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COUNTRY AND INTERCOUNTRY PROGRAMMES AND PROJECTS

Consideration and approval of country programmes

EXTENSION OF
SECOND COUNTRY PROGRAMME FOR
INDIA ^{1/}

UNDP assistance requested by the Government of India
for the period of extension April 1983-March 1985

Illustrative IPF for period of extension: \$99.54 million

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^{1/} The second country programme for India covered the period from April 1979 to March 1983 and was approved by the Governing Council at its twenty-sixth session. See document DP/GC/IND/R.2

I. Justification

1. The ongoing country programme, covering the period 1979-1983, was made co-terminus with the country's Sixth Five-Year Development Plan. However, as a result of subsequent developments, the Sixth Plan was revised to cover the period from April 1980 to March 1985. In order to dovetail the country programme closely with the Sixth Plan, the Government has decided to request UNDP to extend the programme for another two years to again become co-terminus with the National Development Plan. The objectives contained in the original programme continue to be valid. The new projects included in the proposed extended phase will further support the objectives of the approved programme. The resources taken into account for programming during the extended period have been worked out on the basis of illustrative IPFs for 1982-1984 and the first quarter of 1985, with a reasonable provision made for adequate programming.

II. Objectives

2. India has accepted planning as a major instrument for accelerating the pace of economic and social development and has implemented a series of Development Plans since 1951. The overriding concern of these Plans has been to give practical shape to the nation's collective will for using the resources and energies for an effective attack on poverty, unemployment and to provide a material base for a self-reliant economy. During the 30 years of planned development, impressive progress has been made in agriculture, industry, science and technology, health and education and in the development of infrastructure for a wide range of services for creating conditions for accelerated economic growth and providing increased opportunities for employment.

3. The country programme has been formulated within the general framework of the National Plan. While a general review of technical assistance requirements has been carried out as a part of the preparation of the Sixth Plan, a selective approach has been followed to include in the country programme projects which are best suited to multilateral technical co-operation. The projects identified for UNDP assistance continue to be in such fields of activity as will result in qualitative improvement in important areas of national development. In all the activities to be pursued during the extended programme, the emphasis remains on closing technology gaps through the provision of relevant technologies and by ensuring the optimum utilization of limited UNDP resources in critical areas of the economy. UNDP assistance will continue to be used for the upgrading of technology and manpower development as they constitute an important means of improving living conditions of the people through increased production and productive employment. In this sense, the UNDP country programme for India will ultimately contribute to the major objective of the New International Economic Order to improve the quality of life of one of the largest countries of the developing world.

4. The programming process involved a comprehensive review in April-May 1981 of the ongoing country programme, which also encompassed consideration of the new activities to be taken up during the proposed extension period. The United Nations system was appropriately involved in the exercise through informal consultations between UNDP and the central co-ordinating ministry, through special agency missions sent to India for consultations with the relevant technical ministries, and through agencies' local representatives. The specific areas for UNDP support were finally selected by the Government after a series of discussions with the technical ministries, the Planning Commission and further consultation with the UNDP Resident Representative. Given the

limited availability of UNDP resources in terms of India's requirements, considerable thought was given to presenting some of the projects to bilateral programmes and cost sharing contribution in cases where major equipment input is required, which results in orienting the component-mix of UNDP inputs more towards expertise and training.

5. India has had a long and fruitful experience of extending technical co-operation to other developing countries over a wide range of subjects, through bilateral as well as multilateral arrangements. It has acquired considerable expertise and a large and well-developed infrastructure which would be relevant to other developing countries. Thus, there are good possibilities of promoting joint programmes of mutual and collective benefit. India has set aside US\$5.8 million in the country programme for pursuing TCDC activities. In addition, the Indian Government allocates annually from its own regular budget substantial resources towards TCDC-related programmes.

III. Programme description and its relation to national development objectives

6. Within the framework of development perspective in 1980-1994, the Sixth Plan (1980-1985) envisages a total investment (gross capital formation) of Rs.1,587 billion (US\$179 billion) at 1979-1980 prices. This is to be financed by domestic savings of Rs.1,496 billion (US\$169 billion) and net inflow of funds from abroad of Rs.91 billion (US\$10.3 billion) during the Plan period. Fifty-three percent of the total investment will be in the public sector and the balance of 47 percent in the private sector.

7. The Sixth Plan aims at a significant increase in the rate of growth through efficient use of resources, improved productivity, modernization, speedy development of indigenous sources of energy and its efficient use, diffusion of technological benefits and promoting the protection and improvement of ecological and environmental assets.

8. The strategy adopted for the Sixth Plan consists essentially of strengthening simultaneously the infrastructure for both agriculture and industry so as to create conditions for an accelerated growth in investments, output and exports, and to provide through special programmes increased opportunities for employment, especially in the rural areas and the unorganized sector, and to meet the minimum basic needs of the people. Stress is laid on dealing with interrelated problems, through a systems approach rather than in separate compartments; on greater managerial efficiency and intensive monitoring in all sectors, and active involvement of the people in formulating specific schemes of development at the local level and securing their speedy and effective implementation. The attack on the problem of poverty is most effective within an expanding economy. Since growth by itself may not, however, suffice, the Sixth Plan also provides specific allocation for other programmes and policies which aim at improving the living conditions of the masses.

9. The development objectives of the Sixth Plan and the relevant fields identified for UNDP support are dealt with under the following sectors: agriculture and irrigation; energy, science and technology; industry and minerals; transport and communication; education and labour welfare; social development. The UNDP projects in these sectors which are included in the approved second country programme will be pursued. The new projects proposed in the country programme extension are noted under the relevant sectors.

Agriculture and irrigation

10. Agriculture, rural development, irrigation and flood control will receive the highest priority, entailing an outlay of about RS.247 billion (US\$27.9 billion) during the Sixth Plan. The basic plans for agricultural and rural development are:

- (a) Bridge the gap between actual and potential farm yields through accelerated land reform, application of new technologies, efficient farm management practices, and development of scientific land water-use pattern;
- (b) Alleviate rural poverty through increased production and productivity in the agricultural sector, skill promotion, facilitating availability of credit, provision of additional employment opportunities and provision of essential and minimum needs;
- (c) Expedite the completion of as many ongoing major irrigation schemes as may be technically and financially feasible and initiate action on a few selected new projects, modernize irrigation systems in a phased manner, strengthen command area development, carry out detailed surveys and investigations for preparation of new projects and restructure management practices to enhance terrestrial and aquatic productivity.

A growth rate of 4 percent per annum is envisaged for the agricultural sector as a whole during the five years 1980-1985, with a view to bringing about a reasonable balance between demand and supply of various agricultural products, together with the generation of productive employment, especially for the poor in the rural areas.

11. In support of the above objectives, UNDP assistance has been directed towards development of fisheries, prevention of forest fires, management of groundwater resources, stimulating milk production and marketing, advanced level research and development projects at premier agricultural research institutions. Further UNDP support will be required for development and use of biofertilizers; development of coastal aquaculture; augmenting facilities for advanced studies in the fields of post-harvest technology, plant virology, energy management in agriculture, agricultural statistics and computer sciences and agricultural communication; establishment of high security animal disease laboratories; improved training programmes for agricultural extension services; wildlife management training and research institutions; creating capability for field and laboratory tests; and studies on the use of soft and sensitive swelling soils as a foundation and construction material in earth dams, rockfill dams and canal embankments; developing techniques of canal lining and compaction of embankments; development of suitable drainage and water-logging control systems in black cotton soils.

12. UNDP resources earmarked for the sector would be \$51.4 million of which \$31.3 million is for ongoing projects and \$20.1 million for pipeline and new projects.

Energy, science and technology

Energy

13. A reduced dependence on imported oil is a key element of the development strategy and this will be achieved through curbing the rate of growth of consumption of oil products and promoting their economic and efficient use; exploration and develop-

ment and domestic resources; expansion in the production of coal and electricity; setting up biogas plants; energy conservation and economy in its use through energy audit; and research in the development of renewable sources of energy, particularly solar energy. An outlay of Rs.265.35 billion (US\$29.9 billion) is provided in the Plan for the energy sector.

14. UNDP assistance has been applied in the areas of coal gasification, dry beneficiation of coal, safety of coal mines and conservation of coal reserves, strengthening of research and development facilities of the Oil and Natural Gas Commission, providing training in the latest technology to deal with problems of pollution control and refinery design, operation and maintenance and development of renewable sources of energy. Further UNDP assistance is sought in some critical areas to accelerate the oil exploration programme in hilly and difficult geological settings by seismic surveys; assistance to a central facility for engineering design, prototype development, fabrication and pilot production of solar energy products and devices, strengthening the facilities for conducting studies in energy conservation and developing methodologies for computer aided design application suitable for engineering design; developing technological perceptions for operation and maintenance of highly sophisticated, modern and automated petrochemical complexes and strengthening of plastic product testing facilities. The power sector allocation of UNDP resources would be \$17.6 million of which \$9.1 million is for ongoing projects and \$8.5 million for pipeline and new projects.

Science and technology

15. The Plan lays special emphasis on the crucial role of science and technology as an instrument of social and economic change. It calls for linkages and mechanisms for the effective application of science for optimal use of natural resources, and in areas such as energy, health, population control, ecology and environment and integrated industrial and rural development. It also calls for substantial improvement in the general science and technological facilities in universities and research institutions. The science and technology sector has been allocated an outlay of Rs.19 billion (US\$2.1 billion) in the Sixth Plan including science component in the outlay of other ministries of Rs.10.7 billion (US\$1.2 billion).

16. UNDP assistance has been provided for specific projects which are of significance from the viewpoint of the national economy e.g. establishment of primary, pressure and vacuum standards of physical measurements, bio-science and engineering, exploration technology for precious minerals and isotope applications in hydrology. Further assistance is requested for the establishment of a national institute of immunology for undertaking research and development for producing vaccines and developing immunological approaches for control of fertility; cancer research; developing technologies for making resins and moulding compounds for use in the composite industry; developing semi-conductor devices and electronic sub-systems for application in the transport industry with a view to reducing fuel and electrical energy consumption; and developing alternate fuels for internal combustion engines. The science and technology sector accounts for \$21.6 million of UNDP resources of which \$10.8 million is for ongoing projects and \$10.8 million is for pipeline and new projects.

Electronics

17. The electronics industry is labour intensive but requires high level engineering and scientific back-up. It also has a large and growing domestic and export market. The Sixth Plan provides for an outlay of Rs.1.5 billion (US\$170 million) for significant advances in the production of critical materials and components in this field.

18. UNDP assistance in the past was involved in creating a national computer grid to support indigenous computer activities and to ensure more reliable data bases for planning and executing development projects.

19. The projects proposed in the country programme extension deal with the promotion of engineering developments oriented to micro-processor applications in the areas of industrial control, communication systems, power systems and instrumentation; establishment of R and D facilities in electronics materials; training-cum-development facilities in integrated circuit technology; creation of a system engineering capability for application of fibre optics technology in process control data; transmission network, meteorological data, remote sensing, in power plants and substations and in petrochemical and mining industries; development of computer technology training courses for undergraduate and post-graduate education; development of micro-processor-based infra-red instruments; and development of micro-processor-based grain quality and milk analyser. UNDP resources required for the electronics sector amount of \$13.4 million of which \$4.9 million is for ongoing projects and \$8.5 million for pipeline and new projects.

Industry and minerals

20. A major challenge of the Sixth Plan is to secure a substantial acceleration in the rate of industrial growth. It is envisaged that industrial production in the country will grow at an average annual rate of 8-9 percent during the Plan period. This growth rate is expected to be achieved by substantial increase in public sector investment and more hopeful prospects for agricultural growth, as well as improved functioning of the infrastructure, particularly coal, power, railways, etc. In addition, greater attention will be paid to secure higher efficiency and competitiveness in the functioning of the industry. Full encouragement will be given to the growth of cottage, village and small industries. Sectors where efficient production can be secured on a small scale will continue to be reserved for future expansion only by the small-scale units. In industries where the economies of scale are not important, dispersal of industries to secure greater regional balance will be encouraged. The challenge ahead is to make use of efficient and modern large-scale public enterprises as pace-setters in a giant technological leap forward for industry and the entire economy. Therefore, consistent with the emphasis on technological self-reliance, adequate stress will be laid on keeping the technology in use up-to-date. To this end, import of technology, particularly for export-oriented and key industries will be liberalized.

21. The objective of self-reliance requires that the pattern of investment in the industrial sector should continue to give high priority to the creation of adequate capacity in basic industries, such as steel, non-ferrous metals, capital goods, fertilizers and petro-chemicals which are in the public sector. In the consumer and

intermediate industries, the potential for expansion in the private sector would be fully exploited. The Sixth Plan public sector outlay for the industry and minerals is Rs.150.17 billion (US\$17 billion).

22. In support of the objectives outlined above, UNDP assistance has been related to research and development facilities for small-scale and handicraft industries as well as those of pharmaceuticals and fertilizers. The projects proposed for UNDP assistance in the country programme extension are in the following major sectors:

(a) Mining: Establishment of an aluminium research development and design centre; assessment and discovery of new ore bodies for exploration of gold; development of multipurpose pilot plant facilities and training for ore beneficiation of poly-metallic ores for geoscientific investigation, interpretation and evaluation; exploration of gold and silver deposits, techno-economic feasibility for production of aluminium/silicon alloys by electro-smelting of sillimanite concentrates;

(b) Steel: Standardization of melting practices of sponge iron; optimization of demonstration sponge iron plant facilities and development of suitable melting technology; design and development of an experimental blast furnace; and development of concurrent top and bottom blown steel-making operations suitable to Indian conditions;

(c) Fertilizers and chemicals: Pesticides development programme; extraction of elemental sulphur from indigenously available sulphur-bearing deposits of pyrites and pyrite ferrous shells for the production of sulphuric acid; investigations to use low grade rock phosphate deposits for manufacture of phosphatic fertilizers; training of engineers and operators in fertilizer plants; consultancy services for revamping the vitamin 'C' plant; preparatory work for selecting suitable technology for the manufacture of dapsone, and preparing a detailed project for acquisition of the technology; and establishment of a national institute of fertilizer technology;

(d) Heavy industries: Augmenting the facilities at the numerical control centre for metalmaking industry to enable it to develop programmes for NC part/group technology, machinery data, data base management system and computer aided-design; development of battery powered three-wheeled rickshaws; and establishment of an horological engineering institute;

(e) Light industries: Strengthening of the national institute of design; establishment of fluid control research institute for design and development of industrial valves for application in key industries; establishment of a hand-tool institute; setting up process and product development centres for small-scale household electrical appliances industry and small-scale casting and forging industries; strengthening of testing and evaluation facilities in major disciplines, eg, physio-chemical, chemical and electrical/electronic laboratories and setting up additional laboratories for instrumentation and measurement; design and development of leisure and sports leather goods and equipment; augmenting facilities for hosiery knitwear; trade promotion and development programme; application of research results in easy-care cotton fabrics in textile industry; and feasibility study of pulp and paper industry development.

23. UNDP resources required for the industry sector projects amount to \$49.7 million, of which \$15.7 million is for ongoing projects and \$34.0 million for pipeline and new projects.

Transport and Communication

24. For a country the size of India, with varying regional and geographical characteristics, the needs for action in the transport and communication sector are varied and cover a large number of segments. The important policy objectives in the Sixth Plan period relate to removal of transport bottlenecks; creation of adequate additional capacity; conservation of energy, evolving a high degree of co-ordination within the transport sector to make optimum use of available capacity; maximum utilization of existing assets through higher productivity; running of the transport undertakings on a profitable basis and giving special attention to the transport and communication needs of remote and isolated areas. The outlay in the Sixth Plan for this sector amounts to Rs.155.46 billion (US\$17.6 billion).

25. UNDP assistance has been provided for training in advanced design and construction of bridges, highways and railway engineering, research and development in advanced level telecommunications and modernization of telecommunications. The projects proposed in the country programme extension are indicated under the following subsectors:

- (a) Railways: Assistance for setting up an institute of bridge engineering;
- (b) Civil aviation: Advanced level training of civil aviation personnel; strengthening of training facilities; exploring possibility of introducing latest automatic switching centre equipment and operating procedures at the international airport; reinforcing the ability and capability of the civil aviation department in the formulation and enforcement of flight safety; personnel licensing and airworthiness certification rules and regulations;
- (c) Shipping and transport: Preparatory activities for expanding the training programme of merchant marine personnel and advisory services for shipbuilding and repairs;
- (d) Communication: Strengthening further the facilities for training of senior telecommunication officers.

26. UNDP resources required for this sector amount to \$18.0 million, of which \$10.1 million is for ongoing projects and \$7.9 million for pipeline and new projects.

Education and Labour(a) Education

27. In the past, there has been a rapid expansion of higher education. The main emphasis in the Sixth Plan is to consolidate existing facilities for higher education and programmes and to co-ordinate higher education with opportunities for employment, especially self-employment and development goals, to promote selective growth in educational fields of national importance and sensitize academic communities to the problems of poverty, illiteracy and environmental degradation. The plan to achieve these objectives will be characterized by its flexibility for orientation to tasks to be performed and results to be achieved, diversity of models to suit varying needs and circumstances within the framework of priorities and integration of efforts to effect participation and co-ordination of many sectors and

agencies. The means to be adopted will be formal and informal, making full use of all available institutions, systems and media. Inter-sectoral co-operation will be brought about and parallel streams harmonized into a systems network at various points and levels so as to achieve beneficial linkage between education, employment and development. The Sixth Plan outlay for the education sector is Rs.25.23 billion (US\$2.8 billion).

28. In conformity with the aims of the Sixth Plan in the sphere of education, UNDP assistance has been directed to postgraduate hydrological education and research and strengthening the facilities in selected universities. The projects proposed in the country programme relate to the establishment of a centre for training managers in deep and critical understanding of the international processes in managing enterprises; establishment of centres for producing educational programmes; strengthening the facilities for developing real-time information systems and distributed data processing systems, modern work systems design approaches; curriculum design and development for teaching aids and training; training facilities at five technological institutes for technicians involved in repair and maintenance of instrumentation and design and fabrication of sophisticated equipment; research in compressibility, viscosity and solidification behaviour of liquids at ultra-higher pressure; development of NMR spectrometer for oilseed characterisation with a view to increasing vegetable oil production; elaboration and application of socio-economic indicators for quantification of needs, requirements and targets and also for monitoring and evaluation of development activities; and undertaking studies for evaluating the efficacy of protective coatings on cultural materials and their effectiveness against environment conditions.

29. UNDP resources proposed for education sector are \$21.3 million of which \$13.4 million is for ongoing projects and \$7.9 million for pipeline and new projects.

(b) Labour

30. The Sixth Plan gives high priority to human resources development. The primacy of the worker in all sectors of economic activity is increasingly being recognized and his interests are safeguarded. Labour policies envisaged in the National Plan are designed to support the main objectives of increasing employment opportunities, reducing income disparities and ensuring that the benefits of development reach the poorest sections of the population by satisfying their basic minimum needs. The Sixth Plan outlay for the labour sector is about Rs.2 billion (US\$226 million).

31. Several projects included in the approved second country programme for the benefit of the workers will be pursued. In addition, there is need for further strengthening of factory inspection and advice systems through advisory services of international experts. UNDP resources proposed for this sector amount to \$12.0 million of which \$10.1 million is for ongoing projects and \$1.9 million for pipeline and new projects.

Social Development

32. In order to provide social services according to mutually accepted norms, a "Minimum Need Programme" was started in the Fifth Five Year Plan which will continue during the Sixth Plan. It will provide as a package, at micro-level basic facilities for elementary education, rural health, rural water supply, rural roads, rural

electrification, housing assistance, environment improvement of urban slums and nutrition. The total Sixth Plan outlay for the programme is Rs.58 billion (US\$6.5 billion), of which Rs.49 billion (US\$5.5 billion) is in the State/Union Territories Plans. The Sixth Plan document contains specific objectives and targets to be achieved under each of the above fields.

33. The UNDP involvement in the programme would be in such activities as establishment of nutrition planning and research institute; research and training in rural development; advancement of rural technologies; strengthening infrastructure for rural water supply; feasibility of providing low cost sanitation with on-site disposal of human waste; strengthening of hotel management facilities; and preparation and implementation of projects in advisory services required to achieve the Government's commitments in connexion with the "Drinking Water Supply and Sanitation Decade". UNDP inputs needed for pursuing the activities envisaged in this sector would be \$6.5 million.

Annex

\$ (million)

A. Resources

(a) IPF and other resources	
(i) Illustrative IPF for 1979-1981	75.63
(ii) Less borrowed from third IPF cycle	(3.91)
(iii) Illustrative IPF for 1982, 1983, 1984 and first quarter of 1985	156.87
(iv) Other resources (Government cost-sharing contribution)	5.75
(b) Provisions for adequate programming	20.03
	<u>254.37</u>

B. Use of resources

(a) Programmed	
(i) Completed and on-going projects including anticipated revisions	116.90
(ii) New projects and new phases included in country programme extension	106.10
(iii) Earmarked for specific objectives and activities for which projects are to be worked out (continuous programming at a later stage)	-
	<u>Subtotal</u>
	223.00
(b) Unprogrammed balance ^{a/}	31.37
	<u>Total</u>
	254.37

C. Financial distribution of programme, by sector

Sector	Ongoing projects	New projects	Total (US\$ million)
Agriculture and irrigation	31.30	20.10	51.40
Energy, science and technology	24.80	27.80	52.60
Industry and minerals	21.40	34.00	55.40
Transport and communication	10.10	7.90	18.00
Education and labour	23.50	9.80	33.30
Social development		6.50	6.50
Technical Co-operation among Developing Countries	5.80	-	5.80
	<u>116.90</u>	<u>106.10</u>	<u>223.00</u>

^{a/} Representing 20 per cent of the illustrative IPF which has not been taken into account for programming in accordance with the Administrator's instructions contained in UNDP/PROG/FIELD/111; UNDP/PROG/HQTRS/126.

