroidered products. Over 575 participants had joined these schemes by 1984, and a further 1,374 village workers were also associated with activities on a part-time basis.

59. The labour migration patterns of Swaziland's male work force, 25,000 of whom are employed at any one time across the border in South Africa, leave many women as the effective heads of rural homesteads. A UNDP/Netherlands Government-supported project in the Entfonjeni area of northern Swaziland has trained 1,173 Swazi women obliged to maintain their own households in a number of income-creating skills. School uniforms and other fabric goods produced by trainees have proven acceptable - and highly competitive - substitutes for imported items on the local market. Recent courses have taught weaving, screen and block printing, as well as the manufacture of school shoes, various leather crafts, small-unit welding and cement block-making.

60. A demonstration centre displays intermediate technologies useful to women such as fuel-efficient solar dryers and hot box cookers; such labour-saving items as sisal spinners, groundnut shellers and charcoal coolers; and a number of health and sanitation devices. The project has attracted support from UNICEF, the Economic Commission for Africa (ECA), the Voluntary Fund of the United Nations Decade for Women (VFDW) and the United States of America. It has also drawn participants from Lesotho, Mozambique, the United Republic of Tanzania and Uganda to attend courses on study visits.

61. A pilot wool processing, development and training centre in Kashmir, supported by UNDP/FAO, has met with success in its efforts to reactivate the State's once-famous cottage woollen industry. Income-earning opportunities for rural women have been created by the introduction of improved handlooms, made available to weavers and spinners trained at the centre at subsidized cost and installed in their homes. Yarn is delivered directly to these

home-based spinning units and finished goods are collected from individual houses by the State Handloom Corporation. The resultant time-savings in reduced travel over Kashmir's difficult terrain have enabled even remotely situated women to participate in the project while maintaining their domestic activities.

62. The project's impact on the local production of long staple wool has been noticeable. Total wool production since the start of activities has risen by 28 per cent from 1.4 million kilograms to 1.8 million kilograms. More significantly, the share of this total represented by high-quality long staple wool has risen from 0.4 million kilograms to 1.0 million. Earnings of individual women weavers have tripled from 10 rupees a day to 30. Plans for bulk-producing the improved handlooms developed at the centre are now being implemented by the State Handloom Corporation in a scheme to widen the base of these activities.

63. As bearers of children and water, women are being more intensively associated with efforts to reduce water-carried impurities and diseases (typhoid, cholera, dysentery) which account for high infant mortality rates in many developing countries. As the principal users of domestic water in the developing world, women have an important say in such matters as the selection and planning of sites for new water systems, maintenance operations, and community health education. In Sierra Leone, as an integral part of the water supply project described above, 1,000 participants, mostly women, were trained in 1984 in the environmental health aspects of rural sanitation through 40 workshops held in 200 villages. Similar programmes are being carried out with UNDP support in the Central African Republic, Bangladesh, Burkina Faso and other countries.

64. Lending impetus to these efforts is a recent interregional programme financed by the Norwegian Government (\$2.5 million) through UNDP for promoting women's participation in the International Drinking Water Supply and Sanitation Decade. At the end of its preparatory phase in 1984, the project had compiled an authoritative bibliography and world-wide review of women's involvement in numerous water/sanitation projects. In collaboration with the World Bank, it had formulated two technical advisory notes for project planners in this area and, based on 12 project-fielded missions, had identified prospective country-level actions in training and the development of health education materials. Five agreements have so far been reached with implementing agencies for supporting country activities. These include:

(a) The Urban Volunteer Project of the International Centre for Diarrhoeal Diseases Research, Bangladesh;

(b) Efforts by the Kenya Water for Health Organization to promote community participation and training;

(c) A UNDP/World Bank-supported Rural Sanitation Pilot Project in Lesotho for the design and adaptation of health education strategies;

(d) A Save the Children Project in Zimbabwe for training women volunteer health workers in commercial farm areas;

(e) A UNICEF Water Supply and Sanitation Project in Sri Lanka.

65. Despite tragically high infant mortality rates, the population of the Central African Republic continues to rise at an estimated annual rate of 2.5 per cent. The burdens for women as a result of both facts remain heavy. Since 1983, UNDP and the World Health Organization (WHO) have supported a project to complement United Nations Fund for Population Activities (UNFPA) efforts in maternal and child health education in this least developed country. The UNDP/WHO-supported project aims to expand the ongoing training of midwives and their assistants, develop rural health centres in order to bring preventive medicines within reach of at least 60 per cent of children under the age of 1 year, encourage greater numbers of prospective mothers to give birth in health centres staffed by trained personnel and combat infertility in the Bangui area. Together with assistance from UNICEF, the Government of France, UNFPA and the World Food Programme (WFP), the project has so far succeeded in introducing modern maternal and child health practices to 49 rural health centres and clinics.

66. Many projects which deal with the agricultural needs of least developed countries must pay particular attention to women who frequently constitute half the available labour force and who represent their families in the market-place where improvements in agricultural productivity are felt. Projects which seek to modernize farm practices and raise rural living standards need to involve women directly in planning and implementing such agro-economic reforms.

67. This indeed has proven to be the case in Yemen. The diversification of one of the country's largest lowland agricultural regions, the Tihama, from subsistence to more modern farming methods, has been steadily taking place since 1982 with strong government support and with assistance from UNDP, FAO and the Netherlands Government. New irrigation methods and equipment, better seeds, larger quantities of fertilizer and pesticides and varied cultivation techniques have all been transferred to the rural population through the reinforcement of agricultural extension services. An intensive field operation programme has successfully demonstrated to predominantly female farm workers new practices for cultivating sorghum, millet, maize, tobacco, cotton, vegetables and fruits. Increased yields from individual farms as high as 150 per cent were reported last year which, together with positive results from the in-service training of extension workers and in the formation of farmers' co-operatives, prompted the Netherlands authorities to allocate an additional \$3.3 million for a new two-year phase of activities.

68. The project emphasizes the importance of associating women with all training activities and provides specific instruction to them in domestic management and economics. As the productive base of traditional agricultural

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society alters, women require new insights into such matters as food preservation, nutrition, infant feeding, pest control, market gardening, home improvement and health care. Through organized colloquia, radio broadcasts, demonstration activities and weekly training courses, the project continues to reach out relevantly to the women of the Tihama.

69. Women are also being involved as active agents in Mexico's rural development programme. In the process of making grass-roots contacts to formulate an effective rural strategy, a UNDP-assisted project in rural training has stimulated the creation of continuous forums specifically targeted at the leaders of women's co-operatives. Views and proposals for improving women's role in community-based development are publicly put forward through these forums which, since they draw on the membership of recognized, legally constituted co-operatives, have attracted the attention of Mexico's Ministry for Agrarian Reform. Fourteen new women's co-operatives have been formed as a direct result of this publicity.

70. In Zimbabwe, as in other developing countries, women not only keep house but take an active hand in self-help housing construction schemes. Two pilot projects working on all aspects of housing design, construction and maintenance have also involved female heads of households (36 and 20 per cent respectively of two communities) in all activities. Managed by Zimbabwe's Ministry of Construction, the projects receive technical assistance from UNDP/United Nations Centre for Human Settlements (UNCHS) and capital inputs from USAID.

71. As many as 1,045 serviced plots in areas of established infrastructure are expected to be built on by 1985 as a result of the energetic participation in training workshops by co-operative workers, many of whom were women. Their involvement helps to fulfil a major objective of community self-help construction schemes: namely, the adaptation and modification of housing designs to meet user needs. Apart from joining in such actual construction tasks as cement mixing, materials management and roofing, women have been encouraged to start income-creation activities in dress-making, handicrafts, dye manufacture, knitting and vegetable gardening. Their proceeds supplement family incomes and go towards meeting monthly payments on building society loans for housing construction materials.

72. The construction of China's modern economy owes a great deal to the long-recognized quality of its women technicians, teachers, managers, agriculturalists and farmers. Many of the country's leading research institutes, production centres and enterprises employ women in senior positions on terms of absolute equality with men. Women farmers and farm labourers have constituted the backbone of the agricultural sector for generations. Not surprisingly, therefore, a new research and development centre for improved vegetable production, now being set up with UNDP support in Beijing, has a woman Director, employs 32 women scientists among a research staff of 61 and incorporates an additional 75 women in its total membership of 156. The project is being executed by FAO.

73. The Beijing centre will stimulate new applied research aimed at improving vegetable produce through six agricultural research units. These, in turn, have already begun to engage large numbers of women at the commune level to assist in developing seed breeding techniques, germplasm and tissue culture and better storage technologies. In approach, relevance and human equity, the centre typifies an established standard in China for women's place in development, one which may serve to illuminate the efforts of other cultures.

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