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COUNTRY AND INTERCOUNTRY PROGRAMMES AND PROJECTS

Consideration and approval of country programmes

FIRST COUNTRY PROGRAMME FOR  
THE PEOPLE'S REPUBLIC OF CHINA

UNDP assistance requested by the Government of  
People's Republic of China for the period 1982-1986

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## INTRODUCTION

1. China's participation in the United Nations Development Programme's economic and technical assistance activities began in 1973. It has been a contributor and an active host in arranging and implementing UNDP regional and interregional projects, e.g. various kinds of training courses, seminars and study tours, thus contributing its share as desired to the promotion of technical exchanges among developing countries.

2. In 1978, the Chinese Government made a decision, in accordance with the principle of relying mainly on the country's own effort and seeking foreign assistance as subsidiary, that China should maintain the status of a contributor but, at the same time, would start receiving technical assistance from UNDP. In response, UNDP established on an ad hoc basis an allocation of \$15 million for China covering the remaining three years of the second programming cycle (decision 79/5). Twenty-seven projects were formulated against that allocation and most of them have now been completed.

3. During its special session in January 1980, the UNDP Governing Council decided to accord to China a facility for borrowing \$15 million from the third programming cycle (decision 80/1). To plan the use of these resources, a "mini-programme" was drawn up in April 1980 which identified another 79 projects (see Annex II for the list of projects).

4. By the end of 1981 it is expected that the \$30 million approved for expenditure in the second cycle will have been largely delivered.

5. The illustrative IPF for China during the third cycle, 1982-1986, is \$142 million, as established and approved by the UNDP Governing Council at its twenty-seventh session in June 1980. Because the available UNDP resources are very limited compared to the needs of China, a country of vast territory with enormous requirements envisaged in many sectors in the modernization process, the Government will direct them to priority projects which will be conducive to the country's economic readjustment <sup>1/</sup> and development, as well as to the country's modernization and the improvement of the quality of life of its people.

### The country programming exercise and methodology

6. The Ministry for Economic Relations with Foreign Countries of the People's Republic of China, the Government Ministry responsible for co-ordinating UNDP assistance, formulated the country programme. The UNDP office in China also assisted considerably in the exercise.

7. The Ministry conducted a series of consultations with the UNDP office beginning in May 1981 during which views were constantly exchanged on the resource prospect for an approach to country programming in the third cycle. In addition, valuable comments were received from UNDP headquarters on the country programming exercise.

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1/ See paragraphs 27-30 below.

8. The country programme, the first one for China, was prepared at the time when the Government was drafting its Sixth Five-Year Plan for the development of the national economy. It was under the general guidelines tentatively defined in the Plan that the development perspective, development objectives and specific projects of the country programme were formulated.

9. In order to identify specific areas of concentration for development of relevant sectors in the country's economic readjustment period, the Ministry had held discussions with such sectoral state commissions and ministries as the State Planning Commission, the State Commission of Science and Technology, the State Energy Commission, the State Agricultural Commission, and the Ministries of Geology, Light Industry, Education and Public Health, in which the UNDP office participated. Areas of concentration for UNDP technical assistance were defined after those sectoral consultations.

10. Views and comments were solicited to the greatest extent possible from the relevant organizations and agencies of the United Nations system in the process of country programming. In October 1980, delegations consisting of members of the Sixth Department of the Ministry for Economic Relations with Foreign Countries and officials from the UNDP office visited UNESCO, UNIDO, IMCO, WHO, ITU, UPU, FAO, UNCTAD and ITC in their headquarters and had initial discussions on country programming with their executives. UNCTAD, UNESCO, FAO, UNIDO, ICAO and UNDTCD, among others, sent missions to assist the Chinese counterparts in determining areas and project proposals for UNDP technical assistance. Many consultants under specific project assignments also made suggestions related to country programming.

11. Although UNDP assistance to China began only two years ago, certain experience has been accumulated and has contributed to the country programming process. It can be summarized as follows: projects should be identified and selected from the priority areas of the national economic development and in conformity with the characteristics of the UNDP technical assistance; the concept of doing more with less, quick results and demonstration should be applied; the recipient institutions or departments should have appropriate absorptive capacity which means availability of necessary facilities and manpower with proper technical and language competences; the role of project execution should fall on the most suitable executing agencies and government execution should be encouraged as appropriate; to ensure the introduction of appropriate and advanced technology as projected, careful study and preparation should be made by the recipients pending implementation of study tours, training and procurement of equipment; and the role of the recipients and their national project directors should be brought into full play, under the guidance and direction of the overall policies formulated by the Government Co-ordinating Authorities. Close contact between the Government Co-ordinating Authorities and the UNDP field office should be maintained. All has proved to be essential for the smooth implementation of projects.

#### Duration, time-frame and anticipated resources

12. China's Sixth Five-Year Plan period (1981-1985) commenced one year earlier than the country programme for UNDP technical assistance during the third cycle (1982-1986). Since actual implementation of a number of projects in the country

programme started in 1980 and 1981 drawing on the borrowing facility from the third cycle, the country programme can be regarded as basically coincident with the National Plan. The country programme, therefore, fits well into the context of the Plan.

13. China's illustrative IPF for the third programming cycle is \$142 million. The resources taken into account however are \$119.9 million which includes an amount of \$26.98 million for adequate programming. This is due to the Governing Council instruction that only 80 per cent of the illustrative IPF could be used for programming which reduced the \$142 million to \$113.6 million. This figure was further reduced by \$7.1 million (5 per cent of the IPF) which the Government relinquished for reallocation by UNDP as had been announced at the twenty-seventh session of the Governing Council and by a further \$15 million borrowed from the third cycle (see Annex I).

14. The Governing Council of UNDP at its twenty-eighth session endorsed the Administrator's proposal contained in DP/518 that the approach of "continuous programming" be adopted by the recipient Governments in the preparation of country programmes for the third cycle (decision 81/15). Apart from specific projects, this country programme contains project areas which will be translated into specific projects later during the third cycle, subject to annual reviews and in light of the needs of the country's economic readjustment. This will make it possible to maintain the dynamics of the country programme and to maximize the effect of UNDP's limited resources.

15. A phased approach to country programming has thus been adopted in accordance with the principle of "continuous programming" set by the Governing Council. This takes into account the possibility that additional needs can arise during the country's economic readjustment process, and also that the resource prospect for the UNDP third cycle is uncertain. The emerging pattern of bilateral technical co-operation will be taken into account as well.

16. The early part of the programme (1982-1983) covers: (i) an estimated \$10 million provision for those projects included in the second cycle "mini-programme" which were not completed by the end of 1981; (ii) supplementary assistance to a small number of on-going projects to which modest additional funding is provided to ensure achievement of their immediate objectives and successful completion of activities; (iii) second phases of a certain number of on-going projects which still fall within the priority areas for development during the country's economic readjustment period; and (iv) new projects to start implementation in 1982 and 1983. \$40 million is programmed for items (ii), (iii) and (iv), with the understanding that approval of individual project budgets is, of course, conditional on the annual authorized budget levels.

17. During the latter part of the programme (1984-1986), \$69.9 million is programmed for implementation. Of this, an estimated \$35 million will be used for follow-up of selected projects initiated in the early part of the programme. This will permit the Government and UNDP to review and assess, in due course, their design and implementation based on progress recorded and then to determine the magnitude of resources necessary for the follow-up activities in the latter part of the country programme. The remaining \$34.9 million (which includes a provision of approximately \$28.4 million for adequate programming) will finance projects which will be generated at the later stage from project areas preliminarily defined in the country programme subject to annual review.

### Significant features of the country programme

18. Several features of the country programme merit special mention and are described below.

#### (a) Promoting technical co-operation among developing countries

19. Provision of support to and active participation in TCDC is the Government's consistent policy, and one of the principle reasons for its involvement in UNDP's activities. Accordingly the Government announced at the twenty-seventh session of the Governing Council that it would earmark 5 per cent of its IPF during the third programming cycle for promotion of TCDC activities; subsequently, the Government decided to allocate the major portion of these resources for TCDC-oriented regional projects. At the Inter-governmental Meeting of Development Assistance Co-ordinators in Asia and the Pacific held in New Delhi in February 1981, it was agreed that there would be established in China regional centres (as part of regional networks) of integrated rural development (RAS/79/124), acupuncture (RAS/78/051), aquaculture (RAS/76/003), biogas (RAS/75/004), small hydro-power (RAS/80/033), sericulture (RAS/79/006) and primary health care (RAS/78/051), so as to promote TCDC in the Asia and Pacific region. Additional centres are under active consideration. Furthermore, the Government will identify other TCDC projects during the present cycle.

20. It can be seen from the country programme that many projects assisted under the UNDP national programme will have potential value for intercountry co-operation. China is eager to share its successful experiences with other countries or regional centres within the framework of the intercountry programmes and at the same time to benefit from their technological accomplishments. To this end China wishes to increase its participation in TCDC and intercountry programme activities.

#### (b) Strengthening self-reliance

21. The underlying principle guiding the country programme is "relying mainly on (the country's) own effort and seeking foreign assistance as subsidiary." The Government will provide the main inputs necessary for projects listed in the country programme, including the financial input for civil construction and human resources. UNDP input will in turn be directed to assisting the relevant Chinese institutions in the upgrading of certain techniques or skills, aimed at strengthening self-reliance and accelerating development. For each project, a national project director will be designated by the Government in consultation with UNDP and the executing agencies.

#### (c) Quick in producing results and easy to apply

22. The country programme contains a good number of demonstration projects. Experiences and techniques expected to be derived from these projects can be applied to more undertakings in similar disciplines at the national, provincial or lower levels. Still others are characterized by quickness in producing results so that recipients will benefit from them within the period of two to three years, or even shorter.

(d) Government execution of projects

23. Direct execution of projects by recipient Governments is one of the important provisions contained in UNDP's "New Dimensions". The Government encourages those institutions or departments which have the capability to do so to undertake, completely or partly, direct execution of UNDP-assisted projects. Meanwhile, the Government will, in direct execution of projects, maintain necessary contacts with relevant executing agencies, in order to draw fully on their experience and competence.

(e) Transfer of Know-how Through Expatriate Nationals (TOKTEN)

24. There are tens of millions of expatriate Chinese all over the world. A considerable number of these people possess expertise in various fields and are willing to be of service to China. There is no language barrier and their visits are welcomed and appreciated by Chinese institutions. The TOKTEN scheme will serve as one of the many channels by which expatriate Chinese can contribute their service to the modernization programme. The TOKTEN scheme will thus play a modest but useful part in mobilizing this source of know-how.

(f) Preinvestment

25. As the Government puts stress on productive use of investment, careful feasibility studies will be made for all capital construction projects using its own investment, and for such projects drawing on external sources of financing as those assisted by such international organizations as the World Bank and International Fund for Agricultural Development. UNDP support has already been used to develop a large educational project (\$200 million) financed by the World Bank. In view of UNDP's successful experience in pre-investment activities, an umbrella project is designed in the country programme especially to accommodate such requirements as appropriate. This arrangement also constitutes a positive response to decision 81/22 adopted by the Governing Council at its twenty-eighth session which, inter alia, "invites Governments to give, in preparing their country programmes, due priority to pre-investment activities".

(g) UNDP country programme as a frame of reference

26. As mentioned in paragraphs 2 and 3 above, in the first period of operations, which ended in December 1981, programming activities were carried out using the funds initially made available to China by UNDP. This resulted in a diversified and wide-ranging series of projects which gave the United Nations system agencies experience in co-operation with a great many Chinese institutions. In addition to serving in the preparations for this present country programme, this experience will be of value when the Chinese departments concerned consider the form, content and size of technical co-operation requests which they are expected to prepare and submit to other donors appearing on the scene now. In fact, as the number of such donors is increasing steadily, the experience and ideas generated during United Nations agency preparations for the country programme can also be used to help elaborate proposals in priority sectors to attract and interest potential donors. There are already some examples of this process. For instance the World Bank, IFAD, WFP, and some bilateral donors have expressed support for suggestions and proposals put forward during the programming exercise and in the context of UNDP-assisted projects for agricultural and university

education, livestock development and grasslands improvement. This use of UNDP's country programming discussions as a frame of reference for other international or bilateral inputs is in line with Governing Council directives.

#### NATIONAL DEVELOPMENT OBJECTIVES AND PROGRAMMES TO BE SUPPORTED BY UNDP

27. Under the leadership of the Chinese Communist Party and the concerted efforts of the Chinese people, great achievements have been made in the socialist revolution and construction in the 33 years since the founding of the People's Republic of China. In contrast to the extremely backward economic base before liberation, China has evolved to such a stage that an independent and comprehensive industrial and national economic system has been established. The living standard of both urban and rural people has improved a great deal. In 1980, as compared with 1952, the year economic recovery was completed, the total value of industrial and agricultural production had increased 9.1 times, national income 5.2 times, industrial fixed assets 27 times and the average consumption level of the people had increased by 100 percent.

28. However, some mistakes in economic guidelines have caused setbacks in the country's economic construction. Since the Third Plenary Session <sup>2/</sup> of the Eleventh Central Committee of the Chinese Communist Party, especially after the Sixth Plenary Session <sup>3/</sup>, China has taken stock of both experiences and lessons accumulated in all areas of development including economic construction, and has further shifted its emphasis of work to the socialist modernization programme focusing on economic development. Given a country with a large population, and a comparatively low level of development, the Government believes that economic construction should proceed in pace with what the country can really afford, and that the goal of modernization should be approached with energetic efforts but in a phased fashion. As a result, the Government has decided to implement a positive policy of readjusting, restructuring, consolidating and improving the national economy. This means that while the scale of capital construction will be maintained at an appropriate level, the emphasis will be placed on agriculture, light industry (especially consumer goods related to living standards), energy, transport, education and health.

29. China is at present preparing its long-term development programme which covers the Sixth Five-Year Plan. Drawing on experiences and lessons gained in the last 33 years, China is expecting a significant improvement in its strategic objectives, development patterns and economic models. The aim is to blaze a new trail characterized by a fairly steady tempo and better economic results, yielding more substantive benefits to the people and fuller play of the superiority of the socialist system. The forthcoming decade is a crucial period to bring about this strategic change.

30. The primary goal of the Plan is to strive for a fundamental improvement in the country's economic and financial situation. To this end, the Government will

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<sup>2/</sup> Held in December 1978

<sup>3/</sup> Held in June 1981

further implement the policy of readjustment, restructuring, consolidation and improvement with the immediate emphasis on readjustment. This will facilitate the balanced development of the economy and permit steady economic growth thereby constituting a sound base for the preparation of the Seventh Five-Year Plan. This means, inter alia:

- (i) Agriculture and consumer goods production will be increased substantially;
- (ii) Priority will be attached to both energy development and energy conservation, but especially on correct energy utilization;
- (iii) Further efforts will be made to strengthen transport;
- (iv) Technical transformation and renovation will be introduced in selected enterprises while the potential of existing enterprises as a whole will be better utilized;
- (v) Structural reforms will be carried out in the context of economic readjustment; enterprises will be progressively consolidated and restructured and management improved to raise economic effectiveness and efficiency; and
- (vi) Living conditions of the people will be gradually improved on the basis of steady growth of agricultural and industrial production.

31. Five major areas for UNDP technical assistance are tentatively defined based on the priorities for economic development outlined above, as well as on the nature, scope and characteristics of UNDP technical assistance. They are:

- (i) Food production and agricultural productivity;
- (ii) Production of consumer goods and services to the population;
- (iii) Energy development and conservation;
- (iv) Human resources for development; and
- (v) Infrastructure for development.

32. To maintain its dynamics and integration, the country programme incorporates: (a) supplementary assistance to some on-going projects; (b) second phases of selected on-going projects and new projects; and (c) project areas for continuous programming. As explained in paragraphs 16 and 17 above, the amounts mentioned in the following paragraphs as UNDP inputs to individual projects relate to the early part of the programme period. Those projects that are to be considered for additional resources in the latter part of the programme have been marked with an asterisk (\*).

#### A. Food production and agricultural productivity

33. Agricultural production has grown substantially since the founding of the People's Republic of China. Nevertheless, rapid population growth has increased



pressure on food production which remains a little over 150 kg per capita annually.

34. To improve this situation, the Government has in recent years formulated and started implementing a series of policies and measures geared to raising agricultural productivity and food production. These include: respect for extension of the decision-making power of production teams; establishment of various forms of responsibility systems; further development of sideline occupations; expansion of private-plots farming and collective marketing; and increased state purchasing prices for farm and sideline products. Still another measure is for the Government to grant financial and material support to the development of agricultural production. The peasants' initiative and enthusiasm are thus brought into play and food production and agricultural productivity will continue to make significant progress.

35. In the same vein, the Government attaches high priority to updating agricultural technology and training. Work has been initiated or strengthened on agricultural regional planning, scientific farming, research and application of advanced farming techniques, increased mechanization, maintenance of ecological balances, and better control of natural calamities and pests.

36. UNDP technical assistance in this area will be oriented to upgrading agricultural technology and training.

(i) Supplementary assistance to on-going projects

Pilot Demonstration Centre for Intensive Pasture, Fodder and Livestock Production (CPR/79/001)

37. The objective of this project is to demonstrate improved systems of intensive pasture, fodder and livestock production in the arid zones of Inner Mongolia. To ensure the complete attainment of its objectives, UNDP is expected to provide an additional input at an estimated value of \$400,000.

Beijing Vegetable Research Centre (CPR/80/023)

38. Although the Government has stressed the importance of improving vegetable production and supply to the Capital, problems still exist. Severe pest infestation, diseases and the incompatibility of existing production processes with modernized technology are only a few examples. The result is a shortage and unsteady supply of vegetables in the Capital. The Government therefore in 1980 established a modern vegetable research centre in Beijing. The project started implementation in December 1980, but to achieve its objectives, additional support is required to assist in the development, application and extension of research and experimental facilities for vegetable cultivation, pest and disease control, cytogenetics, quality analysis, and physiochemical analysis of soil. The additional UNDP input is estimated at \$400,000.

(ii) Second phase and new projects

National Rice Research Institute

39. The Government had decided to establish a national rice research institute in Hangzhou, Zhejiang Province, which will co-ordinate the research, application and extension of rice production technology. The objective of this project is to provide training opportunities for scientists and technicians working at the Institute in breeding, cultivation, varieties, fertilizer, cross-breeding and disease resistance, etc., with a view to upgrading the overall technical competence of the Institute. The UNDP input is estimated at \$400,000.

Strengthening the Development and Research of Soybean Production in Heilongjiang Province

40. Heilongjiang Province is a major soybean producer. Its soybean production area accounts for 25 per cent of the country's total and the soybean yield in 1980 reached as high as 30 per cent of national production. This project is designed to assist the Province in strengthening the research, application and extension of scientific breeding, cultivation, fertilizer, germplasm, genetics and pest and disease control, with an ultimate aim of raising per unit yield and increasing production. The UNDP input is estimated at \$450,000.

Sugar Processing Research Centre\*

41. As domestic sugar production does not meet demand, the country has to spend a significant amount of foreign exchange every year to import sugar. In the production process, productivity remains low, energy consumption substantial and the product quality poor. There are also unresolved problems in integrated utilization and environmental protection. In order to promote the cane sugar processing industry, the Ministry of Light Industry will upgrade the Sugar Processing Research Institute in Guangzhou into a high level research and development centre for sugar making for which initial UNDP support, estimated at \$500,000, is required.

Research Centre of Integrated Wood Utilization (CPR/80/016)

42. Forest resources are insufficient in the country and the growing stock per capita is only about 10 cubic metres which represents less than one-eighth of the world's average. The gap is even wider in terms of industrial wood consumption per capita. To develop its national economy, China needs more wood. The Government has decided to stabilize the annual cut and, at the same time, optimize its utilization. However, the present utilization is far from ideal at an estimated ratio of less than 50 per cent from logs to final products. Of more than 10 million cubic metres of wood residues, only 15 per cent is actually used annually to process products like wood-based panels. Therefore, exciting opportunities exist for integrated utilization. UNDP started supporting the Research Centre of Integrated Wood Utilization in March 1981 (phase I activities). The Government intends to use further UNDP assistance during the present cycle in the research and application of wood processing and utilization techniques. The UNDP input is estimated at \$700,000 for the second phase.

#### Forest Inventory\*

43. China's forestry resources have not yet been completely inventoried and the variations relating to growth and consumption remain uncertain. This requires urgent solution given the fact that the country does not have abundant resources. The objective of this project is to assist the Ministry of Forestry in developing techniques for forestry resource dynamics monitoring, in planning and management, so as to make correct assessments of and provide guidance to forestry production. The initial UNDP input is estimated at \$500,000.

#### Improvement of Vegetable Oil Processing Technology (CPR/80/021)

44. At present, the country is mostly making crude vegetable oil which is of poor quality, dark color, disagreeable flavour and is liable to sedimentation and rancidity. The objective of this project is to develop a comprehensive vegetable oil making process to up-grade the quality and increase varieties of vegetable oil so as to meet the demands of the population. In its first phase, the project concentrated on the improvement of soya bean oil; the second phase will concern itself with rapeseed oil. The Government has already provided substantial investment for that purpose. The UNDP input for the second phase is estimated at \$600,000.

#### Food Processing Technology

45. The objective of this project is to introduce and apply appropriate technology for prepared food processing and production in Beijing, and gradually to meet the needs of the people in the Capital. Prepared food production will be boosted in terms of quantity, quality and variety, utilizing local raw materials with the aim also of reducing prices. The UNDP input is estimated at \$200,000.

#### Production of Fish and Prawns\*

46. China has 430,000 sq. nautical miles of fishing grounds on the continental shelf and 17,000,000 hectares of inland waters; the coastline is one of the longest in the world, with 18,000 km plus that of the interface between the islands and the sea. Nevertheless, fish production represents only 1.4 per cent of total agricultural production, and aquatic product per capita is much lower than the world level. Therefore, the Government has decided to increase fishery production, taking increased artificial production of fish and prawns as an important area for development. This project will mainly assist in fish culture using solar energy, cage fishing, popped pellet feed production and artificial reef culture. The initial UNDP input is estimated at \$600,000.

#### Preservation and Processing of Fish Products\*

47. In fish production, better methods need to be sought for the preservation and processing of fish products. Due to the lack of preservation and processing facilities, a large quantity of fresh marine fish has to be processed into salted dry fish and the protein content is thus greatly reduced. In addition, a high percentage of fish products is spoiled and can only be processed into feeds or just to serve as fertilizer. Similar problems exist in fresh-water fish preservation. It is therefore essential to improve the quality of fish products to meet the requirement of the people. Efforts are required to secure an

increased percentage of live fish, and to prepare iced fresh fish, frozen fish and other preserved fish products. The objective of this project is to improve the preservation and processing techniques for fish products, which include grading, drying, mussel processing, small size packaging of frozen fish and soft packaging of prepared food. The initial UNDP input is estimated at \$500,000.

National Training and Application Centre of Agricultural Remote Sensing (CPR/80/066)\*

48. The objective of this project is to use remote sensing techniques for prompt and correct collection and processing of data pertaining to agricultural resources and crops growth. This will facilitate both national and regional planning of agricultural production, ensure an effective utilization of agricultural resources and eventually stimulate agricultural production. Under the first phase of the project, a National Training and Applications Centre of Agricultural Remote Sensing was established. Under the second phase of the project, which will be co-ordinated by the State Commission of Agriculture, work will continue on the establishment of the National Centre. Remote sensing sub-centers for forestry, water conservancy, land reclamation and fisheries will also be set up and the remote sensing of agricultural resources by region initiated. The initial UNDP input is estimated at \$800,000.

Land Resources Utilization in Loess Plateau (CPR/80/020)\*

49. The Loess Plateau covers a vast area totaling 530,000 sq. km across five provinces and two autonomous regions: Qinghai, Gansu, Ningxia, Inner Mongolia, Shanxi, Shaanxi (Jin) and Henan, where natural resources are abundant and the layer of soil is thick. However, the ecological balance has deteriorated seriously due to erosion and other factors, and this has contributed to the siltation of the Yellow River. The Government has decided that the Loess Plateau should be gradually transformed into a livestock and forestry base, given its natural, economic and historical conditions. In September 1980, UNDP started its assistance to a project for land resources utilization in the North Western Loess Plateau by providing training and consultancy services in land use management. The UNDP is now expected to extend its assistance during the present cycle in strengthening research and in formulating comprehensive development plans for the area. The initial UNDP input is estimated at \$600,000.

Utilization of Salt Lake Resource for Potash Fertilizer Production\*

50. Potash fertilizer production remains a weak link in the chemical fertilizer industry in the country resulting in low agricultural yields. Cha'erhan Salt Lake in Qinghai Province has an area of 5,000 square kilometres and abounds in resources. Proven industrial deposit of potassium chloride in the lake amounts to about 100 million tons and energetic action has been taken in recent years for its development. Following its approval in 1978 of the establishment of a potassium chloride plant with an annual capacity of 1 million tons, the Government is initiating the construction of an experimental site for the further development and utilization of the Lake's resource, and for the technical preparation of large-scale projects. This project will direct UNDP technical assistance to the experimental stage of the Lake's resource development and utilization. The initial UNDP input is estimated at \$300,000.

### Improved Quality of Basic Tractor Parts

51. The accelerated development of agricultural production in the vast rural areas has increased demand for tractors of better quality. The objective of this project is to assist in upgrading the quality of basic tractor parts and accessories and in improving their reliability and durability. The UNDP input is estimated at \$200,000.

### Centre for Pesticides Research and Development (CPR/80/008)

52. During the initial phase of this project, the UNDP assistance stressed toxicity testing of pesticides. The objective of the second phase is to facilitate the research and development of pesticides with high effectiveness but low toxicity. The UNDP input is estimated at \$400,000.

#### (iii) Provision for continuous programming

53. Approximately 22 per cent of available resources not yet committed for specific projects is to be earmarked for activities related to food production and agricultural productivity in the latter part of the country programme. Through continuous programming, follow-up activities for selected projects already specified in the programme (marked \* in the paragraphs above) and additional new projects will be identified for implementation during the latter part of the country programme. The new projects will be developed in the following areas: protection of fisheries resources; oil bearing crops; tropical crops; pest management; farm machinery; and ginseng production.

#### (iv) Other Assistance in this sector

54. Some inputs are also being made available (in this sector) from bilateral donors to support the following projects: forestry in Yunnan; citrus fruit culture in Hunan; livestock improvement (sheep, goat); plant quarantine research; agricultural surveys in Heilongjiang Province and poplar cultivation in Gansu.

55. FAO through its Technical Co-operation Programme and other special programmes has provided valuable assistance in post-harvest losses prevention, remote sensing, germ plasm evaluation, algin production, olive production, seed processing and technology. An FAO trust fund project for olive tree cultivation has also been approved. A special purpose contribution to United Nations Industrial Development Fund will complement UNDP assistance in pesticides research. WFP began its operations in China in late 1979. It is supporting projects intended to reinforce farm development in Guangxi and Yunnan, tidal land reclamation in Fujian and Guangdong, reforestation (shelterbelt) in Ningxia. IFAD has approved a loan for livestock development in Northeast China. The World Bank is preparing a project for the reclamation of saline lands in the north China plain.

### B. Production of consumer goods and services to the population

56. In the country's economic construction, means of production have been developed to the neglect of the means of livelihood. By 1978, heavy industry production had increased by 90 fold, light industry production by 20 fold and agricultural production by a little over 2 fold, as compared with 1949. For the purpose of rationalizing its economic structure, the Government has decided to

give prominence in the process of readjustment, to the consumer goods industries in order to ensure a proportionate development of agriculture, light industry and heavy industry. As the policy indicates, consumer goods production will be accorded high priority to meet the increasing needs of the population. To this effect, light industry will receive active support from the Government to obtain the required raw materials, fuels, loans and capital construction, etc. Attention will continue to be paid to the development of textiles, consumer electronics and the service sector as a whole.

57. UNDP will be invited to assist in approaching the following issues in consumer goods production: quantitative and qualitative improvement and increased marketable varieties of products; productive use of raw materials and energy conservation; low-cost but high economic effectiveness; and increased production of those consumer goods that sell well and, as a consequence, are often out of supply.

58. Two other aspects of the people's well-being are especially important: housing and health. With the growth in population, the pressure on housing has become acute. Despite major efforts to tackle the problem, the pace of construction has fallen far short of demand. Part of the difficulty lies in the inadequacy and poor quality of building materials. UNDP assistance will be used to help overcome some of these constraints.

59. Great strides have been made in the health sector since the founding of new China; life expectancy, for example, is now estimated at 68 years. Nevertheless, much remains to be done to iron out regional imbalances in the health network and to upgrade the secondary (county) level of health care. Safe drinking water and sanitation systems in rural areas should be expanded. The training of health workers also requires modernization. UNDP assistance is expected to assist in upgrading rural health services and water supply and sanitation on a pilot basis as well as in the training of health personnel.

(i) Supplementary assistance to on-going projects

Strengthening of China Research Institute of Printing Science and Technology  
(CPR/80/043)

60. As a result of the development of culture, science and education, the demand for colour-illustrated books and magazines has grown enormously. At present, due to insufficient pre-press capacity of colour reproduction, many books can only be printed in black and white, thus degrading the results of illustration considerably. UNDP technical assistance began in this area in July 1980. Additional assistance is required in the amount of \$200,000 to aid the Institute to complete a research programme for the improvement of colour reproduction systems.

Biomedical Information Centre and Network (CPR/80/030)

61. The existing medical information system in China is not well equipped and its management and professional competence leave much to be desired. This results in under-utilization of documentation resources. In July 1980, UNDP started supporting the establishment of a biomedical information centre and network, with the objectives of improving the dissemination of biomedical

information in China, promoting co-operation and resource sharing among information agencies, and strengthening relevant facilities and training. UNDP is expected to provide additional assistance of \$150,000.

Experimental Centre for Clinical Diagnostic Reagents (CPR/80/034)

62. There are some 8,840 hospitals at the provincial, municipal and county levels and 55,000 in the communes, which bear a considerable workload in laboratory tests but lack biochemical reagents. In 1980, UNDP started supporting an experimental centre to improve the production and quality of biochemical reagents. UNDP is expected to provide further assistance of \$150,000.

Technical Co-operation in the Organization and Development of the China Export Packaging Institute (CPR/80/002)

63. One major constraint on rapid export expansion, and in particular to the development of light industrial exports, is the inability of the packaging industry to meet fully the structural and design requirements of packaging for export markets. This led to the establishment of the China Export Packaging Institute in 1979, for which purpose initial UNDP technical assistance was provided to upgrade package construction and design, establish an export packaging information service and formulate a medium-term development plan for the Institute. An additional UNDP input of \$200,000 is expected to ensure complete attainment of the project's objectives.

(ii) Second phase and new projects

Model Counties in Rural Health Care\*

64. A primary health care network has successfully taken shape at the county, commune and brigade levels. The objective of this project, however, is to assist in the establishment of a model county programme for the upgrading of secondary (county) level health care in each of the following provinces: Zhejiang, Guangxi, Yunnan, Liaoning, Shanxi and Shandong, with a view to further promoting health services in the vast rural areas. The initial UNDP input is estimated at \$600,000.

Drinking Water Supply and Sanitation\*

65. Safe drinking water supply in China is not sufficient and is vulnerable to serious pollution. The objective of this project is to assist in the drinking water supply and sanitation effort in Beijing, Sichuan, Guangdong, Shanxi, Zhenjiang, Jiangsu and Shanghai, which includes a survey of different sources of drinking water and study of their hygienic implications; and design research and sanitary assessment of centralized supply systems as well as development of purification techniques of drinking water in the rural areas. The project thus responds well to the International Drinking Water Supply and Sanitation Decade. The initial UNDP input is estimated at \$800,000.

Plastics Processing and Application Centre (CPR/80/006)\*

66. Plastics is an emerging industry in China. UNDP in the first phase of this project assisted in the establishment of the Plastics Processing and Application Centre focusing on agricultural applications and quality control. The second

phase of this project will aim at strengthening scientific research, standardization, information collection and dissemination, as well as technical training in the Centre to serve the plastics industry throughout the country with particular emphasis on agricultural and packaging applications. The initial UNDP input is estimated at \$400,000.

#### Synthetic Fibre Research and Development Centre (CPR/80/005)

67. The development of synthetic fibre manufacture is immediately called for to meet the clothing demand of the population. In the initial phase of the Synthetic Fibre Research and Development Centre, UNDP provided technical assistance in spinning. The second phase of this project will be directed to the development of new varieties of synthetic fibres for textile production and research on appropriate techniques for accelerated application and production. Another objective is to provide technical and advisory services including systematic laboratory work and training, and information collection and dissemination. UNDP input during the third cycle is estimated at \$3.5 million, of which a significant amount will be committed during the early part of the programme.

#### Cement Development Centre

68. While rapid progress has been recorded in the Chinese cement industry during the last 30 years, intensified housing construction both in the urban and rural areas has resulted in an urgent demand for high quality, adequate supply and different varieties of cement. The objective of this project is to assist the Tianjin Cement Institute in strengthening research on cement production so as to raise productivity, reduce energy consumption, make effective use of low-grade raw materials, improve working conditions and environmental protection. UNDP input is estimated at \$500,000.

#### Light-weight Building Materials Research and Development Centre (CPR/80/010)\*

69. The production and application of light-weight building materials is in the initial phase of development and will be intensified in order to meet the need for housing. The second phase of this project will assist in the strengthening of a light-weight building material research and development centre with immediate emphasis on the production of aero concretes, light-weight aggregates and high polymer building materials. The initial UNDP input is estimated at \$200,000.

#### Research and Development of Fly Ash Utilization

70. In Shanghai, fly ash discharge increased from 540,000 tons in 1979 to 820,000 tons in 1980, which has contributed to serious environmental pollution. The Shanghai Institute of Building Sciences has for years studied the possibility of making building materials out of fly ash and has achieved some initial results. The objective of this project is to assist the Institute in strengthening professional training, upgrading research and developing appropriate techniques to stimulate fly ash utilization. The UNDP input is estimated at \$700,000.



### Pulp and Paper Technology Centre\*

71. The objective of this project is to upgrade the Research Institute of Pulp and Paper of the Ministry of Light Industry into a pulp and paper technology centre, to assist in the diversification of raw material sources; development of new pulping and paper production methods; improvement of quality, productivity and efficiency; conservation of resource and energy; and the mitigation of pollution. The initial UNDP input is estimated at \$500,000.

### Development of Modified Natural Rubber, Rubber-plastic Blends and Anti-earthquake Building Materials\*

72. The objective of this project is to assist the Beijing Research and Design Institute of the Rubber Industry in developing modified natural rubber, rubber-plastics blends and anti-earthquake materials for application in various industries. The initial UNDP input is estimated at \$300,000.

### Glass Development Centre\*

73. Because of inadequate production, a wide gap has developed between supply and demand in flat glass. The objective of this project is the establishment of a glass development centre to provide necessary design parameters for glass plant construction, and to assist new glass plants in the testing of raw materials, fuels and initial products, as well as in the testing of new technology and equipment which they are expected to introduce. The initial UNDP input is estimated at \$200,000.

### Quality Control Laboratory for Consumer Electronic Products\*

74. In order to meet the demands for domestic electronic products, the Government established a quality control laboratory in the China Electronic Product Reliability and Environmental Testing Research Institute in early 1980. The objective of this project is to assist in the technical reform of the laboratory through training and provision of advanced technology so that it will be in a position to exercise quality control evaluation, surveillance and inspection over consumer electronic products, using current international standards. The laboratory will also be able to advise concerned manufacturers on the approach to improving the quality of their products. The initial UNDP input is estimated at \$700,000.

### Copying Machine Technology

75. Copying machine manufacture is new in China and there is certain technology yet to be acquired. As such, much is left to be desired as to the reliability of the machine itself and the quality of its reproduction. The objective of this project is to help the existing copying machine factories upgrade manufacturing techniques through training of their technicians and provision of consultancies and necessary testing equipment. The UNDP input is estimated at \$400,000.

### The East China Service Centre of Testing Technology

76. The East China Service Centre of Testing Technology, established in 1977, has provided a mass of technological data for various industries and departments working in scientific research, environmental protection and medical sciences in

Shanghai and East China. But its capability does not allow testing of organic materials. The objective of this project is to update the Centre's testing technology to broaden services through provision of training and necessary equipment. The UNDP input is estimated at \$500,000.

#### Hot Processing Technology in Machine Building

77. In the machine building industry, hot processing technology (casting, forging and heat treatment, etc.) has a direct bearing on the quality, durability and productivity of machine parts and equipment required by various industries including light industry. The Shanghai Machine Building Technology Research Institute has for many years worked on casting, forging and heat treatment technology by concentrating on applied research and close association of research with production processes. The objective of this project is to upgrade hot processing technology of the Institute by providing consultancies, training and familiarizing the Chinese specialists with such technology developed in other countries. The UNDP input is estimated at \$200,000.

#### (iii) Provision for continuous programming

78. Approximately 22 per cent of available resources not yet committed for specific projects is to be earmarked for activities related to the production of consumer goods and services to the population in the latter part of the country programme. Through continuous programming, follow-up activities for selected projects already specified in the programme (marked \* in the above paragraphs) and additional new projects will be identified for implementation during the latter part of the country programme. The new projects will be developed in the following areas: (i) housing construction methods and organization; (ii) leather processing technology; (iii) foods products inspection; (iv) carbon fibres; (v) bearings testing techniques; (vi) non-destructive testing; and (vii) dye stuffs production.

#### (iv) Other assistance in this sector

79. Several bilateral donors are supporting the upgrading of teaching facilities in their respective languages in secondary schools, at foreign languages institutes and universities. Two donors also provide assistance to upgrade medical care facilities including the construction of a large hospital for traditional medicine in Beijing and assistance to the Shandong Medical College and in the improvement of blood transfusion services.

80. WHO, under its regular programme, funds many research and training activities currently estimated to cost \$1 million yearly. UNFPA and UNICEF have large-scale programmes for 1982-1984 of \$50 million and \$18 million respectively. UNFPA's biggest project is assisting the Government in its third population census which will take place in 1982. Other projects deal with family planning information dissemination, improvement of demographic studies, introduction of population education into secondary school curricula and the upgrading of contraceptives production. UNICEF's programme includes: assistance to child development centres; hospitals for pediatric emergencies and for handicapped children; and other activities dealing with the production of infant foods, the printing of text books for primary schools, the improvement of science education at primary and pre-primary levels, pre-school teacher training, and the cold chain component of the Expanded Programme of Immunization.

81. UNIDO, United Nations Centre for Transnational Corporations (UNCTC) and ITC have financed training and consultant services against their regular funds or trust funds and special contributions in a wide variety of aspects of industrial, trade, finance and international law. The World Bank is expected to finance a programme of industrial credit. The Special Industrial Services (SIS) programme has financed a series of consultancies and training activities in such fields as polymer development, consumer electronics, etc.

### C. Energy development and conservation

82. Energy is considered a crucial issue in China's national economic development and the Government's policy is to give great importance to energy development and energy conservation with immediate stress on conservation.

83. Comparatively backward management and technology have resulted in a low utilization efficiency rate and considerable waste of energy in the country. Energy consumption is exceedingly high in industrial enterprises. According to World Bank data, energy consumption for Chinese products in equal quantity is three times higher than the average level of the developed and other developing countries. In recent years, energy conservation has been receiving increased attention and initial results have been obtained. If a further effort is exerted to bring the present energy utilization efficiency rate of 28 per cent up to 40 per cent in the next ten years, 140 million tons of standard coal will be saved each year. During the Sixth Five-Year Plan period, the energy conservation effort will be concentrated on technical innovation, equipment modernization and reforms of industrial structure and product composition. Attention will also be paid to the rational utilization of different sources of energy and their economic effectiveness.

84. Emphasizing energy conservation does not mean neglect of energy development. At present, fuel and power generation falls short of the growing needs resulting from economic development. This requires the constitution, within a reasonable limit and by all possible means, of a good base for significant improvement in energy development to eventually reduce energy shortfall.

85. UNDP assistance will cover a wide spectrum of activities within the energy sector including the development of new and renewable sources of energy, as well as conventional resources, and energy conservation. Training and the introduction of advanced techniques of conservation and development will figure prominently in the projects to be supported by UNDP.

#### (i) Supplementary assistance to on-going projects

##### Solar Heating and Cooling Techniques Demonstration Centre (CPR/80/035)

86. The Government has formulated a National Solar Energy Science and Technology Development Programme, 1980-1985, the development objective of which is to ensure the proportionate development and utilization of solar energy. Accordingly, priority is given to the development and popularization of water heaters, solar cookers, driers and passive solar house heating. An experimental programme is being implemented by the Solar Heating and Cooling Techniques Experiment Centre located in the Gansu Natural Energy Research Institute. This programme receives some initial support from UNDP which is expected to continue its assistance to this project in the amount of \$400,000.

Experimental Wind Power Station (CPR/79/023)

87. Wind resources are abundant on the sea coast, pastureland and plateaux of China. The research and utilization of wind energy is one of the effective solutions to energy deficiency in these areas. Taking this into account, a technically advanced experimental wind power station has been built with UNDP assistance in Zhejiang Province to undertake experiments and research on improved techniques, combined with a demonstration role to facilitate the development of non-conventional sources of energy. UNDP is expected to extend its assistance by an amount of \$200,000.

(ii) Second phase and new projectsProspecting, Development and Utilization of Geothermal Resources (Tianjin)\*

88. Although existing studies have proven geothermal resources over an area of 60 square kilometres in Beijing, such resources are far more promising in Tianjin where a big underground anomaly zone of 800 square kilometres is known to exist under the city proper and its suburbs containing a hot water deposit in the shallow and deep layers totaling 19.2 billion cubic metres. An ongoing UNDP-assisted project for "Technical Evaluation of Geothermal Resources and Their Development" is being implemented in the Beijing area. A phase II project will put stress on upgrading prospecting, testing and calculating methods to assess geothermal resources in Tianjin and on formulating programmes for both the development and utilization of geothermal resources within the city proper and its vicinity. The initial UNDP input is estimated at \$500,000.

Oil and Gas Survey in Southwestern China\*

89. Five provinces in Southwestern China (Yunnan, Guizhou, Guangxi, Hunan and Hubei) belong to the carbonate rock area where many oil and gas indications have already been observed. Resource prospects however, still remain uncertain because of the lack of advanced geophysical exploration. The objective of this project is to organize a standard controllable seismic focus team which will be familiarized with advanced seismic methods for making rapid progress in oil and gas prospection in Southwestern China. The initial UNDP input is estimated at \$1.2 million.

Research Centre for Thermal Energy Utilization Technology

90. China's primary energy consumption in 1980 was 560 million tons of standard coal, ranking it third in the world. More than 80 per cent of it was consumed through combustion, thermal conversion or direct thermal utilization. At present, both the utilization ratio of energy and the thermal efficiency are fairly low in general due to poor management and outmoded technology. China's annual fuel oil consumption is over 36 million tons. Fuel oil is to be gradually replaced by coal according to the national energy policy. The Government, therefore, regards the strengthening of research on combustion and thermal energy utilization as one of the important measures for energy conservation. This project is aimed at efficient conservation and utilization of energy resources through research and popularization of new combustion technology. The UNDP input is estimated at \$400,000.

### Technical Service Centre for Energy Conservation\*

91. In order to promote energy conservation in various sectors, the Government has decided to establish technical service centres for energy conservation in the major provinces and municipalities with the one in Beijing for demonstration purposes. In Beijing, integrated utilization ratio of energy is comparatively low and most enterprises are not even aware now of where and how much waste occurs and thus fail to adopt effective conservation measures. The objective of this project is to establish a technical service centre for energy conservation in Beijing for carrying out heat balance testing in factories and enterprises and rendering technical services to reduce energy consumption. The centre will be of service not only to Beijing, but will also provide guidance through demonstration for the benefit of the country as a whole. The initial UNDP input is estimated at \$450,000.

### Training Centre of Thermal Power Plant Operators

92. There is an increasing number of 200 MW and 300 MW coal-fired generating units in operation which serve as the backbone of power grids in the country. The low competence level of operators however, has resulted in undesired operational accidents, causing a great loss to the national economy. It is imperative, therefore, to set up a simulation training centre for 300 MW coal-fired generating unit operators with the objective of ensuring safe and reliable operation of such units. Three to four courses, each of 30 trainees, will be arranged annually. UNDP's input is estimated at \$600,000.

### Training Centre for Oil Exploration and Exploitation Techniques (CPR/80/049)

93. At the present oil exploration and exploitation endeavours are limited to structural reservoirs about 3,000 metres deep, techniques have not been acquired to develop stratigraphic and lithologic reservoirs which exist in large quantity. As a result, very few new reservoirs have been found in recent years, thus hindering the further growth of the petroleum industry. The second phase of this project will support a training centre for oil exploration and exploitation techniques which will facilitate training in and acquisition of advanced geo-physical techniques for oil well siting. Some assistance has already been provided to the Centre by UNDP for the training of drilling engineers. The additional UNDP input is estimated at \$400,000.

### Oil Well Sand Control Technique, Shengli Oilfield

94. The problem of sand intrusion in the Shengli oilfield is such that normal production is being seriously affected. If no sand control measure is effected, one ton of crude oil will be produced along with 5.08 cubic metres of reservoir sand on an average, even using low speed recovery methods. Given the present situation that sand control is by no means efficient or effective, the development of advanced sand control techniques is urgently called for in order to increase crude oil production. The objective of this project is to establish a research laboratory of oil well sand control techniques for the training of research personnel and field technicians in these techniques and for developing feasible sand control methods in the Shengli oilfield. UNDP's input is estimated at \$500,000.

### Energy Conservation in Aluminum Industry

95. This project will assist the Zhengzhou Aluminum Complex in energy conservation with the objective of reducing its annual energy consumption by 140,000 tons of standard coal. UNDP's input is estimated at \$350,000.

#### (iii) Provision for continuous programming

96. Approximately 15 per cent of available resources not yet committed for specific projects is to be earmarked for activities related to energy production and conservation in the latter period of the country programme. Through continuous programming, follow-up activities for selected projects already specified in the programme (marked \*) and additional new projects will be identified for implementation during the latter part of the country programme. The new projects will be developed in the following areas: (i) coal liquefaction and gasification; (ii) coal exploitation and transportation; (iii) other new and renewable energy resources; and (iv) oil recovery techniques.

#### (iv) Other assistance in this sector

97. In addition to UNDP assistance, several United Nations agencies, notably UNCTD, UNIDO, and UNCTC, are financing from their regular funds or special purpose contributions seminars and short-term consultancies in various aspects of energy development. One bilateral donor is providing a loan for coal mining. The World Bank is preparing projects for secondary oil recovery, hydropower and coal mining.

### D. Human resources for development

98. While attention is being focused on readjustment and the improvement of living standards, the long-term growth of the economy will not be neglected. To ensure future development, certain actions must be taken now to develop the nation's human resources and infrastructure which are prerequisites to such growth.

99. The modernization of the educational system is of primary importance. Educational methods and facilities must be expanded and improved and adapted to the realities of a diversified economy. This applies to all levels of the educational system as well as to professional training and studies.

100. UNDP technical assistance will be utilized to assist in the strengthening of the educational system, management and professional training.

#### (i) Supplementary assistance to on-going projects

### Strengthening of the Beijing Institute of Post and Telecommunications (CPR/79/010)

101. The Beijing Institute of Post and Telecommunications is the largest of its kind in the country. It is entrusted with the principal task of training senior technical personnel for postal and telecommunication services and undertaking scientific research. As the intended modernization of post and telecommunications will require more of such expertise, the Institute needs further strengthening which means increasing specialized courses, refurbishing

laboratories and teaching facilities and upgrading its training capability. UNDP is expected to grant further assistance in the amount of \$300,000 for this purpose.

(ii) Second phase and new projects

Strengthening of Agricultural Education (CPR/80/003)\*

102. Further training and upgrading of Chinese agricultural technicians in modern agro-science and management is highly desired in order to establish a good, integrated educational and research system and extension network. The objective of this project is to draw on UNDP assistance to effect improved teaching and scientific research in five key agricultural universities or colleges, and to strengthen the training programmes of several agricultural extension centres. UNDP's input for the second phase is initially estimated at \$400,000.

Strengthening Training and Research in Selected Key Universities (CPR/80/041)

103. A concerted effort is being made by the Government to accelerate human resource development in general, and to establish additional schools of higher learning and to strengthen existing ones in particular. The objective of this project is to upgrade training and research in selected key universities for demonstration purposes. UNDP's input for its phase II activities is \$1,200,000.

Strengthening Vocational Education\*

104. The intensified training of intermediate technicians is a pressing task in the educational sector. 1980 saw the rehabilitation and re-establishment of vocational schools. But this still fails to meet the requirements of the country's economic development both quantitatively and qualitatively. The objective of this project is to establish pilot vocational schools in Beijing, Shanghai, Tianjin, Suzhou, Shenyang and Wuhan as a first step towards a comprehensive development programme of vocational education. The initial UNDP input is estimated at \$800,000.

Adult Education (Telecourse University)\*

105. In 1979 and 1980 the Central Telecourse University in China recruited some 430,000 students who were organized in more than 20,000 classes in telecourse universities distributed in 28 provinces, municipalities and autonomous regions. The main source of recruitment is workers, teachers and recent senior middle school graduates. In more than two years of practice, the telecourse universities have proved to be a success. The Government plans to make the Central Telecourse University a new type of multi-disciplinary university for adult education. The initial UNDP input is estimated at \$200,000.

English for Special Purposes (ESP) - Language Training Network

106. Under a UNDP-assisted project for "Strengthening of the Beijing Second Foreign Languages Institute," three ESP courses have been completed with good results. The objective of the second phase is to establish an ESP network to include three centres at the Shanghai Foreign Languages Institute, the Xian Foreign Languages Institute as well as the Beijing Second Foreign Languages Institute. The Centres will run short-term, intensive ESP training courses for

technical personnel who will be sent to study abroad. UNDP's input for the second phase is estimated at \$1.2 million.

#### Strengthening Secondary Education\*

107. Among the 3,010,000 middle school teachers in China, not many have received higher education. As a result, the overall competence of these teachers is relatively low. As it would be a time-consuming process to improve the situation by depending only upon normal school graduates for replacement, efficient in-service training of middle school teachers becomes crucial. The objective of this project is to help upgrade selected secondary schools for in-service training, especially in science teaching. This will eventually enable them to become pilot middle schools capable of providing teaching experiences and training for other secondary schools. The initial UNDP input is estimated at \$600,000.

#### Improvement of Educational Facilities for Minorities

108. China is a multinational country with more than 50 minorities. Since liberation, the Government has paid close attention to the development of minority education and has trained a large number of minority cadres and many kinds of professionals. Nevertheless, educational development has yet to reach a level that is commensurate with the industrial and agricultural production in the minority areas. The objective of this project is to strengthen two minorities institutes: the Central China Minorities Institute in Wauhan and the Central Minorities Institute in Beijing, so as to improve training of minorities teachers and consequently contribute to the accelerated development of science and culture for all minorities in the country. UNDP's input is estimated at \$500,000.

#### Medical Personnel Training Centre\*

109. The objective of this project is to establish a training centre to upgrade the professional and technical competence of health management staff and nurses. The initial UNDP input is estimated at \$500,000.

#### International Economic Management Institute (CPR/80/028)

110. In accordance with its policy of co-operating with the outside world, China assigns priority to the promotion of effective economic and financial relations with other countries, multilateral organizations and foreign corporations. The objective of this project is to assist the State Import and Export Commission in the establishment of an international economic management institute to train a sufficient number of officials and managers who will have not only the knowledge and skills required for international economic negotiations and joint venture management, but also a good command of foreign languages. UNDP has provided expert services and equipment to help the institute start its training programme. As the institute is still in its initial phase of establishment, UNDP is expected to provide phase II support in the amount of \$400,000.

#### Training in Computing Technology for Trade Statistics

111. The Government is establishing a computerized foreign trade management centre. Its services will cover foreign trade statistics, custom statistics, financial accounting, trade information retrieval, port and inventory control,



import contract management and shipping administration, etc. Necessary computer facilities have been installed in the Centre. The objective of this project is to provide training opportunities for technical and managerial personnel and software engineers, in particular, so as to ensure an effective operation of the Centre to service foreign trade development. UNDP's input is estimated at \$300,000.

#### Strengthening of Qingdao Advanced Training Institute

112. In recent years, China has rapidly expanded its maritime commercial fleet, but training of officers for the vessels has lagged behind. The objective of this project is to assist the Qingdao Training Institute for Seamen in upgrading its training programmes for maritime officers. UNDP's input is estimated at \$500,000.

#### Civil Aviation Professional Training

113. The civil aviation service in the country has made headway in recent years demonstrated by its rapidly increasing operations. In spite of that, the technical and managerial competence throughout the Civil Aviation Administration (CAAC) does not appear to be compatible with such progress which imposes adverse impact on the efficient use of existing facilities as well as on service quality. The objective of this project is to strengthen the Beijing Civil Aviation Training Centre by provision of training courses and advisory services designed to train specialists and core technicians for different job assignments of the CAAC. The initial UNDP input is estimated at \$1,200,000.

#### Training Centre for Enterprise Management\*

114. This project will assist in the establishment of a national training centre for enterprise management based in Beijing to familiarize managers with updated management skills and to train a good number of specialists capable of providing advisory services on a long-term basis, with the aim of improving the overall management of existing enterprises. The initial UNDP input is estimated at \$500,000.

#### Beijing Training Centre for Senior Geologists

115. The objective of this project is to establish a training centre in Beijing to train high level expertise capable of undertaking research on theoretical geology and advanced geological sciences. The centre will also serve the purpose of international academic exchanges and co-operation. The UNDP input is estimated at \$400,000.

#### (iii) Provision for continuous programming

116. Approximately 11 per cent of available resources not yet committed for specific projects is to be earmarked for activities related to human resources for development in the latter part of the country programme. Through continuous programming, follow-up activities for selected projects already specified in the programme (marked \* in the paragraphs above) and additional new projects will be identified for implementation during the latter part of the country programme. The new projects will be developed in the following areas: (i) training in statistics; (ii) export promotion; (iii) educational broadcasting; (iv) teacher training; and (v) budgeting and auditing.

(iv) Other assistance in this sector

117. Many countries have signed scientific and technological co-operation agreements with China providing for training and the exchange of scientists and scholars in a wide variety of disciplines. Moreover, many co-operative arrangements have been made between Chinese and foreign universities. Some bilateral donors, as well as UNIDO, have financed programmes in management training. The World Bank has approved a loan for the strengthening of university education and is also preparing a project in agricultural education and research. WIPO has financed several training courses in the fields of patent and trade mark law and protection. A bilateral donor is assisting in the establishment of a patent office.

E. Infrastructure for development

118. Modernization of the nation's physical infrastructure is a vast undertaking that must be tackled selectively over many years. A high priority lies with the management of water resources, a key link in agriculture and industry. The improvement of communications is equally vital in a country of China's land area and population. But much of the country's infrastructure is highly vulnerable to natural disasters; floods and earthquakes are the most common and dangerous. Preventive measures are essential to protect the nation against such disasters.

(i) Supplementary assistance to on-going projects

Flood Forecasting System for the Yellow River (CPR/80/019)

119. The Yellow River is the second longest river in China. There have been numerous disasters caused by rampant flooding in the lower reaches. The Government has taken a series of engineering measures for flood control in these parts of the river. A further and more important attempt is the implementation of a water conservancy project in the mainstream and its tributaries in the San Hua Reach which is one of the three sources of floods in the lower reach. The objective of this project is to establish a real-time telemetering and flood forecasting system for the San-men Gorge and Huayuankou Reach. In the course of project implementation, it has become apparent that an additional UNDP input of \$400,000 will be required to ensure achievement of the project's objectives.

Development of National Water Resources Data and Technology Transfer Centre (CPR/80/018)

120. A considerable effort is being made to upgrade quantitative and qualitative use of water resources data by planners and decision makers for the assessment, planning and management of water resources, as required for flood control, irrigation, hydro-power generation, industrial and agricultural production, drinking water supply, reservoir use and the development of other sectors. In 1980, UNDP began its assistance for the development of a water resource data and information system of in association with the Hydrological Operational Multi-purpose Sub-programme of WMO which is also receiving support at the regional level under the project RAS/79/113. UNDP will provide further support in the amount of \$200,000.

(ii) Hydrometeorological Forecasting in the Midstream of Chang-jiang River (Yangtze)

121. The midstream of the Chang-jiang River in Hubei Province is situated at 30 degrees north latitude where cold and warm air alternate constantly. Consequently, natural disasters, very often in the form of hailstorms, torrential rains and floods, occur frequently and destructively. To help guard against these dangers, this project will strengthen hydrometeorological monitoring and forecasting in the midstream of Chang-jiang River. UNDP's input is estimated at \$900,000.

Evaluation of Ground Water Resource in the Huang-Huai-Hai Plain\*

122. The Huanghe (Yellow River) Huaihe (Huai River), Haihe (Hai River) plain occupies about one-fifth of the country's total cultivated land and is one of the most important grain, cotton, oil crop and tobacco growing regions in the country. In contrast to other regions, its output is modest owing mainly but not exclusively to drought and the salinity of land which cause low yields. Surface water is no longer sufficient to support industrial and agricultural production. Rational development and utilization of ground water, therefore, is essential. The objective of this project is to evaluate ground water resources in preparation for effective development in the plain. The initial UNDP input is estimated at \$500,000.

The Experimental Site for Earthquake Prediction at Beijing-Tianjin-Tangshan-Zhangjiakou Region (CPR/80/040)\*

123. The Government has decided to establish an experimental site for earthquake prediction in the Beijing-Tianjin-Tangshan-Zhangjiakou region, an area of high seismicity where several devastating earthquakes have already occurred. While the UNDP contribution during the initial phase of this project was concentrated on improving seismic sounding technology, follow-up support will be geared to the establishment of various kinds of forewarning and monitoring stations to obtain relevant data for reliable forecasting. UNDP's input during the third cycle is estimated at \$2 million of which a significant amount will be committed during the early part of the programme.

Development of Telecommunications (CPR/80/024)\*

124. Telephone coverage is far from adequate and the service is not ideal due to the use of manually operated exchanges and open wire lines. The Government intends to gradually automate the national telephone and telegraph services. The objective of the second phase is to further assist in training, to upgrade management and planning pertaining to telephone networking, as well as to introduce such new technology as digital transmission systems. The initial UNDP input is estimated at \$400,000.

(iii) Provision for continuous programming

125. Approximately 12 per cent of available resources not yet committed for specific projects is to be earmarked for activities related to infrastructure development. Through continuous programming, follow-up activities for selected projects already specified in the Programme (marked \* in the paragraphs above) and additional new projects will be identified for implementation during the latter part of the country programme.

(iv) Other assistance in this sector

126. One bilateral donor is providing technical assistance in connection with loans to renew and extend the railway system. The World Bank is preparing a project for port development. Assistance in meteorology and flood forecasting is also being made available through the voluntary co-operation programme of WMO. The Interim Fund for Science and Technology for Development is supporting a project to establish a national remote sensing centre as well as a science and technology policy options study.

F. Inter-sectoral support

127. This section contains five inter-sectoral support projects which will, with UNDP assistance, mobilize a special source of technical know-how through the "TOKTEN" scheme; utilize the middle level expertise of the United Nations Volunteers programme; promote investment support activities; implement timely and effective independent consultancies and training; and stimulate technical co-operation among developing countries.

(i) Second phase and new projects

Transfer of Know-how Through Expatriate Nationals (TOKTEN) (CPR/80/013)

128. This project will continue to provide opportunities for expatriate nationals with specialized knowledge to be of service to China, which means transfer of technical know-how in such areas as agriculture, water conservancy, biology, energy, medicine, management, investment and in science and technology. The additional UNDP input is initially estimated at \$400,000.

United Nations Volunteers Assistance Project (CPR/81/006)

129. The objective of this project is to use the middle-level expertise of the United Nations Volunteers to assist in the implementation of multilateral and multi-bilateral development assistance activities in such areas as education, industry, agriculture, forestry, fisheries, public health and tourism. UNDP's input for the second phase of this project is initially estimated at \$250,000.

Technical Co-operation Among Developing Countries

130. China will continue its positive effort to arrange and implement multi-lateral co-operation activities for the purpose of strengthening its technical co-operation with other developing countries. As indicated in paragraph 19 above, the objective of this programme is to promote TCDC activities through regional centres based in China, which will provide specialized training facilities for other developing countries in such fields as primary health care, traditional medicine, sericulture, mini hydropower technology, biogas, rural development and aquaculture. China will initially make available for 1982-1983 \$1.5 million from its IPF to upgrade and provide training opportunities at these centres.

Pre-investment and Investment Support\*

131. In order to make productive use of investments, feasibility studies and other support activities are essential for capital construction projects,

including projects drawing on foreign investment. The objective of this project is to assist the relevant planning and technical departments of China in improving feasibility studies, project design, contracting and bidding. The initial UNDP input is estimated at \$1.8 million.

#### Unspecified Consultancy and Training Umbrella

132. There will be numerous requests for short-term, independent consultancies and training during the third cycle, in addition to those formulated according to the specific objectives of all individual projects contained in the country programme. This project will serve as a mechanism that will permit timely and effective implementation of those requests which are justified on a case-by-case review. The initial UNDP input is estimated at \$1 million.

#### (iii) Provision for continuous programming

133. Approximately 18 per cent of available resources not yet committed for specific projects is to be earmarked to further support the projects listed above during the latter part of the country programme.

#### (iv) Other assistance in this sector

134. In response to an appeal made by UNDR0 following an on-site survey in January 1981, external assistance was provided to the disaster-stricken provinces of Hubei (flood) and Hebei (drought). Fourteen countries, the EEC, UNICEF and WFP supplied grain, food supplements, clothing, medical supplies and equipment and fertilizers at a total estimated cost of approximately \$20 million. Under the programme reserve, UNDP approved \$350,000 for relief and rehabilitation in the stricken areas (pumping stations and wells).



FINANCIAL SUMMARY

GC/CP/CPR/1  
English  
Annex I

A. Resources

\$

(a)	IPF and other resources	
	(i) Illustrative IPF for programme period	142 000 000
	(ii) Carry-over from previous IPF cycles	(15 000 000)
	(iii) Other resources <sup>*/</sup>	(7 100 000)
	(b) Provision for adequate programming	<u>26 980 000</u>
	TOTAL	<u>146 880 000</u>

B. Use of resources

(a)	Programmed	
	(i) Ongoing projects	13 000 000
	(ii) New projects and new phases included in the country programme	72 000 000
	(iii) Earmarked for specific objectives and activities for which projects are to be worked out (continuous programming at a later stage)	34 900 000
	Subtotal	<u>119 900 000</u>
	(b) Reserve	-
	(c) Unprogrammed balance <sup>a/</sup>	<u>26 980 000</u>
	TOTAL	<u>146 880 000</u>

C. Financial distribution of programme, by sector

	<u>Sector<sup>b/</sup></u>	<u>Ongoing projects</u>	<u>New projects</u>	<u>Sectoral earmarkings</u>	<u>TOTAL</u>
		\$	\$	\$	
02	General development issues, policy & planning	1 200 000	7 625 000	3 165 000	11 990 000
03	Natural resources	1 300 000	11 450 000	5 235 000	17 985 000
04	Agriculture, forestry & fisheries	2 100 000	12 350 000	5 933 000	20 383 000
05	Industry	1 800 000	15 200 000	6 980 000	23 980 000
06	Transport & communications	360 000	4 740 000	2 094 000	7 194 000
07	International trade & development finances	570 000	2 505 000	1 721 000	4 796 000
10	Health	1 020 000	4 080 000	2 094 000	7 194 000
11	Education	1 050 000	8 300 000	3 839 000	13 189 000
16	Science & Technology	3 600 000	5 750 000	3 839 000	13 189 000
	TOTAL	13 000 000	72 000 000	34 900 000	119 900 000

<sup>\*/</sup> Per statement of Chinese delegate in the June 1980 session of the UNDP Governing Council.

<sup>a/</sup> 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/FIELD/111; UNDP/HQTRS/126.

<sup>b/</sup> According to ACC classification.





PROJECTS PROGRAMMED IN THE SECOND CYCLE  
UNDER BORROWING FACILITIES FROM THIRD CYCLE

<u>Project No.</u>	<u>Title</u>	<u>UNDP input (\$,000)</u>
CPR/80/001	Fellowships in Port Administration and Operation	25
CPR/80/002	Technical Co-operation in the Organization and Development of the China Export Packaging Institute	200
CPR/80/003	Strengthening Agricultural Universities	800
CPR/80/004	Primary Health Care - Health Manpower Development	200
CPR/80/005	Assistance for the Establishment of the Spinning Division - Synthetic Fibre Research Centre	500
CPR/80/006	Plastic Processing and Application Centre	450
CPR/80/007	Assistance to the Establishment of Central Leather Laboratory in Shanghai	250
CPR/80/008	Pesticides	165
CPR/80/009	Chemical Engineering Research Laboratory	419
CPR/80/010	Improvement of Building Materials Manufacture	300
CPR/80/011	Chemical Reaction Engineering Laboratory for Extractive Metallurgy	326
CPR/80/012	Industrial Management Development	220
CPR/80/013	Transfer of Know-how Through Expatriate Nationals	160
CPR/80/014	Strengthening of South China Tropical Crops Testing Centre	500
CPR/80/015	Fish Preservation	300
CPR/80/016	Wood Utilization	500
CPR/80/017	Agricultural Machinery Testing Centre and Technical Service Industry	700
CPR/80/018	Development of National Water Resources, Data and Technical Transfer Centre	250
CPR/80/019	Improvement of the Real-time Telemetry and Flood Forecasting System for the Sammen Gorge and Huayuankou Reach of the Yellow River	300
CPR/80/020	Utilization of Land Resources of the Hilly Loess Plateau of Northwestern China	200
CPR/80/021	Assistance for Improvement in the Processing of Oilseeds	130
CPR/80/022	Meat Freezing - By-products Utilization	110
CPR/80/023	Beijing Vegetable Research Centre	250
CPR/80/024	Development of Telecommunications	417
CPR/80/025	Commodity Inspection	150
CPR/80/026	Centre for International Economics and Trade	60
CPR/80/027	Strengthening the Second Secondary School Attached to the East China Teachers University	220
CPR/80/028	Institute of International Economic Management	404
CPR/80/029	Trade Information and Export Market Research	150
CPR/80/030	Biomedical Information Centre and Network	200
CPR/80/031	Establishment of Research Centre in Traditional Medicine	311
CPR/80/032	National Drug Standardization	167
CPR/80/033	Research of Food Hygiene Standards and Inspection	181
CPR/80/034	Experimental Centre for Clinical Diagnosis Reagents	200
CPR/80/035	Solar Heating and Cooling Techniques Demonstration Centre	350
CPR/80/036	High Priority Research Projects in Science and Technology	764
CPR/80/037	Experimental Research Centre of Organic Geochemistry	121
CPR/80/038	Research and Monitoring of Atmospheric Pollution	317
CPR/80/039	Environmental Pollution Control in Beijing	300

CPR/80/040	The Experimental Site for Earthquake Prediction at Beijing-Tianjin-Tangshan-Zhengjiakou Region	1005
CPR/80/041	Strengthening Training and Research in Selected Key Universities	800
CPR/80/042	Strengthening ESP Programme at Beijing Second Foreign Language Institute	534
CPR/80/043	Development of China Research Institute of Printing Science and Technology	252
CPR/80/044	Sixteen m/m Film Laboratory Centre	260
CPR/80/045	Aluminum Window/Door Frames	600
CPR/80/046	Strengthening of the Centre of Petro-Minerological Analysis on Geological Samples	369
CPR/80/047	Bauxite/Aluminum Research	500
CPR/80/048	Techniques of Direct Coal Liquefaction	700
CPR/80/049	Training Centre for Drilling Techniques	504
CPR/80/050	Training and Development of Micro-Computer Systems Application	500
CPR/80/051	Atmospheric Environment Research Centre for Fossil Fuel-fired Power Plants	205
CPR/80/052	Assistance to Material Research Institute on Non-destructive Testing	250
CPR/80/053	Manufacturing Technology of Compax Diamond Blank	34
CPR/80/054	Strengthening of the Institute of Metal Research in the Field of Materials Science Training	215
CPR/80/055	Prevention & Therapeutic Measures of Common Urinary Diseases	184
CPR/80/056	Semen Freezing and Artificial Insemination Techniques	120
CPR/80/057	Assistance to Improve Olive Oil Extraction	160
CPR/80/059	Photographic Techniques and Export Promotion	40
CPR/80/060	Assistance to the Bearing Testing Centre	200
CPR/80/061	Research and Development of Dye-stuffs	300
CPR/80/062	Establishment of Inductively Coupled Plasma Spectrometre Laboratory	145
CPR/80/063	Deep Borehole Surveying	95
CPR/80/064	Manufacturing Technology of Quartz-spring Gravimetre	30
CPR/80/065	Geothermal Research	311
CPR/80/066	National Training & Application Centre of Agricultural Remote Sensing	650
CPR/80/067	Shipping Data Processing Centre	250
CPR/80/068	Coastal Engineering Research Centre	256
CPR/80/070	Research in Oral Health	160
CPR/80/071	TCDC Meeting in Development of Agricultural Machinery Industry	70
CPR/80/072	Preparation of Investment Projects	600
CPR/80/074	Assistance for the Promotion of Technical Co-operation Activities Through Consultations with UN Agencies	30
CPR/80/075	TCDC Solidarity Programmes with Bangladesh and Sudan	200
CPR/80/077	Assistance to the General Machinery Bureau - Electrostatic Precipitator Testing and Development	250
CPR/81/001	Assistance to Regional Sericulture Training Centre	300
CPR/81/002	Integrated Rural Development Demonstration Centre	50
CPR/81/003	Research & Training Centre for Biogas Development	250
CPR/81/004	Mini Hydro-power Generation	150
CPR/81/006	UNV Assistance Project	280
CPR/81/010	Improvement of Production and Technology of Photographic Plates	213