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PROGRAMME PLANNING

Country and intercountry programmes and projects

SECOND COUNTRY PROGRAMME FOR CHINA*

<u>Programme period:</u>	<u>Actual resources programmed</u>	<u>\$</u>
1986-1990	IPF for 1986-1990	122 139 000
	Other resources programmed	<u>6 553 000</u>
	Total	128 692 000

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

I. DEVELOPMENT TRENDS, STRATEGIES AND PRIORITIES

A. Current economic trends

1. China has completed the implementation of its sixth five-year plan for national economic and social development (1981-1985). The task of bringing about a fundamental improvement in the country's financial and economic structure has largely been accomplished. The national economy has begun to develop in a steady, stable and balanced manner. The relative emphases among agriculture, light industry and heavy industry as well as between national savings and consumption are now more balanced after several years' efforts. Agricultural production is growing rapidly; the light industry sector, which was not responsive before to people's needs, is now expanding. Energy production, which had stagnated, has now entered a period of steady growth. Progress has been recorded in almost all fields and the living standards of both the urban and the rural population have improved markedly. Throughout the sixth five-year plan period, the gross value of industrial and agricultural production grew on average at 10 per cent per annum. More than 30 million people have been employed in cities and towns, and wage-earners' real income rose by 20 per cent on average. The average net income of the peasants increased by 80 per cent.

2. Notwithstanding these accomplishments, the Government has recognized that China's technological and infrastructural bases are inadequate for rapid economic and social development. Agriculture, which is the foundation of the national economy, remains weak, and in some rural areas the basic needs for food and clothing are yet to be fully satisfied. Energy, transport, telecommunications and raw and semi-finished materials are in short supply. The pace of human resources development and skills training do not match the needs of economic reconstruction. Economic performance is not improving as fast as expected. Technological progress has been slow; management and administration are still weak. The industrial structure and its product mix are yet to be satisfactorily rationalized.

B. National development strategies

3. The proposal for the seventh five-year plan (1986-1990) was adopted by the National Conference of the Communist Party of China on 23 September 1985. In line with the goal of quadrupling the gross value of industrial and agricultural output between the years 1981 and 2000 set by the Twelfth Party Congress in December 1982, the following are the major objectives of the seventh five-year plan: (a) to establish the foundation for a new Socialist economic structure with Chinese characteristics; (b) to promote scientific and technological progress and intellectual development; and (c) to improve economic efficiency. These are expected to make it possible to double the total value of industrial and agricultural output and the gross national product (GNP) in the decade ending in 1990, raise the per capita consumption levels of both the urban and the rural populations by an average rate of 4 to 5 per cent annually and further improve the quality of people's life and their environmental and housing conditions. The projected average annual economic growth rate under the seventh five-year plan period is 7 per cent, with agriculture and industry growing at 6 and 7 per cent respectively.

4. In light of the objective requirements of national economic development, the general reform of the economic structure with focus on cities will be actively pursued during the seventh five-year plan period and beyond. In the first two years of the seventh five-year plan, indirect macroeconomic controls will be reinforced while enterprises will continue to be revitalized. In accordance with the requirements for the development of a Socialist commodity market, efforts will be made to reduce the scope of mandatory planning gradually, to reform the price structure for means of production and the price control system and to improve further the taxation and banking systems. Organizational structures that conform to the new systems will also be established gradually in order better to handle the relationship between enterprises and Government departments and to remove the barriers that exist between different departments or regions. This will eventually serve to separate the responsibility of the Government from that of an enterprise.

5. Three tasks must be accomplished in relation to the overall pattern of economic development. First, the industrial structure must be further adjusted and rationalized for the modernization of the national economy as well as to accommodate the higher level and the changing pattern of consumption. Second, the emphasis of economic development must be shifted towards technological transformation, renovation and expansion of existing enterprises, and an intensive approach will be adopted to expand production. Third, the relationship among different regions in relation to their economic development must be correctly handled so as to rationalize their geographical distribution. Thus, while the performance of enterprises is expected to improve, the three overall tasks mentioned above must be accomplished in order to raise the labour productivity and the aggregate economic efficiency of the entire community, thereby providing a more reliable guarantee for the continued improvement in living standards. To this end, the following six principles must be observed:

(a) Improvement of conditions of production and continued promotion of the all-round, steady development of agriculture, supported by policies and sciences;

(b) Diversification of consumer goods production and expansion of residential construction;

(c) Mobilization of financial, material and technical resources necessary to carry out a number of key projects in energy, transport, telecommunications and in the raw and semi-finished materials industries, with particular attention on improvement of quality and efficiency;

(d) Accelerated development of the tertiary industry that serves production and meets people's everyday needs and gradual rectification of the balance between the tertiary industry on one side and the primary and secondary industries on the other;

(e) Accelerated technological transformation, renovation and expansion of existing enterprises and equipment of all sectors of the economy with advanced technology;

(f) Proper balance in the relationship among the eastern, central and western economic regions, exploiting their advantages and developing lateral

economic linkages so as gradually to establish economic networks around large cities, at different levels, of varying dimensions and distinctive characteristics.

6. The seventh five-year plan proposal also calls for substantial advances in science, education and culture, in foreign trade and international technological exchanges and in people's welfare and social security.

C. Technical co-operation priorities

7. The seventh five-year plan states that China's basic policy is to open to the outside world. During this period foreign trade and technological exchanges with all other countries, both developed and developing, will be promoted further, on the basis of respect for each other's independence, equality and mutual benefit. Between 1985 and 1990, total imports and exports are expected to increase by 40 to 50 per cent. At the same time, more foreign investment and advanced technology will be actively introduced to accelerate China's Socialist modernization.

8. Priority will be given to obtaining advanced technology. Efforts will be made to ensure that the technologies introduced are adapted, applied, upgraded and standardized. Foreign intellectual inputs will also be actively pursued through various channels and in different ways. As regards international technical co-operation - multilateral and bilateral - the areas of concentration will be agriculture, natural resources, energy, transport, industry, population and health. Through manpower training and intellectual development, such co-operation is expected to facilitate access to and the introduction of modern technology and management skills. It will enhance the managerial capacity of the relevant Government departments, research and service institutions and production enterprises and also their ability to develop and apply modern technology to increase their economic efficiency. In addition, technical assistance will be used to help to prepare capital investment projects, as appropriate.

9. Technical co-operation grants made available to China from multilateral sources in 1984 amounted to \$85.7 million. The bulk of this assistance was devoted to agriculture (62 per cent) including \$50.8 million of food aid from the World Food Programme (WFP), population (10.3 per cent), health (7.4 per cent), natural resources (6.7 per cent) and education (4 per cent). These allocations reflect China's overall development priorities, as does the sectoral distribution of capital assistance which is overwhelmingly devoted to transportation, industry, agriculture, education and natural resources including energy.

10. UNDP is a major source of multilateral technical co-operation grants, providing 18 per cent of the total multilateral technical assistance in 1984, or 44 per cent if food aid is not taken into account. UNDP will continue to be an important contributor because of the sizeable increase in resources allocated to China in the fourth cycle, 1987-1991. The principal bilateral donors include Japan, Australia, the Federal Republic of Germany and Canada. However, considering the enormous size of the Chinese economy and the large development expenditure by the Government, the amount of technical co-operation available is extremely limited. Far greater amounts could easily be absorbed. For example some 520 project proposals were received for funding under the second country programme. To finance all these

project proposals, some \$400 million would be required, far exceeding available resources. Notwithstanding this huge gap between the demand for and supply of technical assistance, the continuous programming approach adopted by the Government will allow a more rational selection of projects on the basis of evolving priorities.

11. As the second country programme is prepared by areas of concentration, the following brief sectoral discussions are presented as background information.

Agriculture and agro-industry

12. Dramatic increases in the production of basic cereal grains have taken place during the sixth five-year plan period. Several factors are responsible for this increase but two are noteworthy. First, in terms of policy, adoption of the household responsibility and contract system have offered greater rewards for farmers who work harder. In addition, the greater role of market forces in regulating agricultural production and further relaxation of controls on the prices of farm and sideline products, under the guidance of State planning, have increased the income of farmers. Second, in regard to technology, research and development have been strengthened in agricultural universities and other scientific research institutions, and the results are being disseminated to the target groups.

13. Agriculture remains the important foundation of the entire economy. During the seventh five-year plan period, the Government will pursue measures for the all-round development of farming, forestry, animal husbandry, sideline production and fishery and integrate the operation of agriculture, industry, trade and transport. Accordingly, the rural production structure will be further readjusted and the rural economy will be gradually specialized, commercialized and modernized. Grain production will continue to be increased; forestry, animal husbandry and the cultivation of fresh-water and marine products will be accelerated; the production of vegetables, poultry, eggs, milk and other non-staple foods will be expanded; and rural industries and various service trades will be encouraged in response to local conditions.

14. During the second country programme, in view of the country's requirements for agricultural development and improved living standards, UNDP technical assistance will focus on the processing of some major agricultural products; the introduction of new technology in animal husbandry; and support to rural industries in the poor and remote areas. In addition, research on macro-planning and policies for agricultural production will also be supported through the National Economic Information Network project.

Energy

15. There is a huge gap between energy supply and demand in China. During the seventh five-year plan, China will actively expand energy production with emphasis on increasing electric power. Great efforts will be made to develop thermal and hydropower resources and to build nuclear power stations in a planned and selective fashion, so as to increase the country's total annual output of electricity to about 550 billion kWh by 1990. The annual coal output will also be increased to around 1 billion tons by 1990. In addition, prospecting and development of oil

and gas resources will be strengthened to bring the annual output of crude oil to 150 million tons by the same year. Conservation will be emphasized along with exploitation, with the objective of saving 100 million tons of standard coal in five years.

16. Under the second country programme, UNDP technical assistance will be geared to demonstrating technical transformation in the power industry and coal mines; assisting in oil and gas resource exploration; helping in the preparation of coal-water mixture and nuclear power safety regulations; and providing manpower training in nuclear power as well as in energy conservation.

Industry

17. China has a full range of industry covering almost every industrial field and enjoying one of the highest sustained industrial growth rates in the world. Nevertheless, industrial technology has lagged behind the industrialized countries. Productivity has often been low, product innovation slow and product quality unsatisfactory. For this reason, it is envisaged that industrial enterprises in China will actively introduce, develop and apply modern technologies.

18. During the second country programme, UNDP is expected to support the development of new products and promote the most efficient utilization of materials by strengthening the existing research institutions that serve industry. Special attention will be paid to the introduction of advanced methods and techniques for testing, quality control and standardization. In addition, assistance will be requested in carrying out diagnosis and feasibility studies of China's industrial enterprises, in order to ensure the cost-effectiveness of their technological transformation, renovation and expansion programmes.

Transport

19. Top priority will be given to the development of transport during the seventh five-year plan period. China will continue railway construction; accelerate the development of road, water and air transport; improve transport networks; and promote modernization and rational co-ordination of various forms of transport.

20. During the second country programme, UNDP technical assistance will be used to demonstrate technical transformation in the railway sector and to introduce modern management methods in a seaport. There will also be a provision for sectoral training in transport.

Health

21. In the last 35 years, China has made impressive progress in health care which has been well documented. During the seventh five-year plan period, China will further expand the mass campaign to eradicate pests and communicable diseases, strengthen medical research, provide more health-care facilities, improve the three-tiered health-care organization and train more health-care personnel.

22. During the second country programme, UNDP assistance will focus on medical research to combat such principal diseases as cancer and cardio-vascular disease.

Assistance will also be directed to the introduction of advanced techniques in the manufacture of pharmaceuticals and management of hospitals. Importance will also be attached to projects relating to the rehabilitation of the handicapped and to the protection of the environment.

Human resources development

23. Major efforts have been made to expand and improve education and technical training in China. During the seventh five-year plan period, the Government will continue to develop higher education with a substantially increased enrolment; gradually introduce nine-year compulsory education; and actively expand vocational and technical training. On-the-job training of cadres, workers and peasants will also be strengthened to upgrade their knowledge and improve their skills.

24. While, in this regard, China has relied primarily on its own resources, the World Bank, the United Nations Children's Fund (UNICEF) and several bilateral donors have extended substantial assistance to strengthen various Chinese educational institutions. During the first country programme, UNDP also assisted in a number of related projects. Bearing in mind the country's need during the seventh plan period further to reform the national economic mechanism, improve the national economic management and raise economic efficiency in all sectors and disciplines, the second country programme will give priority to human resources development in the field of management. Some sectoral technical training, apart from training activities addressed to specific disciplines under various projects, will also be carried out.

II. THE COUNTRY PROGRAMME

A. Assessment of current country programme

25. The first country programme for China, approved at the twenty-ninth session of the Governing Council in June 1982, was formulated in accordance with the objectives of the sixth five-year plan. The priority areas included food production and agricultural productivity, production of consumer goods and services to the population, energy development and conservation, human resources development and infrastructure. More than 150 projects were formulated and implemented during the period 1982-1985.

26. The most important feature of the first country programme was its full reflection of the principle of self-reliance and seeking foreign assistance as a complementary and subsidiary resource. The great majority of projects had already been included with high priority in the national, sectoral or local plans during the sixth five-year plan period. While inputs for these projects such as the cost of civil construction and equipment and human resources were provided mainly by the Government, UNDP's contribution was geared to assisting the relevant Chinese institutions in upgrading their techniques and skills and thus enhancing their capacity for self-reliance.

27. In this connection certain special features in project management and implementation were noteworthy. All projects were managed by National Project Directors designated by the Government in consultation with UNDP and the concerned

executing agencies. They operated projects within clearly defined terms of reference and demonstrated a high degree of competence in management. In order to make the most effective use of the multilateral channel of co-operation and to broaden the scope of UNDP technical assistance, Government cost sharing was arranged for UNDP-assisted projects, in a selective manner, by the relevant Chinese institutions, the total amount being approximately \$5 million. A number of projects also benefited from third-party cost sharing by friendly Governments.

28. Twenty-five projects implemented in the first country programme were executed by the Government. A review of the experience acquired under this project execution modality was carried out in November 1985, and the modality was found to work well. While maintaining satisfactory quality standards, it also contributed significantly to strengthening the capability of the Chinese institutions concerned in managing development projects and enabled them to establish or enhance valuable international contacts.

29. The promotion of economic and technical co-operation among developing countries (ECDC-TCDC) was another main feature of the first country programme. The Government had earmarked 5 per cent of the third cycle IPF for support to those regional projects related to ECDC-TCDC. To facilitate the training in China of specialists and technicians from other developing countries, China established seven regional centres, with assistance from UNDP, respectively in biogas, sericulture, integrated fish-farming, mini-hydro power, acupuncture, integrated rural development and primary health care. These centres had, by 1985, trained 1,310 scientists and technicians from other developing countries. In addition, China hosted a large number of training courses and workshops for foreign participants. In November 1983, China and the Economic and Social Commission for Asia and the Pacific (ESCAP) and UNDP jointly sponsored at Beijing the Regional Inter-governmental Consultations for the Formulation and Implementation of Programmes for TCDC, in which 12 countries from Asia and the Pacific region participated. Thanks to the efforts made by all participants, this action-oriented and productive meeting agreed upon 32 co-operation projects.

30. Another noteworthy aspect of the first country programme was the use of the Transfer of Knowledge through Expatriate Nationals (TOKTEN) facility. Over 250 Chinese expatriates came to China between January 1982 and September 1985, for periods ranging from 2 to 8 weeks, and proved to be an invaluable source of expertise in a wide variety of fields. Since 1984, a new approach has been introduced, "senior technical adviser recruitment", under which foreign experts, usually retired or made available by their employing company or institution, come to China for little or no remuneration. Many of them have been prominent specialists and have made very significant contributions in their fields.

31. Annual progress reviews were conducted during implementation of the first country programme. In addition, a specific assessment of its outcome was carried out in mid-1985, in the context of preparing the second country programme. The great majority of projects had been completed by the end of 1985, or are expected to be completed by 1986. Only 23 projects are to be continued in the second country programme period, several of which are follow-up phases designed to achieve new objectives.

32. The first country programme has made significant achievements in promoting the technological advancement of relevant Chinese institutions. For example, technical training centres in such areas as information electronics, energy, transport, chemical engineering, machinery manufacture, building materials, textiles, materials testing and agriculture were established or strengthened. They are now playing leading demonstration roles in the introduction and dissemination of advanced but appropriate foreign technology and in training Chinese personnel. Recruitment of foreign expertise and manpower training also proved to be very productive; many international consultants have made positive contributions to the solution of pressing technical problems through their lectures and advisory services to the relevant Chinese institutions. Study tours and fellowship training have enabled Chinese scientific and technical personnel to upgrade their skills, become familiar with new trends of international development and enhance international academic contacts. Many trained scientific and technical personnel, upon return to China, are active in organizing "secondary training" to share their newly acquired knowledge with their professional colleagues, numbering tens of thousands, thus substantially increasing the social and economic impact of UNDP-assisted training.

33. A number of lessons were learned from all the experience of the past six years of technical co-operation with UNDP and were highlighted in the assessment mentioned above. There was a tendency to have rather too many projects with the result that some were less than adequate in terms of scale and hence did not have the maximum economic and technical impact. In some cases, opportunities for making the fullest use of the "seed money" represented by UNDP assistance could have been better exploited by means of more active follow-up. Some projects did not have sufficiently well-defined objectives. Delays frequently occurred in obtaining equipment, often for want of experience in drawing up the technical specifications. In some cases, serious delays were caused by difficulties in obtaining export licences from the Governments of the supplying countries. These delays led to problems in scheduling the visits of outside experts and consultants to make the best use of their time in training with the equipment in question, although this difficulty was to some extent overcome by arranging visits by Chinese personnel to institutions where the equipment was in use. The United Nations system was not always able to recruit experts or arrange fellowships and study tours at the time required. Participants for tours and fellowships were selected with great care, but a frequent source of difficulty was to find qualified Chinese candidates with sufficient foreign-language capability. This problem was, to some extent, overcome by sending selected trainees to language training institutes in China. Three such institutes were strengthened by means of a UNDP project and assistance was also provided by the United Nations Fund for Population Activities (UNFPA) and UNICEF. National project directors, as mentioned earlier, proved in general to be excellent managers and quickly learned to make effective use of opportunities provided by UNDP assistance. However, considerable time was required for them to become familiar with UNDP procedures and reporting requirements, especially in the case of Government-executed projects.

34. The above problems did not seriously detract from the impact of UNDP assistance and the Government judges the overall result of the first country programme excellent. The problems which have been recognized are being tackled as part of a valuable continuous exploring, learning and improving process. It can be

seen that China has been in the forefront in adopting the concepts embodied in the New Dimensions Programme of Technical Co-operation, in particular with regard to the promotion of self-reliance, the use of national expertise and national project directors, government execution and TCDC.

B. New programme proposal

35. Having reviewed the lessons of the first country programme, the Chinese Government carefully considered the orientation, substance and modality of UNDP technical assistance in the years ahead and arrived at certain general perceptions. In view of the limited resources, rather than being thinly spread to accommodate too many small projects, UNDP technical assistance should focus on activities falling within a few priority areas, in line with the requirements of national economic and social development and particular characteristics and strengths of multilateral technical assistance. Also, the substance of such activities should consist mainly of technology acquisition and manpower training to be supported by minimum, yet necessary, advanced equipment. In this connection, it is absolutely crucial to ensure that the economic effectiveness of UNDP technical assistance will increasingly improve, exploiting fully the catalytic role of such assistance to produce maximum output with minimum input. Also, in order to ensure the most effective use of limited UNDP resources, government cost sharing will continue and expand. The amount of cost-sharing will be significantly greater than that for the first country programme and will be determined on a project-by-project basis. The total amount of the cost-sharing contribution will be known as and when the precise requirements of the projects concerned are calculated. Third-party cost sharing from other sources in UNDP-assisted projects is also welcome.

36. In addition to UNDP, a number of multilateral funding agencies also have operational technical assistance programmes in China, including UNFPA, UNICEF, WFP, the World Bank, the United Nations Financing System for Science and Technology for Development and United Nations specialized agencies, as well as several bilateral donors. The Ministry of Foreign Economic Relations and Trade is the Government co-ordinating authority for all multilateral and bilateral technical assistance except that from the World Bank. In order to make best use of assistance from every source, the Ministry adopted a co-ordinated planning approach. Accordingly, the national economic and social development requirements in various fields were kept in view and the priority areas for external assistance were determined, with the technical assistance to be provided by the major funding agencies of the United Nations and especially UNDP as the basic frame of reference. The existing country programmes for UNFPA and UNICEF assistance to China were formulated within such a framework. In fact, the country programme for UNDP assistance has, even during its preparation, served as a frame of reference for technical co-operation within the United Nations system and, in some instances, for bilateral assistance. Under the continuous programming approach, the second country programme will continue to be a frame of reference, especially during its mid-term review scheduled to be held in 1988, to contribute to the formulation of other multilateral and bilateral assistance programmes and projects.

37. In the light of the national development strategies during the seventh five-year plan period, the technical co-operation priorities and needs as well as considerations contained in paragraph 35, the Government decided to focus the

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country programme on five main areas of concentration. These are: (a) human resources development; (b) technical transformation of existing industries; (c) development of advanced technology; (d) improvement of living standards; and (e) application of electronic information technology.

38. The Ministry of Foreign Economic Relations and Trade solicited project proposals from the various sectoral ministries and institutions in the country in line with the above-mentioned areas of concentration and also considered suggestions made by United Nations specialized agencies and organizations. Over 200 major proposals were examined. The main criteria used in the course of project selection were whether their objectives were viable and fitted with the national strategies; whether they had the potential to produce expected outputs and result in increased productivity within a relatively short time; and whether they would have a demonstration role to promote technological advancement. Other important factors appraised were the availability of Government inputs and the absorptive capacity and managerial competence of the recipient institutions.

39. One special feature of the second country programme is worthy of note. An important aspect of China's foreign policy is to promote South-South co-operation, including ECDC-TCDC. Since 1972, in participating in intercountry activities organized by UNDP, China has strengthened economic and technical exchanges as well as understanding and friendship with other developing countries and hopes to have the opportunity to be more involved in the regional, interregional and global programmes of UNDP in the future. The Government intends to strengthen further, with its own resources, the regional centres already established in China in order to enhance their training and research capacity and their ability to provide services to other countries. It will also encourage them to join in networking arrangements with centres in similar fields abroad. In addition, China will continue to host various study tours and training activities sponsored by the United Nations system and will make efforts to explore new modalities for ECDC-TCDC, particularly with countries in the Asia and the Pacific region.

Human resources development

40. Economic construction, social development and scientific and technological progress depend on the intellectual development of the Chinese nation. China is determined to come to grips with this important issue and to bridge the gap between supply and demand of manpower, in order to create necessary conditions for: proficiency in advanced science and technology; effective management of modern enterprises; elimination of waste of human, material and financial resources; and substantial improvement in labour productivity.

41. China decided to concentrate a major part of the UNDP technical assistance during the second country programme on intellectual development and manpower training. Therefore, in addition to the special human resources development programme, all projects included in the other four areas of concentration also contain large training components. Such training activities, which are designed to solve specific technical problems as a means to achieve the objectives of individual projects, are also of significant importance.

42. However, in the current situation where China is making great efforts to advance the reform of its economic structure, to improve national economic

management and to raise the economic efficiency in all sectors and fields, training of management personnel has become a pressing issue. For this reason, the second country programme will give prominence to human resources development in the field of management. Such training will cover both macro and micro aspects, as well as general and sector-specific programmes. The trainees will include both high-ranking managerial personnel and middle- and lower-level managers, as well as workers.

43. In high-level management training, UNDP is expected to assist in leadership training at the provincial and municipal levels, as well as for large enterprises. Such training will be of a broad nature, covering not only modern macro-economic management, but also enterprise economics. After a period of exploration and experimentation, consideration will be given to the establishment of a training centre for high-level management to meet future needs. This training activity is also expected to assist in improving personnel management in China, in such specific aspects as recruitment, review, application and promotion procedures.

44. The requirements for sector-specific and field-specific management training are substantial, ranging from public administration, financial and banking management, enterprise management, and management of commerce to economic management and administration in the energy, transport, machine-building and metallurgical sectors. During the second country programme, UNDP is expected to support a human resources development facility for organizing such sector- and field-specific training in a systematic fashion, mainly through study tours and the provision of foreign experts to conduct seminars or lectures in China. The two existing projects, TOKTEN, and senior technical adviser recruitment, will also support such training as appropriate. Furthermore, this new project will make use, where appropriate, of the focal point for short-term advisory services established by UNDP in accordance with Governing Council decision 85/13 and take into account, for purposes of co-ordination, the training programmes to be organized under the ongoing project, Economic Management Training, for which an extension is being proposed.

45. Vocational training assumes special importance in the technical transformation and advancement of the Chinese enterprises. During the first country programme, UNDP assisted in the establishment of some pilot vocational schools through a project entitled Strengthening Vocational Education. A follow-up project is proposed for co-financing by UNDP and the Arab Gulf Programme for the United Nations Organizations (AGFUND), to transform two existing vocational training centres, one in Tianjin and one in Shanghai, into advanced institutions which will eventually train some 2,000 vocational instructors annually for other vocational schools, training centres and labour service companies throughout the country, develop modern training methods and prepare teaching materials for similar institutions. UNDP is also expected to provide assistance in training programmes for provincial- and county-level co-operatives.

46. To ensure the safety and reliability of nuclear power plants, it is essential that a significant number of specially trained personnel be available. In view of China's urgent need for nuclear power manpower development, UNDP will be requested to assist in establishing a nuclear power manpower training centre to produce qualified teams of management, engineering and operational staff.

47. The "open door" policy of China and the rapidly increasing scope of international co-operation has created a large demand for qualified personnel involved in foreign economic relations. UNDP will be requested to assist in the introduction of new curricula and strengthening of training facilities of the concerned institutions.

48. Three existing projects, namely, TOKTEN, the United Nations Volunteers (UNV) and the more recently initiated senior technical adviser recruitment project, have been very effective in enabling the Chinese Government to invite carefully chosen experts to visit China, in a rapid and efficient manner and at a minimum cost, to share their experience and train Chinese personnel and to meet ad hoc but urgent needs as they arise. It is proposed to continue all three projects in the second country programme.

49. Another existing project in the human resources development area is the Economic Management Training project, initially approved in 1983. Under this project, the Economic Development Institute (EDI) of the World Bank has provided training, both at the Bank and in China to Chinese instructors in economic management and project management and implementation in various sectors. The instructors, together with visiting experts, have, in turn, offered a series of courses in those subjects at the Shanghai Institute of International Economic Management and the Central Institute of Finance and Banking at Beijing. However, there remains a large unsatisfied demand and it is proposed to extend the project for a further three years.

50. The IPF allocation for the human resources development area of concentration is \$23,398,000 of which \$3,200,000 is set aside for programmed reserve.

Technical transformation of existing enterprises

51. Industrial enterprises in China constitute an impressive base for development. However, in the past, too much stress was placed on new projects, to the neglect of existing enterprises. Consequently many existing enterprises have for many years been backward, characterized by high consumption of energy and raw materials and low product quality. Their technical transformation will focus especially on: (a) conservation of energy and raw materials and lowering of costs of production; (b) adjustment of the product mix to permit upgrading of existing products and development of a new generation of products, as well as improvement in performance and quality to satisfy domestic and international market demands; and (c) rational utilization of resources. These measures are considered essential to increase the value of industrial and agricultural output by four times by the end of this century.

52. UNDP technical assistance will be directed to assist the Government's efforts in the technical transformation, renovation and expansion of existing enterprises and industries. To this end, a general facility for technical transformation, comprising mainly expert services and study tours, is proposed. It will be used to finance consultancies for diagnostic and feasibility studies in selected existing enterprises and industries and in such areas as energy, transport, machinery manufacture, electronics, chemical engineering and light industry, including those employing disabled persons. These activities are expected to raise the economic

effectiveness of the sizeable investment that China plans to make in technical transformation during the seventh five-year plan period.

53. Four large-scale technical transformation and demonstration projects have already been identified in the energy and transport sectors. In the field of energy, it is proposed to use UNDP technical assistance in the modernization of high pressure 200 MW turbine-generator units, which will remain China's principal power generators in the near future. The project will study the feasibility of modernization and, if appropriate, develop a plan to modernize all existing units and prepare designs for new units. Another major project is to demonstrate technical transformation in a large representative coal-mine, the Pingdingshan Coal-Mine No. 1, which is to be modernized in terms of mechanized extractive technology, ventilation, safety, automated monitoring, coal treatment, and environmental protection. A large element of government cost sharing is envisaged for this project.

54. In the transport sector, assistance is proposed for the Sifang Locomotive and Rolling Stock Works to strengthen its design and testing capability to enhance the economic viability and reliability of the locomotive diesel engines, produce an improved prototype and design technical modifications for 1,000 diesel engines already in operation. Assistance is also expected for the technical transformation of a roller test stand for locomotives, at the Acceptance Test Centre of the Railway Ministry at Dalian, the only such stand in China with the capacity to measure a whole locomotive's performance (such as traction, fuel consumption and thermo-dynamic performance). These projects will have a significant impact on overall national technical capabilities in the manufacture of locomotives and the development of railway transport.

55. The development of the chemical fertilizer industry is a necessary condition for agricultural modernization. Compound fertilizers at present account for only 1 per cent of all chemical fertilizer production in China. UNDP is expected to provide technical assistance in improving the production and application of compound fertilizers. UNDP will also be requested to support a closely related project to enhance the capability of the China Mine Design and Research Institute at Lianyungang to study the techniques of beneficiation of various phosphate rocks, to make optimum use of China's rich resource of middle- and low-grade phosphate rocks, generally meeting the demand for phosphate fertilizer.

56. The allocation of IPF resources for the technical transformation of existing enterprises area of concentration is \$16,421,000, and \$3,200,000 is earmarked for programmed reserve.

Development of advanced technology

57. In order to quadruple the value of industrial and agricultural output by the year 2000, selective and judicious application of advanced technologies is as important as the technical transformation of existing enterprises. In line with China's long-term policy of substituting oil with coal, coal-water mixture will be prepared as fuel for boilers and kilns to replace heavy fuel oil, so that the country's abundant coal resources will be better utilized and the oil will be reserved as petrochemical feedstock for greater economic benefit. UNDP assistance

is proposed to demonstrate the technique of preparation of the coal-water mixture. UNDP is also expected to assist the Institute of Engineering Thermophysics, Academia Sinica, in developing improved turbo machine technology to achieve energy conservation.

58. China is beginning to construct nuclear power plants to meet a part of its energy demand. The Government attaches great importance to the safety of such schemes and to that end established the National Nuclear Safety Administration in October 1984. UNDP technical assistance is expected to help that Administration build up the capacity for nuclear safety administration and formulate safety codes for siting, design, operation and quality assurance of the nuclear power plants. The nuclear safety standards developed by the International Atomic Energy Agency (IAEA) and other countries will be used as reference.

59. For several years China has been experimenting with solar energy. Assistance has been provided by the Federal Republic of Germany as well as others, in the use of low-temperature solar collectors. A follow-up project has been identified for UNDP support to assist the Beijing Solar Energy Research Centre in the development and demonstration of vacuum solar collectors, which can operate at the higher temperatures, to supply heat for industrial processes.

60. Continued exploration and development of oil resources is an important aspect of China's efforts to overcome the energy shortage. Assistance in marine engineering geological investigation in the Pearl River-mouth basin of the South China Sea has been identified as a priority project for UNDP technical assistance. The project will conduct surveys initially in the basin and gradually extend them to the entire shelf region in the northern part of the South China Sea. It will also develop standards for marine engineering geological investigations which will be applied to explorations in the East China Sea, the Yellow Sea and the Bohai Sea. In another project, UNDP technical assistance will be called upon to support the formulation and implementation of an optimal plan for the exploitation of oil reserves in the Nanbao depression, which is typical of the numerous oil and gas-bearing basins in East China. Experience derived from the Nanbao project in developing effective exploitation and evaluation methods can be applied in the entire region of East China. This should lead to substantially shorter cycles of oil and gas exploitation and development in the rift valley basins in East China and to correspondingly higher economic returns.

61. The second country programme will support selectively the development of some new products and promote the most efficient utilization of materials. In China, the production of polyvinyl chloride (PVC) resin has been growing. Vigorous efforts will be made to extend the application of rigid PVC and develop new products to serve the construction and chemical industry and the tertiary industries. A significant amount of timber and steel could be saved as a result of these efforts. Another project will reinforce the capability of the Chinese Research Institute of Chemical Industry at Chengnang to undertake research on the synthesis, processing and application of various organic silicon products in light industry, textiles, electronics, building materials, transport, energy, medicine and health.

62. Several other institutions which provide research and advisory services to Chinese industries will be strengthened. UNDP technical assistance is proposed to help the Department of Corrosion in the Beijing University of Iron and Steel to establish closer contacts with centres of corrosion research in industrialized countries with a view to strengthening its capability to develop and disseminate methods of corrosion control. Meanwhile, research, training and consultancy services will be extended to industry to reduce the immense economic cost of corrosion as well as to prevent corrosion-related accidents and environmental pollution. Another project along similar lines will support the Research Institute of Synthetic Aging at Guangzhou in research, testing, standardization and advisory services on aging and stabilization of such polymeric materials as plastics, synthetic rubber, coatings, synthetic fibres and adhesives. The project is expected to lead to better performance, longer service life and broader applications of these materials under the wide range of climatic conditions in China.

63. Dies and molds are the essentials of modern industry. In China, the design and manufacture of dies and molds have been less than satisfactory. UNDP technical assistance is proposed to strengthen the existing computer-aided design and manufacturing (CAD-CAM) activities in the Beijing Die and Mold Development Centre to serve industry.

64. Another project designed to support research and service to Chinese industry concerns the development of solders and welding materials for lead-in wires used by the electronics industry. UNDP technical assistance will support the Beijing Non-ferrous Metal and Rare-earth Research Institute, particularly in developing copper-based lead-in frames, and special purpose solder pastes, most of which are now imported.

65. The rapid pace of construction of commercial and residential buildings in China is creating an enormous demand for sanitary ceramics. A project is proposed to strengthen the Building and Sanitary Ceramics Centre at Xianyang, Shaanxi Province, to enable it to introduce modern production methods. Another project concerned with building materials will assist the State Administration of Building Materials at Beijing to develop and apply modern methods of manufacturing diamond tools for precision cutting of stone, concrete, glass and ceramics. A Non-metallic Materials Development Centre will also be established at the Non-metallic Materials Mining Institute at Suzhou to study new processes and equipment for the mining, dressing and processing of such materials.

66. A major concern in improving the economic effectiveness and efficiency of Chinese industry is in the area of precision measurement and standards. UNDP assistance is proposed to strengthen the technical capabilities of several institutions engaged in this field. While machinery is manufactured in China on an impressive scale, the quality and performance of these products compare unfavourably with those produced by the developed countries in terms of accuracy. It is therefore considered essential to accelerate the development of advanced precision dimensional measuring instruments to permit the machinery sector to apply international accuracy standards. UNDP assistance is expected to strengthen research and development of precision optical/electronic measuring techniques and

measurement of large dimensions in order to improve the quality of the manufacture and accuracy of installation of industrial and heavy machinery. Two projects are proposed for these purposes: one to strengthen the Department of Precision Instruments at the Tool Research Institute at Chengdu, Sichuan Province; and the other, dealing with large-dimension measurement, at Tsinghua University, Beijing. Similarly, gears and gear devices are important components in machines, but such products made in China leave much to be desired in terms of quality, noise and service life. A third project will therefore provide technical assistance to the Gear Research Department of the Zhengzhou Research Institute of Mechanical Engineering in order to upgrade its ability to support the gear industry in the design, manufacture, inspection and testing of gears. Assistance will also be provided to the Research Institute of Instruments and Meters of the Beijing Electrical Meter Works for developing improved control instruments and precision meters to serve various industries.

67. In the electrical and electronics industry, UNDP technical assistance is planned to enable the Beijing Radio Research Institute to improve its capability for precision electrical measurements and enforcement of standards. Other projects foreseen in this context include support to the Beijing Specialty Gas Research and Development Centre to acquire advanced skills in the analysis and quality control of high-purity industrial gases required by the electronics, medical and food industries and assistance in the development of advanced measuring instruments.

68. Another aspect of the improvement of standards and quality is represented by a proposed project at the Beijing Chemical Reagents Institute at the Beijing Chemical Industry Corporation, which is designed to strengthen China's capability to manufacture ultra-high purity grades of chemical reagents and fine chemicals utilized in industry and medicine. Standardization and testing will also assume increasing importance as the food industry develops in China. UNDP support is anticipated to strengthen the testing of grains, edible oils, meat and dairy products.

69. Several other new technologies are expected to be developed with UNDP assistance. One such project is to provide access to modern electric light source technology, including tungsten wires and incandescent phosphorous lamps, with a view to economizing on electrical energy. Consideration is also being given to a project for the development of a salt-pond biology centre chiefly to extract such valuable materials as carotene, glycerol and algaemeal from *Dunaliella* algae, which can be widely used in foods and drinks. Research will also be undertaken on the application of biological technology to deal with some unresolved problems in China's animal husbandry including slow growth, low carcass weight and high feed consumption. UNDP will also be requested to assist the South-West Agriculture University in studying the use of isotopes in agriculture to improve seeds and storage of agricultural products.

70. One ongoing project, Quality Control and Testing of Filters for Tractor Engines, is expected to continue into the second country programme in order to complete its objectives. Another project, Assistance in Heat-treatment Technology, is expected to develop further advanced heat-treatment processes, in particular, to reduce energy consumption and pollution, and to introduce automated control systems.

71. The IPF allocation for the development of advanced technology area of concentration is estimated to be \$27,396,000.

Improvement of living standards

72. Activities in this area of concentration will mainly deal with problems directly related to improving the incomes, diet and living conditions of the Chinese people. They therefore cover processing and storage of agricultural products; food industry; industrial consumer goods, including clothing; income generation in remote and poor areas; agricultural production technologies; environmental protection; and health.

73. Along with the development of agriculture and industry and the rise in people's living standards, the diet of the people begins to change. There is a demand for more and better processed food. But the food industry as a whole still falls behind other sectors of the national economy and is unable to meet fully the growing demand for processed food. During the second country programme, UNDP technical assistance will focus on improved processing and quality control of rice, soybean, coffee and dairy products.

74. Rice is the traditional staple food in China. Improved incomes have led to a demand for a greater variety of high quality and more nutritious rice products. A UNDP project is expected to introduce up-to-date technology to produce a variety of high quality nutritious products through the cooking and extrusion processes.

75. Through its own investment and efforts, supplemented by WFP and various bilateral donors, the Government has substantially increased milk production and the number of dairy-processing plants. But facilities and reference samples currently available are inadequate for establishing safety standards and appropriate testing procedures for milk and milk products. UNDP technical assistance is foreseen to assist in establishing a National Dairy Testing Centre in Heilongjiang Province to overcome these deficiencies and serve as a reference dairy laboratory for the entire nation.

76. China ranks high in soybean production, but this valuable source of protein is yet to be fully utilized on an industrial scale. UNDP technical assistance will be sought to develop a wide variety of food products based on soybean, in order to provide adequate protein material for the food industry and to improve people's nutritional standard. Another important project proposed is to support the Beijing Food Additives Development Centre in developing safe food additives. Other projects foreseen in the area of food processing include assistance in extrusion cooking of food for breakfast cereal and in food-testing technology.

77. Certain critical aspects of agricultural production have also been selected for UNDP support. One is fruit crop research and development in the Shaanxi Province. The results of this project will be immediately applied in the entire loess plateau area also. Another is cotton, a crop of major economic significance in China. Owing mainly to the poor quality fibre of the cotton varieties now planted, many do not meet the requirements of the textile industry. Cotton farmers have faced high production costs because of problems of drought, salinity, pests and diseases

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and obtained less than optimum yields. UNDP technical assistance is sought to provide the genetic material, laboratory equipment and training for scientists at the Shandong Cotton Research Centre to tackle these problems and to develop techniques for producing improved quality fibre as well as to overcome the environmental constraints of drought, soil salinity, pests and diseases in cotton production.

78. The rapid economic development taking place in China and the resulting increase in incomes is creating a strong demand for better clothing. Several projects have been formulated in this regard for UNDP technical assistance. One project will establish a Garment Technology Development Centre at Hangzhou to assist the garment industry to develop and apply new products and techniques, as well as undertake marketing studies. Another project will strengthen the capability of the newly established China Textile Dyeing and Finishing Centre in Shanghai to carry out research, product development, technical training, information processing and consultancy services. A third project in Hunan will facilitate technical development in China's ramie textile industry in its various production processes including degumming, spinning, weaving, finishing and garment making, as well as comprehensive utilization of the fibre. A fourth project will assist the Suzhou Silk Research Institute in introducing improved techniques of dyeing, printing and finishing of silk.

79. China's increased production of grain in recent years has placed greater strain on already insufficient storage facilities. UNDP assistance is sought to enable the Chinese specialists to observe bulk storage structures and associated handling, aerating, cooling and fumigating techniques in selected major grain-producing countries and to visit the manufacturers of storage structures and related equipment. Demonstration steel silos and associated equipment will be installed and tested and evaluated in Jiangsu Province under this proposed pilot project.

80. In the field of medicine and health, it is planned to expose the Chinese specialists to modern techniques in medical imaging and diagnosis and treatment of cancer, cardio-vascular diseases, soft organ diseases and fetus diseases. A project has been formulated to assist the Beijing Institute of Pharmaceuticals in introducing several modern techniques of manufacture of pharmaceuticals and improve quality standards and regulations for pharmaceutical products. Another project is foreseen to strengthen the Sichuan Industrial Institute of Antibiotics, enabling it to discover, screen and culture antibiotics. In addition, assistance will be provided in the establishment at Xian, Shaanxi Province, of a comprehensive centre for the rehabilitation of the physically disabled, to be co-funded by a number of other donors and Chinese agencies. The centre will provide diagnostic and treatment services, physiotherapy and vocational rehabilitation training and is expected to become the nucleus for similar services throughout north-west China. UNDP support will also be provided to another project to improve patient care, nursing, research and management in the Beijing Union Medical College Hospital. In view of the fact that the hospital has a sound base and assumes an important role among China's medical institutions, strengthening its capacity in a comprehensive manner will enable it to serve as a demonstration centre and have significant importance for the development of China's health sector.

81. China is highly conscious of the need to take account of environmental safety in pursuing its development objectives. The Government has set itself the goal of eliminating environmental pollution nation-wide by the end of this century - ensuring a clean, beautiful and quiet environment for work and living, in both urban and rural areas. In this context, the risks of environmental pollution and ecological damages are being closely assessed in the course of economic construction.

82. In accordance with the Marine Environmental Protection Law, China intends to exercise effective control over territorial seas under its jurisdiction to prevent contamination, which is caused mainly by oil discharge. The Government has therefore decided to establish a system of aerial remote sensing for the monitoring and surveillance of marine pollution during the seventh five-year plan period. The system will be designed to identify transgressors, measure the quantity and variety of oil spillage, present evidence for law enforcement and provide information for decision-making on measures to control and eliminate oil contamination.

83. The rapid development of industrial and agricultural production is leading to shortages of fresh water and the problem of water pollution is becoming increasingly acute. It is therefore imperative to strengthen the development and application of water treatment techniques and make available various new technologies, processes, equipment and material necessary for water conservation and treatment for drinking and industrial use. UNDP assistance is expected to support such activities in Shanghai. Assistance will also be provided in the recovery and utilization of various wastes in several major industrial cities in order to achieve the twin objectives of reducing environmental pollution and ensuring full utilization of resources.

84. An important objective of China's seventh five-year plan is to accelerate the development of its poor and remote areas, especially those populated by minority nationalities. The country is a unified multi-national state with 56 minority nationalities. Although they number 67 million, or 6 per cent of the country's total population, the area they inhabit accounts for 50 to 60 per cent of the country's total land area. Some parts are endowed with abundant natural resources, such as grassland, forest, fertile lands and minerals, while others are mountainous, with harsh climates and lacking in transport and essential infrastructure. Many remote and minority nationality areas have achieved remarkable progress in economic and cultural development and living standards. With their different historical and natural conditions, however, development in those areas has not been homogenous. Several regions have yet to eliminate poverty; their basic needs are not fully satisfied and they remain dependent on substantial economic subsidies from the State.

85. UNDP is requested in the second country programme to assist a series of income-generating activities in these remote areas. The Government has invited non-governmental organizations (NGOs) in friendly developed countries to contribute their experience in working with disadvantaged people and to provide funds to support their initiatives. Assistance from UNDP and from NGOs will be used primarily to assist the local people in meeting certain basic needs and in exploiting their indigenous natural resources and in undertaking, mainly by their

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own efforts, various small-scale production enterprises in industry, agriculture and traditional handicrafts. This is expected to raise the income and the living standard of the minority population and stimulate the local economies to progress in harmony with the national modernization programme.

86. The role of UNDP will be largely to assist the central, provincial and county authorities and the people's organizations to identify and prepare suitable projects, working closely with the interested NGOs. In conducting economic analyses of the proposed enterprises, special attention will be given to factors such as production costs, market prices, management needs and distribution of benefits.

87. It is proposed to extend into the second country programme several ongoing projects in the area of improvement of living standards. The project Soybean Research and Production Centre in the Heilongjiang Province, has been successful in strengthening research and promoting increased production of soybeans. However, because of the long-term nature of this research and the time required to introduce results into farming practices, the project needs to be extended until the end of 1987. Another project, Demonstration and Training for Vegetable Oil Refining, will need to be extended beyond 1986 in order to derive further benefits from its demonstration centre. A follow-up phase is also foreseen of the project, Rational Utilization of Land Resources of the Loess Plateau of North-western China, to provide technical backstopping to a recently approved WFP project in the same location, particularly in the soil and water conservation and crop diversification fields.

88. In support of the housing industry, the Light Building Materials Research and Development Centre is proposed to be extended by three years further to support research and train personnel in the design, manufacture and development of new products. Two other ongoing projects in the building materials industry are proposed for extension. One is assisting research and development in the utilization of the vast quantities of flyash, discharged by the coal-burning power stations, as an additive in making cement and concrete blocks. In its extended phase, the project will also investigate the use of flyash in a wider range of building materials. The other project is the Glass Development Centre which needs additional support to develop its research and advisory capacity, complete laboratory and test facilities and train staff.

89. Another ongoing project relevant to the construction industry is supporting the Research Centre for Integrated Wood Utilization at Beijing. It is proposed to extend the project by three years, to continue to strengthen the Centre's ability to conduct research and advise the wood industry, especially in wood-based panels including laminated panels and plywood, adhesives, drying and preservatives for a large variety of wood species used in China.

90. It is also planned to extend one project in the health sector, at the Experimental Centre for Clinical Diagnostic Reagents at Shanghai, to expand the range of reagents available, especially bacteriological reagents, standard strains and culture media, as well as dry reagents with longer storage life for use in diagnostic laboratories in hospitals in China.

91. The IPF allocation for the improvement of living standards area of concentration is \$25,988,000 of which \$1,200,000 is earmarked for programmed reserve.

Application of electronic information technology

92. The emerging revolution in information technology presents China with both a challenge and an opportunity in economic development. The Chinese Government holds the view that, in order to respond to this new challenge and to lose no time in using new technologies to serve China's economic development, it is important to accelerate the development of electronic information technologies and make full use of them to modernize traditional industries. Accordingly, the Government has decided that the electronics industry should develop faster than other industries during the seventh five-year plan period. Two strategic objectives are sought. First, priority will be given to applying electronic information technologies in various socio-economic sectors to meet the genuine, demonstrated needs of the end-users. Second, the development of the electronics industry will be shifted onto a course where micro-electronic technology will serve as the basis for the production of computer and communications equipment. Special efforts will also be devoted to developing a new generation of the basic components required for the modernization of various installations and the increased production of consumer electronics goods. UNDP technical assistance during the second country programme will relate primarily to the first objective stated above.

93. A major project identified for UNDP technical assistance will support the State Planning Commission, the State Economic Commission and other sectoral Government departments in their joint efforts to establish a national economic information network which is expected to become the principal vehicle for the collection, processing, storage, distribution and exchange of economic information. The network will provide the central and provincial Governments and the sectoral departments, at various levels, with modern economic information services to aid in the decision-making process. It will also strengthen the capability to forecast economic development trends and make more effective the planning, implementation and management of economic activities.

94. During the second country programme, UNDP will assist in the application of computer technology at the enterprise level to stimulate technical transformation and progress. This will include assistance in the establishment of a computer management system for equipment maintenance in a number of steel works in China, so that they are able to use advanced operational research and mathematical modelling methods to predict accurately maintenance requirements. Assistance will also be provided to the Beijing No. 1 Machine Tool Plant, which is a major manufacturer of some 40 machine tools, in establishing a computer-aided management information system to enable the plant to use computers in production and materials supply planning, as well as in the formulation of the best product mix based on improved market forecasts.

95. CAD-CAM figures prominently in the mechanical industry in industrialized countries. But in China, such techniques are in the initial stage of research and development and have limited application. Therefore, UNDP is requested to help promote further research, application and dissemination of CAD-CAM techniques at

the Research Institute of Automation for the Machine Building Industry in Beijing. The purpose of this project will be to upgrade the design and manufacture of industrial products; improve existing manufacturing processes with respect to reliability, energy consumption and pollution; and boost production, both quantitatively and qualitatively. The project is expected to have an important effect in promoting technical transformation and progress in China's mechanical industry.

96. Computers have become increasingly important in the work of the substantive departments of the Government. UNDP is expected to assist the Ministry of Geology and Mineral Resources in developing modern software systems for the processing of geophysical data to expedite the survey, exploration and development of petroleum and gas resources and to train personnel in their use. To strengthen the management of water-borne traffic and to enhance safety and efficiency in navigation and transportation, UNDP will be requested to assist the Ministry of Communications in introducing a modern radar-based computerized management system for harbour traffic in the port of Shanghai. Assistance will also be requested in establishing a system for the storage and retrieval of satellite data in the Chinese Meteorological Department to enable it to serve other agencies which require meteorological data to plan their production and construction activities.

97. To accelerate the application of computing technology, great importance has been attached to software engineering. It is anticipated that UNDP will assist the Chinese technicians in learning advanced software techniques and in developing software engineering methods most appropriate to the environment of China. In addition, assistance is expected in developing standard methods to deal with the technical problems encountered in computerized data processing of the Chinese characters so as to remove obstacles to the application and popularization of computing technology in China.

98. Only one ongoing project is proposed for extension in this area. This is the Qualification and Surveillance Laboratory for Consumer Electronics Products, at the China Electronic Products Reliability and Testing Research Institute at Guangzhou. The original UNDP funding has been insufficient to provide all the training, consultancy and equipment required for this sophisticated undertaking.

99. The IPF allocation for the application of electronic information technology area is \$12,702,000.

Special purpose project

100. It is proposed to create a special facility which will operate in conjunction with other sources of technical assistance, such as the World Bank, to carry out pre-feasibility and feasibility studies of investment projects identified for financing in collaboration with other external financial institutions.

101. The IPF provision for this special facility is \$5,798,000.

C. Unprogrammed reserve

102. A small unprogrammed reserve of \$2,840,000 has been set aside for contingencies.

Annex

FINANCIAL SUMMARY

I. ACTUAL RESOURCES TAKEN INTO ACCOUNT FOR PROGRAMMING

A. <u>UNDP-administered sources</u>	\$	\$
Third cycle IPF balance	11 470 000	
Fourth cycle IPF	110 669 000	
Subtotal IPF		122 139 000
Special Measures Fund for Least Developed Countries	-	
Special programme resources	-	
Government cost-sharing	3 080 000	
Third-party cost-sharing	239 000	
Operational funds under the authority of the Administrator	3 234 000	
UNDP special trust funds	-	
Subtotal, UNDP non-IPF funds		6 553 000

B. Other sources

Funds from other United Nations agencies or organizations firmly committed as a result of the country programme exercise	-	
Parallel financing from non-United Nations sources	-	
Subtotal, other sources		-

TOTAL ACTUAL RESOURCES TAKEN INTO ACCOUNT FOR PROGRAMMING	<u><u>128 692 000</u></u>
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II. USE OF RESOURCES

Ongoing projects	24 855 000	
New project proposals	93 397 000	
Programmed reserve	7 600 000	
Subtotal, programmed resources		125 852 000
Unprogrammed reserve		<u>2 840 000</u>

TOTAL USE OF RESOURCES	<u><u>128 692 000</u></u>
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