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PROGRAMME PLANNING

Country and intercountry programmes and projects

FOURTH COUNTRY PROGRAMME FOR HUNGARY\*

<u>Programme period</u>	<u>Actual resources programmed</u>	\$
January 1987-December 1991	IPF for 1987-1991	1 925 000

CONTENTS

	<u>Paragraphs</u>	<u>Page</u>
I. DEVELOPMENT TRENDS, STRATEGIES AND PRIORITIES . . .	1 - 9	2
A. Current economic trends . . . . .	1 - 2	2
B. National development strategies . . . . .	3 - 8	2
C. Technical co-operation priorities . . . . .	9	3
II. THE COUNTRY PROGRAMME . . . . .	10 - 50	3
A. Assessment of current country programme . . . . .	10 - 22	3
B. New programme proposal . . . . .	23 - 49	5
C. Unprogrammed reserve . . . . .	50	11
Annex: Financial summary		

\*Detailed listings of projects and other related data prepared as part of the country programming exercise are available on request. These listings include: (a) proposed projects; (b) distribution of resources by objective; (c) distribution of new country programme by sector.

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## I. DEVELOPMENT TRENDS, STRATEGIES AND PRIORITIES

### A. Current economic trends

1. The dominant features of Hungary's present economic situation derive from the combined impact of a heavy debt burden, adverse trends in external trade and the rising cost of external borrowing which forced a major shift of policy in 1979-1980. This involved, first, a stabilization programme to contain domestic expenditures at levels that would both reduce import demand and release significant resources for exports and, second, the vigorous pursuit of the process of structural economic reforms originally initiated in 1968, which were designed to extend the role of market forces in the Hungarian economy, improve efficiency and increase the competitiveness of Hungarian products in world markets.

2. Hungary's gross domestic product (GDP) grew at 2.4 per cent during 1984, a rate substantially higher than that of 1983 (0.7 per cent). The most striking success of the Hungarian adjustment programme (begun in 1980) has been the conversion of a convertible currency-account deficit in 1982 into a record trade surplus of \$1.2 billion in 1984. While modest increases in exports have contributed to this improvement, imports and investment have both been drastically compressed. Since 1980, Hungary's imports have grown by only about 1 per cent a year in real terms; gross domestic investment has declined for six consecutive years and, by 1984, it had dropped to almost two thirds of its 1978 level. Together with the restoration of inflows of external capital, these elements of economic stabilization have permitted Hungary to rebuild its convertible-currency reserves and to re-establish its credit-worthiness. However, a substantial price has been paid in terms of foregone growth and minimal improvements in consumption for the population. Hungary is proceeding with major medium-term reforms linked to adjustments in incentives and economic structure; these include expanding the role of market prices, improving enterprise management and upgrading industrial technology and agricultural efficiency. These adjustment efforts have as a major goal improvement in the country's export competitiveness. If these efforts are successful, and if there is no strong downturn in the external trade and credit environments, Hungary's path to sustainable growth, one that is less constrained by foreign-exchange shortages, should be less difficult.

### B. National development strategies

3. The seventh five-year plan 1986-1990, now being finalized, will continue to focus on strengthening equilibrium in the external accounts; on structural transformation to make productive units more efficient and internationally competitive; and on improvements in living standards.

4. The development of the industrial sector has been the principal driving force in the transformation of Hungary from a largely agrarian society to a relatively modern economy in the space of three decades. Industry generates about 40 per cent of GDP, provides over one third of total employment and total gross capital formation and accounts for almost 75 per cent of the country's exports. One of the problems of industry is the low rate of innovations to replace obsolete production methods and products. In this

connection, the Government is determined to place increased emphasis on domestic technical innovations, import of advanced foreign technology, co-operation agreements with foreign companies, modernization of information and data-base systems and (training of more people in higher technological skills and in more sophisticated computer-assisted) manufacturing techniques.

5. The agricultural sector has met the important objective of ensuring the country's self-sufficiency in food and providing a net surplus of exports. The priority now is to enhance the efficiency of farming operations in order to raise the return on resource inputs and expand the exportable surplus (meat, grain and processed food products) available from this sector. One of the measures considered by the Government for improving even further the productivity of the sector has to do with plant protection. The development of pesticides in Hungary started in 1960 in response to growth in domestic demand. Approximately 60 per cent of the plant protection chemicals produced are now consumed domestically but the Government is determined to substitute less toxic chemicals for the highly toxic products currently used.

6. To protect the health of the population from agricultural chemicals and other forms of pollution, the Government has made environmental protection a national priority and will guard this priority very carefully in the future.

7. Projects for the development of infrastructure and natural resources, including energy and mining, figure prominently in the plan. Protection of the Danube bank-well filtered water and development of technology for low calorific-value coals and low-grade raw materials are among these projects.

8. Social welfare conditions in Hungary are good and in some cases are comparable with those of the more industrialized countries. This is the result of deliberate Government policies and the consolidation of these achievements is an important objective of the plan.

### C. Technical co-operation priorities

9. Fourteen project proposals are described in chapter II. All proposals enjoy priority and are in line with the above strategies and the overall development objectives of the plan. Of the 14 proposals, 6 aim at bringing to a successful conclusion activities begun in the third cycle.

## II. THE COUNTRY PROGRAMME

### A. Assessment of current country programme

10. Hungary's IPF for the current cycle had been established at \$3.5 million. As a consequence of the decision to programme resources at 55 per cent, the IPF was reduced to \$1,925,000. Together with a carry-over from the previous cycle, the UNDP funds available for the period 1982-1986 amount to \$2,302,000.

11. The above decision notwithstanding, the Government implemented all the activities planned in the current country programme with decreased budgets with the exception of the small-scale project for advisory services in

business organization and management which was withdrawn altogether from the country programme.

#### Natural resources

12. For better utilization of the country's scarce raw materials, the Government is developing with UNDP assistance, technology for the complex utilization of low-grade and secondary raw materials and coals of low calorific value. The achievements of this national project have led to a regional project (RER/85/001) the objective of which is to make leading mineralogists and technologists from developing countries acquainted with the results achieved and the practical experience acquired in the fields of newly developed techniques of coals identification, appropriate technologies of beneficiation of copper/polymetallic ores, quartz sand beneficiation technologies and processing of heavy metal fractions from quartz sand beneficiation.

13. UNDP assistance is also being directed with good results towards the elaboration of comprehensive methods for the prevention of non-point source pollution caused by land run-off and the formulation and application of pesticides less harmful to the environment in the agriculture and public health sectors. Innovative methods for a systematic reduction in water pollution have been developed and new less toxic agricultural chemicals are being tested.

14. The above activities respond to national priority needs and fulfil one of the main objectives of the current country programme.

#### Science and technology

15. The projects being implemented with UNDP assistance in this sector are providing valuable support to applied research in radiation chemistry and radiation technology; training in computer-aided design; training in various scientific and technological fields; and the introduction of high capacity microfiche tools.

16. Activities which bridged the second and third cycles and which were successfully completed in 1984 resulted in the introduction of computerized information services which are enabling Hungarian researchers, documentalists and library users to obtain rapid access to a wider range of bibliographic materials.

17. Other activities started in the second cycle aimed at energy conservation in the operation of buildings are continuing and are still consistent with the Government policy of keeping the annual rate of energy consumption under control.

18. In addition to improving performance in the material spheres of the economy, considerable emphasis continues to be placed by the Government on the advancement of scientific and technological development; hence the continued relevance of these projects to national objectives as well as to those of the current country programme.

## Health

19. Economic policy in Hungary has a strong commitment to social equity. It is for this reason that the current national plan 1981-1985 established, as a paramount objective, the maintenance of living standards, the prevention of disease and the development of medical equipment. With UNDP assistance, a project now under way is introducing new diagnostic and therapeutic methods pertaining to haematology and immunology and is thus fulfilling the objective assigned to it in the country programme. The National Institute of Haematology and Blood Transfusion has over the past two years developed new diagnostic tests for early recognition of iron deficiency as well as assays for ferritin and lactoferrin concentration in plasma. Together with the production of test serums, this activity constitutes a valuable improvement in the diagnostic capacity of Hungary's health care. Also ongoing is highly sophisticated research in membrane physiology, producing new knowledge which in a long-term perspective will benefit disease control. Another project wound up its activities successfully in 1985 after training 674 technicians in the repair and maintenance of biomedical equipment.

## Transport

20. The decision to continue the regional project for the North-South Trans-European Motorway (TEM) into the third cycle entailed the continuation of national activities of the UNDP-supported TEM country project to finalize studies and the design of the Hungarian section of TEM. The resolve of the Government to integrate its transport network with that of Europe remains very strong. In this connection, the Government has obtained a loan from the World Bank for the construction, among other facilities, of the first phase - 14 km - of the 28 km four-lane motorway by-pass of Budapest, including two bridges across the Danube.

## Conclusions

21. Practically all the activities programmed in the current cycle are being carried out with very good and sometimes outstanding results such as in the development of technology for low calorific-value coals and secondary raw materials, in the prevention of non-point source pollution, in the development of modern information systems and in immunology.

22. It is expected that the above ongoing activities will be completed by the end of the cycle, as originally scheduled, with six projects proposed for new phases of assistance. These are listed in section B below.

### B. New programme proposal

23. The need to strengthen the equilibrium in external accounts requires improvements in the productive efficiency of the economy and the modernization of its structure. Science and technology will have to be given a greater role in this modernization process and more people will have to be trained in higher management and technological skills as well as in sophisticated manufacturing techniques.

24. The need to bring about improvements in the living standards of the population requires for its part the upgrading of services and infrastructure, including health-care services, water supply and other public facilities.

25. With these needs in mind, the overall orientation and focus of the new programme will be towards supporting scientific and technological activities and enhancing management techniques, developing natural resources and assisting in national efforts aimed at attaining better health for the population. In the areas of modern information systems, education in computer-aided design and management, radiation and metallurgical technologies, chemicals, immunology and medical equipment, the focus will be on bringing to a successful conclusion important activities launched in the third cycle.

1. Upgrading of technology and the skills of scientists and engineers

26. The modernization of data-record systems has attracted sizeable investments over the past five years. Similarly, efforts continue to be directed at developing computer technology and introducing mechanization of design in industry; also there is now a national project to equip all secondary schools with computers. This project received UNDP assistance in the second cycle, mainly for the development of new educational curricula in computer subjects. Another project assisted by UNDP in the third cycle and which will continue in the fourth cycle, provides training in computer-aided design. However, to make more effective use of the various data bases and to pursue further the objective of training more students in computer-aided design and radiation technologies, the Government proposes the following set of activities for UNDP assistance in the fourth cycle.

(a) Projects

27. In Hungary, as in other countries which have reached a certain degree of technological sophistication, the needs for scientific and technological information have made it necessary to develop a number of services for such data. To improve the flow and use of these data, the Government proposes to develop existing data bases and link up some of them generating scientific, technological and economic information into one network and establish models for its operation. For this, the Government is setting aside \$395,000 in the fourth cycle.

28. The establishment of another network using micro-computers in higher education is also foreseen to improve the knowledge and disseminate the results obtained during the current country programme project for the introduction of education on computer-aided design. The allocation being set aside for this purpose is \$200,000.

29. To develop scale-up methodology by computerized modelling and parameter estimation for radiation processes which have an economic impact on Hungarian chemical and agro-based industries through the manufacture of new products or the creation of new processes in polymerization, disinfection and chemical synthesis, a UNDP-assisted project is under way and will be completed towards the end of the current cycle. A modern automated radiation laboratory

facility with trained staff for linear accelerator operation, spectrophotometry and pulsed-beam dosimetry is planned to be fully established by that time. To strengthen the laboratory further and to expand its activities for educational purposes, an allocation of \$20,000 is proposed in the fourth cycle.

30. An allocation of \$155,000 is proposed for fellowships in the field of science and technology. As in the current cycle, a number of "umbrella" fellowship projects will be formulated to cover training needs in the fourth cycle.

(b) Linkages

31. It is hoped that there will be some successful results from the first three project proposals which could be utilized to the benefit of other regions within the framework of the "Outreach" and TCDC programmes. Besides, the intention of the first proposal is the promotion of communication of scientific, technological and economic information not only within the country, but also with other interested countries.

2. Development of natural resources

32. The drinking water demand in Hungary is at present 5 million cubic metres per day, and it is estimated that this will double by the year 2000. At present bank-well filtered water accounts for 44 per cent of Hungary's potable water supply. The entire Danube section in Hungary and its tributaries are bordered by sand-gravel layers permitting water intakes based on bank-well filtration. This resource is to be further developed and protected.

33. Through the project described in paragraphs 12-14 above, most advanced highly computerized equipment is being absorbed, and new approaches and techniques are being developed for investigating minerals, coals and secondary raw materials. The requirement for the next five years is to recycle waste from metallurgical plants and develop technologies for this purpose. The Government attaches great importance to this technology and considers activities in this area as the logical sequel to the operations carried out under the predecessor project.

34. Conscious of the need to protect the health of the population and the environment against the excessive use of agricultural chemicals and air pollution and to limit and gradually reduce and prevent air pollution including transboundary air pollution, the Government intends to introduce less toxic chemicals in agriculture and monitor long-range air pollution. In the light of these considerations the following set of activities is proposed.

(a) Projects

35. Accessibility of high-grade raw materials, especially those which consist of only a few components in higher concentrations, have tended to decrease world-wide. Consequently, multi-component raw materials with comparatively low valuable concentrations have gained in importance. This is also true of low calorific-value coals. New demand can be met only from these low-grade

resources. Two Hungarian national programmes address the utilization of these resources, the industrial goals of which may be achieved in a more effective and modern way by the performance of the ongoing UNDP project for the complex utilization of low-grade and secondary raw materials for metallurgy and low calorific-value coal. The project, which uses electron spectroscopy for chemical applications techniques is to wind up operations in 1986. However, it is proposed that a new phase for the improvement of the material and energy utilization of metallurgical technologies through the use of industrial waste be financed in the fourth cycle with an allocation of \$170,000.

36. The protection of bank-well filtered drinking water resources is of basic importance as these provide the major part of the drinking water resources in the country. Although it is generally known which parts of the river bank can be considered as potential bank-well filtered water sources, to date the lack of data for systematic exploration restrict their rational utilization. Further, in some sections where bank-well filter systems exist, frequent pollution occurs partly from contaminated groundwater arriving at the bank-well filter area and partly from pollution in the river itself. The quality of the water in the Danube River and the improvements occurring during bank-well filtration have to be taken into consideration, bearing in mind that, depending on the relative levels of water in the river and in the aquifer, the flow to bank-well filter wells can be either from the river or from the land. Many questions need to be investigated if full use is to be made of bank-well filtration, including the systematic identification and rational exploitation of suitable sites, natural filtering characteristics and water quality changes, possibilities for bank modifications to improve performance, changes in extracted water quality with changing river characteristics etc. Special emphasis has also to be given to the river-bed sediments and the chemical biological and physical processes which can possibly take place in it. For a research and development programme to elaborate the methodology for monitoring bank-well filtered water resources and preventing their pollution, an allocation of \$170,000 is proposed.

37. Over the past two decades, the Government promulgated laws and ordinances prohibiting harmful pollution of the atmosphere and became party to many conventions in the field of the environment including the 1979 Geneva Convention on Long-Range Transboundary Air Pollution. As with water, the Government plans to strengthen the existing system of monitoring air pollution by introducing modern instrumentation and techniques for monitoring air pollutants and by upgrading training in programmes related to the environmental aspects of pollution by major air pollutants. For this activity an allocation of \$190,000 is set aside in the fourth cycle.

38. Agriculture in Hungary applies large quantities of pesticides to secure high outputs in the face of ravaging diseases, insects and weeds. In terms of demand, Hungary is among the 10 largest pesticide-consumer countries. Insecticides represent a high risk both as biological toxicants and as environmental pollutants. Research work is therefore being reinforced in order to substitute less toxic insecticides for the currently used highly toxic products. This work is being carried out with UNDP assistance at the National Research Institute for Plant Protection. As indicated above, the project results are very encouraging and will contribute to world-wide efforts

aimed at eliminating the currently used traditional insecticides which create a permanent threat to humans and animals when applied for agricultural and sanitary purposes. To use the results of the research work under way for practical application and to carry out further tests, an allocation of \$110,000 is proposed.

(b) Linkages

39. The above project will be carried out in full co-operation with the regional project for European Co-operation on Environmental Health Aspects of the Control of Chemicals (RER/82/002). Should their results be successful, these could be shared with other countries in the framework of the "Outreach" and technical co-operation among developing countries (TCDC) programmes.

3. Assistance for national efforts aimed at attaining better health for the population

40. The improvement of the health and living standards of the population is a basic political objective of the Government. Efforts are made on several levels and with different approaches. Some of the main objectives: the improvement and extension of medical services, the strengthening of the industrial infrastructure of these services and the enhancement of the social security of the retired people. The proposed activities in this area respond to these objectives and aim at improving the efficiency of blood transfusion instruments, supporting the production of special bioceramics used in implants and prosthetics, extending the scope of training of professionals, providing maintenance of biomedical equipment and providing the basis for research on the development of a new pension system.

(a) Projects

41. Currently under way are UNDP-assisted activities to increase the efficiency of research in Hungary related to haematology, immunology and blood transfusion. To increase the efficiency of this research further and to introduce into practice the results of the most important new methodologies on a nation-wide basis, the Government plans, under a new phase of the current project, to strengthen the National Institute for Haematology and Blood Transfusion by an additional allocation of \$90,000 in the fourth cycle.

42. The Hungarian Central Research and Design Institute for the Silicate Industry has developed methods for the production of high purity alumina. Measurements and medical tests in accordance with international standards have confirmed that this may serve as the basic material for the production of various implants. At present, laboratory investigations are continuing. To strengthen research and development work on bioceramic materials for implants, prosthetic and orthopedic appliances with a view to rehabilitating the mobility of disabled persons in Hungary, an allocation of \$75,000 is proposed for assistance in this field.

43. During the second and third cycles, a UNDP-assisted project was carried out and successfully completed in 1984 after providing organized training for

technicians to maintain, repair and service biomedical equipment, mainly X-ray devices, electro-medical and electro-mechanical equipment. During the project period no fewer than 674 people were trained, more than four times the number originally envisaged. Under a new phase in the fourth cycle, the Government plans to provide additional training on micro-processor-based medical equipment and proposes an allocation of \$40,000 for the purpose so as to improve the efficiency of medical engineering applied to the public health service in Hungary.

44. To elaborate a social security plan so as to maintain the working ability of the active population, the Government proposes an allocation of \$50,000 for expertise in this field.

(b) Linkages

45. As with the proposals under objectives 1 and 2 above, should the results of projects in this sector be successful, these could be shared with other countries in the framework of the "Outreach" and TCDC programmes.

4. Enhancement of management techniques and development of human resources

46. As the Hungarian economy is highly trade dependent, the Government is making great efforts to reinforce the equilibrium in the external account and to alleviate the burden of international debt. In this connection, the need arises for developing and adopting an up-to-date strategy for participation in the world market and modernizing the management methods in commerce and industry. The two project proposals below are consistent with these objectives.

(a) Projects

47. To promote Hungary's share in international trade, analytical activities are planned by the Government in the field of foreign trade. Their objective is the formulation and adoption of a foreign trade policy to be included in future national five-year plans. These activities could provide government decision-making bodies with forecasts of the changes in the international economic situation and environment. Using the information acquired in the context of the resources available for the Hungarian economy, the economic policy and competition on the world market can be improved. The planned activities aim at promoting the abilities of government organizations in charge of controlling the economy on macro and micro levels. In the framework of the planned project, Hungarian experts will be sent to banks and major enterprises in developed countries to study modern methodology and practice; foreign consultants will also be invited to Hungary. An allocation of \$35,000 is proposed for this project.

48. Another small allocation of \$25,000 for training and consultants is proposed to support the nation-wide transfer of expertise acquired in the field of organization development and human resources development. Those Hungarian experts who have already had training in these subjects will go through special courses, take part in study tours and fellowship programmes and as trainers will reproduce these skills at a number of Hungarian enterprises and institutes.

(b) Linkages

49. The first project will co-operate with the World Bank loan project for industrial export and restructuring.

C. Unprogrammed reserve

50. For unforeseen contingencies the amount of \$200,000 is set aside as unprogrammed reserve.

## FINANCIAL SUMMARY

## I. ACTUAL RESOURCES TAKEN INTO ACCOUNT FOR PROGRAMMING

A. <u>UNDP-administered sources</u>	\$	\$
Third cycle IPF balance	-	
Fourth cycle IPF	1 925 000	
Subtotal IPF		1 925 000
Special Measures Fund for Least Developed Countries	-	
Special programme resources	-	
Government cost-sharing	-	
Third-party cost-sharing	-	
Operational funds under the authority of the Administrator	-	
UNDP special trust funds	-	
Subtotal, UNDP non-IPF funds		-
B. <u>Other sources</u>		
Funds from other United Nations agencies or organizations firmly committed as a result of the country programme exercise	-	
Parallel financing from non-United Nations sources	-	
Subtotal, other sources		-
TOTAL ACTUAL RESOURCES TAKEN INTO ACCOUNT FOR PROGRAMMING		<u>1 925 000</u>

## II. USE OF RESOURCES

Ongoing projects	-	
New project proposals	1 725 000	
Programmed reserve	-	
Subtotal, programmed resources		1 725 000
Unprogrammed reserve		<u>200 000</u>
TOTAL USE OF RESOURCES		<u>1 925 000</u>

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