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REPORT AND RECOMMENDATION
OF THE
PRESIDENT OF THE
INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT
TO THE
EXECUTIVE DIRECTORS
ON A
PROPOSED LOAN
TO THE
BANK FOR AGRICULTURE AND FOOD INDUSTRY
WITH THE GUARANTEE OF
THE SOCIALIST REPUBLIC OF ROMANIA
FOR A
FOURTH LIVESTOCK PROJECT

December 3, 1980

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CURRENCY EQUIVALENTS

Currency Unit: Leu (Plural Lei)

1. Official Rate

Lei 4.47 = US\$1.00

Leu 1.00 = US\$0.22

2. Tourist Rate

Lei 12.00 = US\$1.00

Leu 1.00 = US\$0.08

3. Conversion Rate for Traded Goods (as of January 1, 1981)

Lei 15.00 = US\$1.00

Leu 1.00 = US\$0.07

The Official Exchange Rate of lei 4.47 per US\$1 is used only for accounting purposes. The rate used for tourist transactions is lei 12 per US\$1. Beginning on January 1, 1981, a trading rate of lei 15 per US\$1 will be used to convert the prices of all traded goods.

Fiscal Year

January 1 to December 31

GLOSSARY OF ABBREVIATIONS

BAFI	-	Bank for Agriculture and Food Industry (Banca pentru Agricultura si Industrie Alimentara)
CAP	-	Agricultural Production Cooperative (Cooperative Farm)
ERR	-	Economic Rate of Return
ICA	-	Inter-Cooperative Association
IAS	-	State Agricultural Enterprise (State Farm)
MAFI	-	Ministry of Agriculture and Food Industry
SMA	-	Agricultural Mechanization Stations (State Mechanization Units)
UAC	-	Unified Agro-Industrial Councils

ROMANIA

LIVESTOCK IV (CATTLE) PROJECT

LOAN AND PROJECT SUMMARY

Borrower: Bank for Agriculture and Food Industry (BAFI)

Guarantor: Socialist Republic of Romania

Beneficiaries: State farms, Cooperatives, Food processing enterprises, and individual producers.

Loan Amount: US\$80 million

Terms: Repayable in 15 years, including a 3-year grace period, through semi-annual installments. Interest at 9.25 percent per annum.

Relending Terms: Relending to State enterprises at 2 percent per annum during construction and 4 percent after construction. Relending to cooperatives and individual producers at 3 percent per annum. State enterprises subloan maturities would be up to 10 years including up to 3 years grace, and cooperative subloan maturities would be up to 16 years including up to 3 years grace. Individual producer subloans would be for 5 years. The Government would bear the foreign exchange risk.

Project Description: The project would consist of selected investments undertaken between mid 1981 and mid 1984 as part of Romanian Five Year Plan for 1981-1985 for milk and beef production. The project would comprise about 60 percent of the total planned investment over the three year period, and include; 92 new and 32 modernized dairy farms, 17 new specialized breeding heifer production farms, 19 new beef fattening units, 109 improved pasture units, milk and beef processing and storage facilities, on-farm production of milk, meat and breeding animals by individual producers, and technical services and research. The project would address the unsatisfied domestic demand for milk and beef products and generate additional foreign exchange earnings. Substantial production efficiency improvement is expected through technical innovations and institutional improvements under the project. At full development, incremental project production would reach about 3.8 million hectolitre (hl) of milk, 40 thousand tons of carcass beef and 33 thousand breeding heifers. Additionally, a

substantial amount of fertilizer would be produced from the incremental farmyard manure. The project would reach full development in 1985-1987, and faces no greater risks than can normally be expected with operations of this type.

Cost Estimates:

	<u>Local</u>	Foreign Exchange	<u>Total</u>
	-----\$ Million -----		
Dairy Farms	107.5	44.3	151.8
Heifer Rearing Farms	9.2	5.2	14.4
Dairy Farm Modernization	9.6	6.0	15.6
Beef Fattening Farms	20.4	7.6	27.9
Meat and Milk Processing and Storage	18.0	7.7	25.7
Pasture Improvement	27.7	9.0	36.7
Credit to Individual Producers	18.1	7.7	25.8
Technical Services and Research	3.2	3.0	6.3
Incremental Working Capital	<u>44.6</u>	<u>14.6</u>	<u>59.2</u>
Base Cost	258.3	105.1	363.4
Physical Contingencies	7.7	3.3	11.0
Price Contingencies	<u>8.0</u>	<u>29.8</u>	<u>37.8</u>
Total Project Cost	<u>274.0</u>	<u>138.2</u>	<u>412.2</u> ^{1/}

Financing Plan:

	<u>Local</u>	Foreign	<u>Total</u>
	-----US\$ Million -----		
Bank for Agriculture and Food Industry (BAFI) and Cofinanciers	164.9	58.2	223.1
Sub-borrowers	109.1	-	109.1
IBRD	-	<u>80.0</u>	<u>80.0</u>
Total	<u>274.0</u>	<u>138.2</u>	<u>412.2</u>

<u>Estimated</u>		<u>\$ Million</u>			
<u>Disbursement:</u>	FY	<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>
Annual		13.3	25.9	27.5	13.3
Cumulative		13.3	39.2	66.7	80.0

Economic Rate of Return: About 22 percent on 88 percent of the total costs for which benefits have been quantified.

Appraisal Report: No. 3139a-RO, Date: November 24, 1980
EMENA Projects Department

^{1/} Including tax and duties of \$1.8 million.

REPORT AND RECOMMENDATION OF THE PRESIDENT
OF THE IBRD TO THE EXECUTIVE DIRECTORS ON A
PROPOSED LOAN TO THE BANK FOR AGRICULTURE AND FOOD INDUSTRY OF ROMANIA
FOR A FOURTH LIVESTOCK PROJECT

1. I submit the following report and recommendation on a proposed loan to the Investment Bank of Romania, with the guarantee of the Socialist Republic of Romania, for the equivalent of US\$80 million to help finance a Fourth Livestock Project. The loan would have a term of 15 years, including 3 years of grace, with interest at 9.25 percent per annum. Cofinancing of up to US\$100 million is being sought, all from commercial lending institutions.

PART I. THE ECONOMY^{1/}

2. The first basic report on Romania (Report No. 1601-RO, "The Industrialization of an Agrarian Economy under Socialist Planning") was circulated to the Executive Directors on April 20, 1978. An updating Country Economic Memorandum (CEM) discussing the New Economic Measures was introduced in January 1979. The CEM was circulated to Executive Directors on August 20, 1980 (Report No. 2757-RO). Country social and economic data are given in Annex 1.

A. Long-term Trends and Development Strategy

3. Over the past three decades, Romania has pursued a development strategy designed to industrialize a primarily agrarian economy. The main features of this strategy have been (a) a high rate of investment; (b) development of a broad industrial base, with priority given to heavy industry; (c) development of local natural resources, including the reorganization and modernization of agriculture; (d) balanced regional distribution of production and incomes; and (e) training of a skilled labor force. This strategy had been carried out through a system of comprehensive central planning and management, guided by central party and government authorities.

4. As a result, Romania's economic development since 1950 has been impressive, characterized by a rapid economic growth and considerable structural change. According to official statistics, national income has grown in real terms at an annual average rate of about 9 percent. Per capita GNP in 1978 is estimated to have been US\$1,750, according to the Bank Atlas methodology. Since 1950, investment has grown at an average annual rate of 13 percent, as a result of which the share of gross investment in GNP has risen, averaging about 33 percent in the 1976-80 plan period. Industry, which has grown at more than 13 percent per annum over the past decade, has been the driving force of economic growth, receiving around 50 percent of investment, most of which has been allocated to the capital goods industry. As a result, industry has become the leading sector, accounting in 1978 for about 50 percent of GDP and for 33 percent of the labor force, compared with agriculture's 14 percent share of GDP and 33 percent of the labor force. With the transfer of labor from agriculture to industry, the population has become

^{1/} This Part is identical to that contained in the President's Reports for a Fourth Power Project and a Bucsani-Buzau-Siret-Prut Irrigation (BBSP) Project which have been circulated to the Executive Directors for their consideration on December 23, 1980.

increasingly urbanized. Standards of living have increased substantially, partly because of the growth of personal incomes and partly because of provision through the state budget of expanded and improved education, medical services, housing and social expenditures of other kinds. Furthermore, Romania's integration into the world economy has increased, as the level of trade has grown and its composition altered.

B. Recent Economic Developments

5. During the first four years of the present Plan period (1976-80), the expansion of the Romanian economy has slowed down perceptibly. The average annual rate of national income growth of 8.4 percent was below the planned growth rate of 11 percent, and growth has been decelerating, falling annually from 10.5 percent in 1976 to 6.2 percent in 1979. These changes reflect the emergence of a number of internal and external constraints, notably the pace at which improvements in productivity and efficiency can be attained; the ability of the economy to bring new capacity into operation as planned; a serious deterioration in the terms of trade; and trade restrictions in important export markets.

6. Industry continued to be the leading sector of the economy. However, the growth of industrial production also slowed down from an average of 12 percent per annum during 1976 and 1977, to 9.0 percent in 1978 and 8.1 percent in 1979. As in the past, the growth of capital goods exceeded that of consumer goods and the fastest growing subsectors were metallurgy, machine-building, chemicals and construction materials. Agricultural production grew at a respectable average rate of 6.3 percent between 1976 and 1979, displaying however, large annual variations due to changing weather conditions.

7. As elsewhere, energy has become a critical sector for the Romanian economy. In the aftermath of the 1973 fuel price increase, an emergency decree was issued, fostering domestic energy production and imposing cuts and stringent restrictions on industrial energy consumption. These steps were followed by further measures in 1977 and 1979, designed to conserve domestic oil and gas resources and expand use of domestic coal and hydropower resources. Although small increases in domestic oil production were originally planned in the present plan period, production has in fact fallen while natural gas production has stabilized. Coal production increased only 8 percent in the first three years of the plan, but jumped by 12 percent in 1979 and strenuous efforts are being made to expand it further. In spite of the campaign to restrain the growth of energy consumption, the difficulties in bringing new coal mines into operation on schedule has resulted in a tripling of oil imports between 1975 and 1979. The comprehensive directives for the preparation of the energy development program for the period 1980-2000, published in July 1979, is designed to make Romania self-sufficient in energy by 1990, through further development of coal and hydropower resources, through the rapid introduction of nuclear power and through development of non-conventional renewable energy sources. This may be optimistic, given the rapid pace of coal and nuclear power development required to meet the target, but the vigorous adjustment of

policies and priorities by Romania to the changed energy situation is expected to result in striking changes in the pattern of energy production by 1990, and further improvements in the efficiency of energy use by consumer.

8. Between 1976 and 1979 investment fell about 6 percent short of planned levels. The shortfalls occurred chiefly in industry where the planned annual growth rate of investments of over 20 percent could not be met, partly because of the diversion of resources in 1977 to the repair of earthquake damage. Industrial investment, in fact, grew by 13 percent a year--in itself a very respectable achievement. The shortfall in investment does not reflect difficulties in mobilizing sufficient financial resources, but a number of supply-related factors, in particular, capacity constraints of design institutes, shortfalls in the production of construction materials, capacity constraints in the construction sector, production shortfalls for some domestic equipment and more restrictive foreign exchange allocations for imported capital goods.

9. Changes in the level and distribution of employment accompanied the growth and structural change of production. The total labor force increased by only 0.5 percent per year between 1976 and 1979, but large intersectoral shifts in the labor force continued. Between 1976 and 1979, the agricultural labor force fell from 38 percent to 33 percent of the total. The outflow from agriculture, which is determined chiefly by the needs of non-agriculture sectors rather than the ability of agriculture to compensate for the loss through mechanization, appears to be leading to some seasonal labor shortages; recourse has been necessary to students and other groups to meet short term labor needs. The Government recognizes that the transfer of labor has to slow down to some degree, to avoid adverse effects on agriculture output, and is thus giving even greater emphasis to increases in labor productivity. Between 1976 and 1979, labor productivity in industry rose by 7.9 percent per annum, about one and a half percent more than was achieved between 1971 and 1975. In agriculture, labour productivity rose by 10 percent per annum.

C. New Economic Measures

10. The slow-down of growth during the current plan period reflects to some extent the increasing maturity and complexity of the economy and the difficulties of moving from a development strategy emphasizing growth through increases in capacity to growth from using existing capacity more efficiently. As part of its efforts to improve productivity and efficiency, the Government introduced in January 1979 a number of changes in the planning and management system, commonly referred to as the "New Economic Measures". Their main purpose is to increase the responsibility of enterprises for implementing plan targets by extending the scope of enterprise autonomy and by sharpening the impact of financial rewards for success and financial penalties for failure.

11. The centerpiece of the New Economic Measures is the replacement of gross production by net production as the major performance indicator complemented by physical output targets. The change from gross to net production is to heighten the inducement for reducing inputs. To reinforce concerns about net production at the enterprise level, a new system of

enterprise revenue and expenditure budgeting has been introduced which combines evaluation criteria, computation of income bonuses and penalties for over and under-fulfillment of net production targets, and the tax assessment of enterprises. The second major element of the New Measures is the modification of the planning system. The changes introduced have two components; first, the greater involvement of enterprises in the resolution of inconsistencies and constraints in the planning process. Second, the measures increase the use of purchasing and delivery contracts. Whereas, in the past enterprises could make annual contracts only after the finalization of the plan, they are now able to make multi-year contracts which will form the basis for the first draft of the annual plan. Both of these changes are intended to bring greater reality to plans.

12. The New Measures also involve important changes in financial flows between the enterprises and the state budget. In the past, enterprises retained very little of their profits, and transferred most, in the form of taxes and other payments to the state budget. In future, enterprises will retain a greater share of profits. The major payment to the budget will be a "prelevation tax", which is calculated on the value of net production and paid from profits, but the enterprise will retain a greater part of its profits for distribution between funds for investment, working capital, housing, socio-cultural activities and profit-sharing fund. The New Measures, however, are explicitly not intended as a step towards "decentralization". Central planning remains the foundation of the system and will not be relegated merely to determining major macro-economic ratios and setting price or policy parameters, on the basis of which enterprises would autonomously prepare their own output plans. The New Measures are, in fact, a conservative attempt to strike a balance between extended enterprise autonomy dictated by the growing complexity of the economy on the one hand and a firm belief in centralized planning and control as the means of obtaining high growth rates and structural change on the other.

D. External Trade and Foreign Borrowing

13. In foreign trade, developments have in the current plan period been substantially different from and decidedly less favorable than those planned. The five-year plan envisaged growth rates of 13 percent per annum for imports and 18 percent for exports in real terms aiming at a trade surplus which would allow the country to repay some of its foreign debt. Between 1976 and 1979, in fact, imports increased at an annual average rate of 16.4 percent and exports of 13.1 percent in current prices. This resulted in a sharply growing trade deficit which in 1979 reached \$1.3 billion, virtually all of it in the convertible currency area. On the import side, the deteriorating trade balance reflects rapidly rising international prices, especially for petroleum. Export growth has been unable to keep pace with import requirements, partly because of less favorable price movements in Romania's principal export markets. The insufficient growth of exports is also explained by the vulnerability of Romanian exports to import demand fluctuations and import policies of the receiving countries, and to difficulties in meeting design and quality standards and establishing marketing policies essential to extend the foothold in highly competitive product markets.

14. The large trade gap together with rising interest payment has led to a current account deficit of US\$1.7 billion by 1979. The deficit has been financed through increased capital inflows, with total medium and long-term debts rising from US\$2.8 billion in 1975 to about US\$5.6 billion at the end of 1979. Most of the inflows have been suppliers' credits and eurocurrency borrowings; Romania has borrowed almost US\$1.1 billion on the eurocurrency market since 1975, and has been able to lengthen maturities and reduce the spread over LIBOR considerably during the period. The scale of term borrowing available to Romania has not been sufficient, however, to finance the current account deficit fully and the Government had to resort to substantial short-term borrowing between 1977 and 1979. The net inflow on short-term debt was particularly large in 1979, about US\$1 billion, and by the end of 1979, outstanding short-term debt had increased to US\$1.8 billion.

E. Development Prospects

15. In November 1979 the Twelfth Congress of the Romanian Communist Party approved the Directives for the preparation of the new five-year plan 1981-85. Although they suggest the continuation in broad terms of the present development strategy, they project lower growth rates than envisaged in earlier drafts of the Directives and than those achieved during the present plan period. However, one major change is the planned reduction of the share of national income allocated to investment. The share of investment in GNP is projected to decline to around 30 percent, compared with 33 percent during the current plan period, and the growth rate of investment is planned to be only around 6 percent compared with 13 percent achieved in the first four years of the current plan period. These changes indicate government recognition that a major issue underlying the development path of the economy in the 1980s is the allocation of resources between consumption and investment. In our view, this planned slowdown of growth momentum is commendable for three particular reasons. First, there is a need to allow Romanian consumers, who compare their economic position increasingly with that in Western European economies, to share more fully in the fruits of economic growth than the high investment levels of the past have permitted. Second, due to the growing complexity of the economy, its rate of growth is increasingly influenced not only by the rate of investment but also by improvement of productivity and efficiency, and, as is now widely recognized within COMECON countries--this cannot be accomplished without tangible incentives translating into higher consumption. And third, as the more recent empirical evidence suggests, the Romanian growth path is approaching the margin of absorptive capacity. It remains to be seen whether the consumer goods industries have the capacity to increase production and to improve their output mix sufficiently, and whether the investment goods industries can provide for the investment requirements of the consumer goods industries.

16. The directives and back-up documents prepared for the Twelfth Congress make clear, that the economy is becoming more dependent upon imported raw materials and--at least temporarily--energy, and more vulnerable to sudden changes in the terms of trade. The Romanian authorities, recognizing the need to economize on the use of energy and imported raw materials, have been reexamining the composition of investment

in a number of sectors prior to finalizing the new five-year plan for 1981-1985. It is clear that to contain the growth of imports to manageable proportions, domestic production must be stimulated in certain areas (i.e. energy, investment goods) and the efficiency of input use improved. To finance the necessary imports, exports must be increased, and export growth will require both improvements in the sophistication and quality of Romania's industrial goods and improvements in export marketing. Improvements in the planning and management systems will be needed to ensure that all these interlinked goals can be attained.

F. Creditworthiness

17. With the large increase in the current account deficit and the associated increases in external borrowing described in paragraphs 13 and 14 above, the debt service payments (including interest on short-term credits) rose to \$1.24 billion in 1979 or the equivalent of 12.2 percent of gross foreign exchange earnings. In the convertible currency area where most of Romania's debts were incurred, the debt service ratio was 20.6 percent compared with 17.4 percent in 1978 and 18.6 percent in 1977. For 1980, another large current account deficit is expected reflecting in part the sharp increase in oil prices. To contain future deficits and to keep the service burden manageable, the Government has recently adopted a series of measures aimed at increasing exports and restraining imports. Besides the steps taken in the crucial energy sector (see para. 7), these measures include new financial incentives for exports; a directive giving priority to export production over production for the domestic market; renewed emphasis in offsetting trade arrangements; a consolidation of the investment program which will result in lower imports of investment goods; and increased recycling of raw materials. Changes in the foreign exchange system are envisaged in the near future to reflect the changing economic priorities and world market conditions. Given Romania's strenuous development efforts within the context of well articulated plans, these measures and possible future steps aimed at enhancing exports and economizing the use of imported inputs, are likely to succeed in keeping the country's debt burden within manageable limits, thus preserving its creditworthiness for medium and long-term borrowing.

PART II - BANK GROUP OPERATIONS IN ROMANIA

18.^{1/} The proposed loan would bring total Bank commitments to Romania to \$1,707.6 million for 28 loans^{2/} in agriculture, industry, power and transport. Disbursements under the Bank's initial loans were slow during 1975, but this situation has improved considerably since 1976. Annex II contains a summary statement of Bank loans to Romania and notes on the execution of ongoing projects as of October 31, 1980.

^{1/} Paras. 19-22 are substantially the same as those in the President's Report for the Orchards Project dated June 2, 1980, and those in the President's Reports for a Fourth Power Project and a Bucsani-Buzau-Siret-Prut Irrigation (BBSP) Project which are being considered by the Executive Directors on December 23, 1980.

^{2/} Including a \$125 million loan for a Fourth Power Project.

19. Foreign exchange, especially in convertible currencies, continues to be a major constraint. It remains one of the major objectives of Bank lending to help alleviate the country's shortage of foreign exchange by providing long-term external capital and by financing projects which will expand foreign exchange earnings or savings. The Bank has also assisted the Government to mobilize cofinancing for appropriate projects. The Bank helped to attract foreign commercial banks to provide \$100 million cofinancing in August 1979 for the Second Livestock Project for which a Bank loan of \$75 million was made in April 1979. In addition, syndicated cofinancing loans of \$200 million in total have recently been concluded for the Mostistea and Calmatui Irrigation and Drainage Project for which a Bank loan of \$70 million was made in April 1979 and the Third Livestock Project for which a Bank loan of \$85 million was made in December 1979. Through their contacts and subsequent negotiations with commercial banks, the Romanian authorities now appear convinced of the positive value of cofinancing in the form of financial credits, and have indicated their intention to seek similar arrangements for future projects. Bank lending also aims at supporting the steps being taken by the Government to introduce new industrial technologies, to improve the quality of products and production efficiency, to reduce production costs and to provide for necessary electric power development. Marketing, especially for export goods, is also emphasized. Special attention is given to agriculture where production is still unnecessarily dependent upon weather and where productivity levels are still comparatively low.

20. A number of further loans are under consideration, including loans for irrigation, industry, power, road and rail transport and regional development. The Government has also proposed that the Bank consider lending for a port project and the development of additional petroleum resources.

21. In addition to lending, the Bank (through EDI) has assisted Romania by conducting training courses on economic and financial evaluation and methods of analysis in various sectors, including industry and transportation, for 169 Romanian officials in Belgrade in 1973 and in Bucharest annually since 1975 in collaboration with a Romanian academic institution. Additional courses, including one for agricultural project appraisal, are under discussion with the Government. The methodologies taught in these courses are becoming more widely known in Romania and are expected for some projects to begin to supplement the methodology normally used by the Romanian planning authorities.

22. The projects, for which assistance has been committed or is being considered, represent only a small portion of Romania's total need for external financing. However, they will provide a substantial net addition to the inflow of convertible currency, and are helping to set a pattern for obtaining longer-term convertible finance from other sources. The disbursed debt outstanding to the Bank is expected to constitute about 13 percent of Romania's total projected convertible currency debt in 1980; the Bank's share in Romania's debt service payments in 1980 is expected to be about 5.5 percent.

PART III - THE AGRICULTURAL SECTOR IN ROMANIA

23.^{1/} Agriculture continues to be a key sector in the Romanian economy, providing almost all of the nation's food, the raw materials required for agricultural processing industries and significant foreign exchange earnings. In 1978 agriculture accounted for 14 percent of GDP, 33 percent of the labor force and 14 percent of export earnings. The proportion of the total labor force employed in agriculture declined from 74 percent in 1950 to 33 percent in 1978, thereby releasing a large number of people for employment elsewhere in the rapidly growing Romanian economy. National income increased at an average rate of about 9 percent from 1951 to 1978. During this period national income in agriculture grew at a rate of 3.5 percent per annum. Agriculture's share of national income declined from 28 percent in 1950 to 15 percent in 1978.

24. About 14.9 million ha, or 63 percent of Romania's land area, are used for agriculture. Of this area, 66 percent is arable, 29 percent is grassland and 5 percent is used for orchards and vineyards. There are three principal agro-climatic zones; the Plains Zone, the Foothills Zone and the Mountain and Tableland Zone. The Plains Zone which is the richest agricultural area, including all of the land in the Danube plains, includes 53 percent of Romania's arable land. About 64 percent of all arable land is devoted to production of grain (mostly wheat and maize). Other crops include sunflower, sugarbeet, soybeans, potatoes, vegetables, fodder crops, grapes and fruit. In 1978 crop production accounted for 56 percent of total agricultural output, while livestock accounted for 44 percent.

Sector Organization

25. Romanian agriculture has undergone a major transformation following the collectivization measures introduced since the Second World War. Today agricultural production, especially crop production, is dominated by state agricultural enterprises (IASs) and agricultural production cooperatives (CAPs). For example, in 1978, 87 percent of cereal production was in the socialist sector. Production by individual farmers and from small private plots of cooperative members is important for fruit and livestock but not for field crops. Agricultural mechanization stations (SMAs) play a major role in providing machinery hire services. Recently a number of Inter-Cooperative Associations (ICAs) have been formed through combining the activities of a number of individual cooperatives. These ICAs are engaged in various large scale agricultural operations such as pig and poultry production.

^{1/} Paras. 23-34 are substantially the same as those in the President's Report for the Orchards Project dated June 2, 1980 and those in the President's Report for a Bucsani-Buzau-Siret-Prut Irrigation (BBSP) Project which is being considered by the Executive Directors simultaneously with this project.

26. In 1978 Romania had 396 IASs with an average size of 5,100 ha and an average labor force of 660. They farmed 2.0 million ha, equivalent to 14 percent of all agricultural land. Other State agricultural units covered 2.5 million hectares, or 17 percent of agricultural land. In the same year, there were 4,400 CAPs, with an average size of 2,060 ha and 550 members. The total area of land under CAPs was 9.1 million ha, equivalent to 61 percent of all agricultural land. There were 709 SMAs which provide machinery services to producers. Each SMA had an average of 140 tractors plus a wide range of other equipment. Each working member of a CAP is allocated a small plot (normally 0.15 ha) which can be used for production of crops. Members are also allowed to keep limited numbers of livestock on CAP land. About 10 percent of the land controlled by CAPs is used for individual members' plots. Individual farmers number almost half a million and own about 9 percent of total agricultural land. Most of their farms are in the more mountainous regions. They use only 5 percent of the nation's arable land, although they have 19 percent of the grasslands and 21 percent of the orchards. They own 16 percent of all cattle, 14 percent of sheep, 12 percent of poultry and 8 percent of pigs. Together with CAP plottolders they produced 54 percent of all milk, 59 percent of eggs, 41 percent of wool, 53 percent of poultry and 57 percent of fruit in 1978.

27. At the national level, the major State institution in the agricultural sector is the Ministry of Agriculture and Food Industry (MAFI). MAFI plays a major role in preparing the Five Year Plan for the sector and is the supervisory institution for plan implementation. In each district, the Ministry is represented by a general directorate, which is responsible for all agricultural activity in the district including both IASs and CAPs. Marketing is organized nationally under MAFI, with general economic directorates responsible for processing and marketing specified commodities. Foreign trade companies are responsible for the exports of the general economic directorates.

Performance in the Agricultural Sector

28. Although considerable progress has been made in developing agriculture in Romania, the sector remains relatively undeveloped. Between 1951 and 1978 gross agricultural output increased at an average rate of 4.5 percent. During this period the area of arable land has remained about the same but crop yields have increased markedly. For example, the average yield of wheat increased from 1.1 tons per ha in 1951-1955 to 2.8 tons per ha in 1976-1978, while maize yields increased from 1.3 tons per ha to 3.2 tons per ha over the same period. Livestock yields have increased while there have also been significant increases in the numbers of all types of livestock. Milk yields for instance, increased from 867 litres per cow in 1950 to 1,968 litres per cow in 1978. Nevertheless, crop and livestock yields in Romania are still appreciably lower than those obtained in a number of other countries. While agricultural production has been increasing, the labor force in agriculture has been falling. Labor productivity has thus increased much faster than agricultural output. In 1978 gross agricultural output per worker was more than six times the level in 1950. Despite this substantial improvement, the absolute level of labor productivity is still relatively low. Labor intensive methods of production, such as hand harvesting of maize and the use of animal-drawn carts, are still common, especially on cooperatives and in the individual farm sector.

Sector Issues and Development Strategy

29. The growth of Romanian agriculture has been constrained by several factors, especially rainfall, lack of machinery and farm inputs and problems concerned with organization and incentives. Rainfall in Romania is both low and erratic, especially in the main cropping areas in the Plains Zone. Flooding has also been serious in many low lying areas. Fortunately the soils in the Plains Zone are good while there are excellent sources of water in the Danube and its tributaries. Romania has therefore given high priority to development of irrigation and drainage. The total area under irrigation has increased from 200,000 ha in 1960 to 2.2 million ha in 1979. Government plans to increase this to 3.7 million ha by 1985. By then 38 percent of arable land would be irrigated.

30. Serious shortages of machinery and farm inputs, especially fertilizers, insecticides and herbicides have been experienced. These shortages have been aggravated by Romania's foreign exchange needs, for Government has sometimes exported fertilizers or restricted imports of other inputs needed by the agricultural sector. Hitherto, Government policy has given much greater emphasis to development of IASs rather than CAPs. IASs have been provided with the best managers and have received much higher levels of investment and supplies of tractors, machinery and fertilizers, while CAPs have been neglected. In 1978 the level of investment per ha of IASs was more than five times that of CAPs and they were therefore more productive than CAPs. This neglect of CAPs has been one of the key weaknesses of Romanian agriculture, for CAPs control more than 60 percent of all agricultural land. In 1978 Government decided to accord equal treatment to IASs and CAPs. This new policy is to be implemented through the creation of Unified Agro-industrial Councils (UACs) which are responsible for providing equal levels of service and material inputs to IASs and CAPs. About 700 UACs have been established, and for each one there is an SMA. Each UAC will be responsible for coordinating all agricultural activities undertaken by the IASs and CAPs for which it is responsible. On average each UAC will be responsible for about 20,000 ha of land. Implementation of this new policy is still underway and it is too early to assess the effectiveness of the UACs. These organizational changes are being complemented by changes in the structure of wages and incentive bonuses. These changes, which link payments to workers to achievement of profit targets, were introduced in 1978 under the "New Economic Measures". These changes have already been introduced on IASs and their extension to cooperatives is planned.

31. Agricultural policy is formulated within the framework of a national plan approved by Government and the Romanian Communist Party. For the 1981-85 plan, the guidelines forecast that national income will increase between 6.7 and 7.4 percent p.a., gross industrial production will increase in the range 8.0 to 9.0 percent p.a. and gross agricultural production at 4.5 to 5.0 percent p.a. Investment in agriculture in this period will amount to 155 billion lei (US\$8.6 billion), equivalent to 12 percent of total national investment for the plan period. The main thrust of agricultural development strategy will be to increase crop and livestock yields through improved organization, the use of more efficient techniques, especially greater mechanization, increased use of fertilizers and other inputs, and further large investments in irrigation.

Agricultural Investment Financing

32. The Bank for Agriculture and Food Industry (BAFI) is the Government's specialized agency for financing projects in agriculture, irrigation and food processing. As such, BAFI has been the Borrower for all Bank loans in support of agriculture and would be the Borrower for the proposed loan. BAFI was established in 1968 as a channel for, and administrator of, all investment funds provided under the State plan for the agricultural sector. It lends to both IASs and CAPs and repays the Government as it receives repayments of subloans. BAFI is involved in all phases of project appraisal, execution and supervision, and it has a large technical and economic staff located in Bucharest, in 39 district (judet) branch offices and in 92 sub-branches throughout the country. BAFI has thorough review and approval procedures for all investment projects. In addition to BAFI's review, all agricultural investments for more than lei 10,000,000 (\$50,000) are reviewed and approved by MAFI and those greater than lei 70,000,000 (\$3.9 million) must be approved by the Council of Ministers. BAFI also provides short-term credit to, and maintains settlement accounts for, all cooperative and State agricultural enterprises; and acts as fiscal agent for the Government for collection of State revenues from these enterprises. As the Government's channel for investment financing in agriculture, BAFI's primary source of funds is the State budget; the Guarantee Agreement therefore includes a provision that the Guarantor shall provide all necessary funds for the implementation and operation of the project.

Bank Contributions in the Agricultural Sector

33. The Bank's lending strategy is based on the findings of various reports, including the Agricultural Sector Survey of October 1976 (No. 953a-RO), the Basic Economic Report of March 1978 (No. 1601-RO) and a number of recent appraisal reports. A cattle and sheep subsector survey was also carried out during 1979 and its report is under preparation. Beyond the provision of foreign exchange, the main objectives of Bank lending remain to assist the Government in addressing the problems of production instability and low productivity. In addition, in appropriate cases, foreign exchange earnings or savings are an objective. Attainment of these objectives will help to raise the level and quality of domestic food consumption.

34. With increasing experience in the agricultural sector and a greatly improved relationship with the Romanian authorities, the Bank has been able to make other significant contributions. Technical improvements in project concept and design have been attained in a number of fields including irrigation, poultry and pig production and horticulture. Additionally, BAFI has decided to introduce the Bank methodology in its economic evaluation of subprojects. The Bank has made twelve loans for agriculture totalling \$741.5 million since 1975. The Giurgiu-Razmiresti Irrigation Project, the first agricultural project financed by the Bank in Romania, has been successfully completed and a completion report on this project is under preparation. No reports of the Bank's Operations Evaluation Department have yet been prepared on agricultural projects in Romania.

The Cattle Subsector

35. The climate and resource base are well suited to cattle and sheep and there is a long tradition of animal husbandry in the country. However, per capita meat consumption in Romania is about 30 and 25 percent below the average per capita consumption in the EEC and Eastern European countries respectively. Per capita consumption of dairy products is also lower than in those countries. The Romanian Government has recently decided to take measures to meet the unsatisfied demand for fresh meat as part of its policy to give increased attention to consumer issues while continuing to earn foreign exchange from agricultural exports. Meat is allocated, through the central planning process, between domestic and export markets. In the past, domestic consumption of fresh meat has been suppressed due to the priority the Government has given to earning much needed foreign exchange. This is reflected in the Second Livestock Project (Loan 1669-RO) which has a heavy emphasis on exports. The three previous livestock projects financed by the Bank are being implemented without any major problems. The proposed project, aside from its considerable technical and institutional improvements, would contribute to raising the level of meat consumption and dairy products in the domestic market as well as providing additional foreign exchange earnings.

36. The livestock sector accounted for 44 percent of gross agricultural production in 1978 with beef and milk accounting for 15 percent. Milk alone accounts for 10 percent making it the single most important agricultural commodity. Production of beef and milk is planned to increase significantly by 1985, to 21 percent of total agricultural production. The livestock population in 1978 included 6.3 million cattle, 10.3 million pigs, 15.6 million sheep and 100 million poultry. The feed base for the cattle industry comprises the by-products and required rotation crops on the 10 million hectares of arable land together with 4.5 million hectares of pasture and meadow not suitable for cultivation. Important crops such as wheat, barley, soybeans, sunflower and sugarbeets provide much of the by-products used for feeding livestock.

37. Of the 6.3 million cattle, CAP plot holders and individual farmers own 43 percent, CAPs themselves own 43 percent and the State owns 14 percent. Due to higher productivity, beef and milk production attributable to CAP plot holders and individual farmers is higher than the percentage of ownership (milk 53 percent and beef 47 percent).

38. Past growth rates for both cattle and sheep, in numbers and production, are very acceptable for an established industry such as Romania's. However, productivity is low when compared to countries in Europe and North America with similar industries. There are three major reasons for the low productivity; the inappropriate and outdated technologies, the low quality of inputs and the institutional constraints such as poor feed analysis and inadequate nutrition extension services available for livestock producers.

39. Among the technical inputs applied to animal husbandry in Romania, veterinarian services are virtually the sole satisfactory aspect. Compared to other technical services, veterinarians are well trained. This has caused undue concentration on health and resulted in control of the industry by veterinarians rather than production specialists. Dairy housing, feed harvesting and storage, feeding, manure removal and milking systems are

outdated and extremely labor intensive. Poor management techniques and generally weak technical support at the farm level also contribute to the relatively poor performance. This is partly because technical specialists and research suffer from poor training and international isolation.

40. Forage quality, all important to economically efficient ruminant animal production, is very poor and there is a gross deficiency of protein feed. This creates serious direct loss to the economy since much more expensive concentrate energy feed, mainly maize grain, is used as a substitute, which otherwise could be exported. It is also a serious indirect loss depressing productivity. At present, the social sector feed base depends heavily on crop production. Yields here are comparatively low despite the high quality resource base, due mainly to inadequate inputs, notably fertilizer and machinery. The Government plans will in part resolve the fertilizer deficiency by 1985 but there will still be insufficient machinery. Grassland utilization, a key factor in the future development of the cattle industry, is underdeveloped. Less than 40 percent of the grassland area receives any fertilizer at all, and the rest usually only very small amounts. However, the Government plans to increase the area receiving fertilizer to 80 percent by 1985. MAFI, through activities of its Pasture Enterprises, is now actively engaged in pasture improvement schemes involving clearing, reseeding, fencing and access road construction. Such improvement will expand the carrying capacity of the pasture, which has the potential for a 50 percent increase. To achieve this, development of pasture management skills must be stimulated.

41. In its 1981-85 Five Year Plan, Romania plans substantial improvement of the cattle subsector through (a) further investment in large, industrial type complexes conducive to greater efficiency in State and cooperative units, improved technology absorption and better use of managerial skills; (b) import of quality stock and upgrading of local cattle to improve beef and milk merits; (c) growth in beef fattening capacities to absorb increased numbers of young animals destined for fattening from new and existing dairy farms; (d) modernization of older dairy and beef complexes; and (e) assistance in expanding production by the individual producers mainly by improving grassland in foothills and mountain areas where their animals are located. The proposed project would be in line with these Government strategies and respond directly to the major problems of the subsector as described above.

PART IV - THE PROJECT

42. The project, which is included in the Government's Five Year Development Plan, was originally discussed with a Cattle and Sheep subsector mission in May 1979 for possible Bank financing, following an extensive questionnaire on that subsector submitted to the Government in January 1979 and answered in early April. A preparation mission, including a cattle nutrition consultant, visited Romania in September 1979. Another preparation mission, including a dairy engineer to review the milking technology, visited Romania in November and December 1979 and discussed the Government's preliminary preparation report. Through these stages of preparation, the Bank has discussed the project concept extensively with the Government and has made significant contributions to project design. As a result of these discussions, the Government has decided to develop a

nationwide feed analysis service and a nutrition extension service for farm animals to gain substantial reductions in output costs. Additionally the Government will alter the current tandem milking method to the herringbone system proposed by the Bank on the nationwide basis which will result in considerable efficiency improvement. Also, the Government has agreed for the first time to include pasture improvement for Bank financing which would assist Romania to make better use of its relatively underdeveloped and so far neglected pasture resource. The project was appraised in April and May 1980, and negotiations were held in Washington in November 1980. The Romanian delegation was headed by Mr. Ion Rusinaru, President of BAFI and included representatives from BAFI and the Ministry of Agriculture and Food Industry. A report entitled "Staff Appraisal Report - Livestock IV (Cattle) Project" No.3139a-RO dated November 24, 1980 is being distributed separately to the Executive Directors. The main features of the project are mentioned in the Loan and Project Summary and in Annex III.

Project Description

43. The proposed project is designed to contribute to expanding production of beef and milk to increase domestic consumption and generate additional foreign exchange earnings. This would be achieved through increased investments incorporating new technology and through the creation of new institutions to serve the sector. The principal innovations under the project would include improved design of cow housing, introduction of herringbone milking parlors into all dairy subprojects, improved forage quality and the augmentation and strengthening of four major support services: a) animal production and grassland research, b) milking machine testing and maintenance service, c) forage and concentrate feed analysis laboratories, and d) animal nutrition advisory service. Investment in grassland improvement would serve to specialize and expand production, an important source of low cost feed in area less well suited to arable agriculture.

44. The project would consist of selected investments over a three year period (mid 1981 to mid 1984) as part of the Romanian Five Year Plan for 1981-1985 for milk and beef production. The project would comprise about 60 percent of the total planned investment over the three year period. It would include; (i) 92 new dairy farms each of about 920 cows, (ii) 32 modernized dairy farms, expanding from 520 cows to about 680 cows each, (iii) 17 new specialized breeding heifer production farms, (iv) 19 new beef fattening units with about 7,700 head capacity each, (v) 109 improved pasture units, each averaging 1,000 ha, (vi) about 5 milk processing plants, 6 cheese cold stores, 2 cattle slaughtering and processing facilities and 2 beef product cold stores, (vii) a line of credit for individual producers for milk, meat and breeding animal production, and (viii) technical services and research. Large scale on-farm milk production investments would be undertaken by both IASs and CAPs and located both in hills and plains areas to make use of available forage. A minimum cost feed base would be assured through the maximum use of by-products and required rotation crops having no economic opportunity cost. This, together with improved forage quality, would ensure minimum use of high cost concentrate feeds and those having a high opportunity cost. Exclusive use of loose stall housing and herringbone milking parlors, laid out to avoid

bottlenecks in the flow of operations, would minimize labor needed for both milking and feeding and also improve control of the animals and reduce the incidence of mastitis. The project would provide four regional forage and feed analysis laboratories and a specialized nutrition advisory service to link these to the farms. This would ensure full knowledge and correct usage of the available feeds and forages. A milking machine maintenance and testing service would assist in ensuring mechanical performance of both the project machines and others. Applied research would develop country specific data on the nutritional aspects of Romanian produced feeds as well as on milking systems performance and pasture utilization. Details of the research program would be agreed upon with the Bank. Only on-farm subprojects incorporating the modern technology and utilizing the supporting technical services would be included in the project. Beef fattening and breeding heifer production to be undertaken in the project by IASs and CAPs would be exclusively in the hills area to maximize use of the lower cost grass forage. Grassland improvement in the project would be confined exclusively to the rainfed hills area, defined as mainly between 400 and 800 meters in elevation, to ensure that there would be no opportunity cost to utilizing these areas as grassland. Improved grassland would be utilized for grass and hay, partly by IASs and CAPs but mainly by CAP plottolders and individual farmers. For the latter, it would be administered by the Popular Council (local district general administrative bodies) and would be mainly for beef production although some manufacturing milk may also be produced. Processing and storage facilities would also be constructed to meet incremental capacity requirements under the 1981-85 Five Year Plan. The technological aspects of these are well known in Romania as both slaughtering and processing facilities and cold stores have been financed by the Bank under the previous livestock projects.

Project Cost and Financing

45. The estimated total cost of the project is \$412.2 million, including \$1.8 million duties and taxes, with an estimated foreign exchange component of \$138.2 million. The cost estimates are based on unit rates of work under the Romanian system of administered prices. The cost of equipment and materials has been estimated on the basis of the prices prevailing in mid-1980. Physical contingencies have been provided at an average of 4 percent which will be adequate because the cost estimates are based on detailed production models. Price contingencies on foreign exchange costs are based on an increase of 5.25 percent for the second half of 1980, 9 percent for 1981, 8 percent for 1982, 7 percent for 1983-85 and 6 percent thereafter. Reflecting experience with other Bank-financed projects to date, price contingencies on local costs have been taken at one percent.

46. The proposed Bank loan of \$80 million would finance 19 percent of the estimated total costs and 58 percent of the estimated foreign costs of the project. The balance of the project cost would be financed by sub-borrowers' contributions (\$109.1 million) and loans from BAFI and cofinanciers (\$223.1 million). The Government of Romania would bear the foreign exchange risk. The proposed loan would be made to BAFI with the guarantee of the Socialist Republic of Romania, and would be for a term of 15 years, including 3 years grace, at an interest rate of 9.25 percent per annum. The Government has, in

principle, agreed to seek cofinancing of up to \$100 million for this proposed project. Judging by the response of cofinanciers to other Bank-financed projects in Romania, it is expected that offers of cofinancing will be obtained. The amount and timing of cofinancing will depend on market conditions and amounts being raised by Romania on other Bank-financed projects. It is likely that for this project cofinancing will be in the range of US\$50-100 million equivalent.

47. Out of these funds together with BAFI's own funds, about \$155 million equivalent would be onlent to CAPs, about \$64 million equivalent to IASs, about \$24 million equivalent to food processing enterprises, about \$30 million equivalent to MAFI for pasture improvement, about \$24 million equivalent to individual producers, and about \$6 million equivalent for research and technical services. BAFI would onlend these funds for terms of up to 16 years including up to 3 years grace to cooperatives at 3 percent per annum, for terms of up to 10 years including up to 3 years grace to IASs, MAFI and food processing enterprises at 2 percent per annum during the construction period and 4 percent thereafter, and for terms of 5 years for individual producers at 3 percent per annum. As in earlier projects, these rates result in a positive spread over BAFI's financial and administrative costs in providing the loans. Government controls on prices have limited domestic inflation to around one percent per annum. Thus BAFI loans under the project would be made at positive real interest rates, on the same terms and conditions as are extended to other borrowers in the agricultural sector.

Project Execution and Operation

48. The project would be carried out by cooperatives and State enterprises under agricultural credit subprojects administered by BAFI, and BAFI's branch offices would be responsible for overall supervision and monitoring of subprojects. Subloans would be made by BAFI to MAFI for grant financing by MAFI of investment in Popular Council (para. 44) administered pasture improvement schemes. Similarly, funds would be made available by BAFI to MAFI for financing of technical services and research, all of which would be under MAFI's control. BAFI maintains detailed records of sub-borrowers' financial and production results relative to subproject appraisal expectations and would submit to the Bank quarterly reports (Loan Agreement, Section 6.01(c)(ii)). Since necessary information would be available from BAFI's branch offices, the incremental cost of monitoring project implementation would be negligible. Technical assistance to the cooperatives and State enterprises carrying out subprojects would be provided by MAFI, particularly the judet (district) Directorates General for Agriculture, research stations, and the food inspection services, under a well developed program of assistance to such entities. All subproject investment proposals would have to be cleared by the responsible MAFI agency before review by BAFI. BAFI would prepare an individual summary analysis for each investment project, including key operating and investment indicators. For subproject review by the Bank, BAFI would prepare and submit for Bank approval individual summary analysis for representative types and numbers of subprojects according to agreed methodology of analysis (Loan Agreement, Schedule 1, para. 3(e)). In addition, details of the cattle nutrition research, the dairy husbandry research and the pasture research would be submitted to the Bank for comments and agreement prior to implementation (Loan Agreement, Section 3.04). MAFI would have responsibility for all necessary arrangements for international procurement.

Market Outlook

49. The analysis of the market and of the demand and supply pattern indicates that no marketing problems need be expected. The Romanian per capita consumption level of both milk products and meat including beef is low compared with EEC countries and most of the Eastern European countries, and is expected to be so through 1985. Despite the recent growth in milk products sales by the Milk Central (10 percent per annum for fresh products but at a much lower rate for cheese and liquid milk), the demand for milk products is still largely unsatisfied. This is evidenced by frequent long queues for milk products, and peasant market prices for cheeses and cream are well above the social sector controlled prices. Over the country as a whole, the Milk Central estimates that the total milk products market is 15-30 percent undersupplied at present. Under the Bank's assumptions of supply development (5.1 percent annual growth giving 71.9 million hectolitres (hl) as against the Romanian Plan target of 8.1-8.8 percent annual growth giving 85-88.7 million hl), Romania would continue to be in a milk deficit situation up to 1985. The Bank's estimates of supplies available for human consumption by 1985 are 218 kg per capita excluding butter, compared to 1978 consumption of 160 kg per capita. This is below estimated demand of 223 kg per capita in 1985. Should planned butter and cheese exports occur, the unfulfilled gap would further expand. Meat is also in short supply. Pig meat prices on the peasant market are on average 55 percent higher than official prices. Beef is only available through the official market outlets, but its absence in many shops confirms the shortage. The Romanian authorities estimates that per capita meat consumption in 1978 would have been 70 kg rather than the actual figure of 53 kg if supplies were available. By 1985, Romania plans to supply the market with 67 to 72 kg per capita of meat and meat products, which compares to an estimated potential demand for 1985 of 85 kg per capita at present prices. Compared to 12.5 kg in 1978, per capita beef consumption planned for 1985 at 16-18 kg remains relatively low compared with many other countries. Thus, no market problem is expected for beef produced under the project. Romania has been a consistent net exporter of beef over the last decade. In 1979, ten different and diverse countries imported an average of over 2,000 tons beef each. On the basis of the recent FAO projections and the recent Romanian export records, the planned 1985 export target of 30,000 tons of live cattle and 152,000 tons of carcass beef are realistic from the demand standpoint. A detailed review of supply situation for 1985 carried out under the Bank's recent Cattle and Sheep Subsector Survey indicates that insufficient beef is likely to be available to fulfill the Plan domestic consumption and export targets. In the light of this, no overall marketing problems are envisaged in the disposal of beef produced under the project.

Audit

50. BAFI would keep separate accounts for all project expenditures and its transactions are subject to continuous control by internal auditors to an annual audit by inspectors from the Ministry of Finance and from the Court of Superior Control which reports directly to the Council of Ministers and the President. BAFI's accounting system and the audit of its transactions are satisfactory and BAFI's audited overall and project operating and financing results would be sent to the Bank not later than six months after the end of BAFI's fiscal year.

Procurement

51. Equipment and materials equivalent in cost to the proposed Bank loan of US\$80.0 million would be procured in accordance with the "Guidelines for Procurement under World Bank Loans and IDA Credits - March 1977." US\$78.0 million of the items would be procured through international competitive bidding, and US\$1.75 million of specialized equipment for feed and forage analysis laboratories and milking machine testing and maintenance kits would be procured through limited international tendering after soliciting bids from suppliers in at least three countries. US\$0.25 million would be expended through MAFI for international training in connection with technical services and research. Romanian manufacturers would be allowed a preference of 15 percent or the applicable customs duty, whichever is lower. The application of preference is not expected to significantly affect the result of bidding on the proposed project. It is expected that foreign suppliers would win contracts for about US\$4.8 million for slaughterhouse and meat processing equipment and specialized research equipment which are not manufactured in Romania. Other items to be procured through international competitive bidding and limited international tendering (about US\$75.2 million) are available domestically and, based on experience with previous Bank-financed agricultural projects, it is expected that the Romanian manufacturers would be successful in bidding for these items. The Bank would not finance construction works under the project; these would be carried out by the Romanian Construction Trusts, which are experienced and familiar with local conditions, methods and regulations.

Disbursement

52. The Bank loan would be disbursed at the rate of 27 percent of the amounts disbursed by BAFI for dairy farms, beef fattening and heifer breeding farms, individual producers, milk and meat processing and storage facilities, and buildings for technical services and research. Disbursement would be made against certificates of expenditure, the documentation for which is not submitted for review but is retained by BAFI and made available for inspection by Bank supervision missions. Reimbursement for BAFI disbursements for equipment and for research and technical services would be at the rate of 100 percent of foreign expenditures and 100 percent of local expenditures ex-factory and training for technical services and research would be made at the rate of 100 percent of foreign expenditures. Prior to disbursement for the following individual components, BAFI would submit to the Bank for its approval (i) details of the National Feed Analysis Service including an implementation timetable, location of laboratories, equipment, staffing and training (Loan Agreement, Schedule 1, para.3(f)) and, (ii) a program and timetable for training and equipping the Milking Machine Testing and Maintenance Service (Loan Agreement, Schedule 1, para. 3(g)).

Environment

53. Romania now maintains a comprehensive system of standards and controls to ensure satisfactory waste disposal, and a strict system of penalties is maintained to ensure compliance. Facilities financed under the

project would be constructed and operated in conformity with this environmental protection code. During construction, each on-farm production complex would be required by law to install suitable waste water treatment works as well as separate well and water pumping facilities. In the manure and waste disposal system, combined solid and liquid manure would be pumped to concrete holding tanks for sedimentation and separation of liquid and semi-solid materials for fertilization of agricultural land. Similarly, the slaughtering and processing facilities and cold stores facilities would be required to construct effluent treatment plans to separate fats and solid materials, prior to discharge into the municipal sewerage system. Provision would also be made for a separate drainage system for rainwater. A strict system of penalties is maintained to ensure compliance with water purity requirements.

Benefits and Risks

54. The project would contribute to increased production and even more importantly to increased production efficiency under the livestock development program included in the Government's Five Year Plan for the period 1981-1985. The important technological improvements are described in paras. 43 and 44 above. At the same time, the project would help the Government's effort, begun recently, to improve the quality and quantity of domestic food consumption, a policy objective with which the Bank concurs. Reasons for supporting this greater emphasis on consumption have been given in para. 15. The project would also bring about foreign exchange earnings, mainly through beef products exports. At full development in 1985/86 for all but new dairy units which reach full development in 1986/87, annual incremental off-farm project production would be about 379 thousand tons (3.8 million hl) of milk, 40 thousand tons of carcass beef (or about 165 thousand fattened cattle and 15 thousand cull cows) and 33 thousand breeding heifers. Additionally, the incremental farmyard manure produced would have an active substance fertilizer equivalent of about 14,000 tons of nitrogen, 7,000 tons of phosphate and 16,000 tons of potash. Annual incremental milk production at full development from the project would permit in the absence of exports a per capita consumption of 250 kg in 1985/86 compared to 160 kg in 1978. Even assuming that about 70 percent of the specialized beef units output or some 25,000 tons carcass weight will be exported, additional beef production from this project will permit an increase of 0.7 kg per capita in Romanian domestic beef consumption by 1985/86. Final goods from the project would be sold domestically through the State fixed price marketing system or exported through agencies. In either case surplus funds would be transferred to the State for redistribution in accordance with centrally planned expenditures.

55. The economic rate of return to the project excluding the agro-industries component is 22 percent on 88 percent of the total costs for which benefits have been quantified. The economic rate of return for CAP dairy farms on hills and plains, whose costs are \$116 million, is 17.9 percent. The rates of return range between 41.8 percent and 43.8 percent for dairy farm modernizations in CAPs and IASs whose costs are \$17.2 million in total. The CAP and IAS beef fattening farms would have the rates of return of 11.0 percent and 14.2 percent with the costs of \$11.8 million and \$16.2 million, respectively. The economic rate of return is least sensitive to

changes in capital costs and most sensitive to revenue variations. For the economic rate of return for the total project to fall to 11.3 percent, revenues would have to fall by 10 percent and at the same time the capital and operating costs would have to increase by 10 percent, respectively. Beef production is particularly sensitive to fluctuations in revenue. Due to the cyclical nature of world beef production and prices, these will inevitably occur both upwards and downwards; though less so in Romania than in other countries due to highly competent export market management. Most important in this respect is that the projected long run trend in international beef prices is positive thus ensuring viability for beef production in the future. Agro-industries investments are not analyzed pending BAFI's submission of investment analysis according to the agreed methodology for disbursement applications. Similar investments under previous Bank financed Romanian livestock projects have shown ERRs ranging from 15 percent to 20 percent of total investment and expected to be repeated here. This component accounts for only 6 percent of total investment under the project and would be unlikely to alter the total on-farm components ERR by more than 1 or 2 points. The individual producers component also accounts for about 6 percent of total project investment. Similar types of investment financing under the Second Livestock Project have shown rates of return, both economic and financial, equal to or somewhat greater than for similar investments in the social sector. Consequently a complete analysis of this component would be likely to increase the overall economic rate of return marginally. The project is expected to yield a number of benefits whose value cannot be quantified, including the benefits of the improved technology and technical services as well as those from research to units outside the project including individual producers and CAP plot holders. Given the robustness of the quantified portion of the project and the significant unquantified benefits, project risks, principally delay in upgrading forage quality and provision of agroindustries capacities, are quite acceptable and no greater than can normally be expected with operations of this type.

PART V - LEGAL INSTRUMENTS AND AUTHORITY

56. The draft Loan Agreement between the Bank and the Bank for Agriculture and Food Industry of Romania, the draft Guarantee Agreement between the Socialist Republic of Romania and the Bank, and the report of the Committee provided for in Article III, Section 4 (iii) of the Articles of Agreement are being distributed to the Executive Directors separately.
57. Features of the project of special interest are listed in Section III of Annex III.
58. I am satisfied that the proposed loan would comply with the Articles of Agreement of the Bank.

PART VI - RECOMMENDATIONS

59. I recommend that the Executive Directors approve this proposed Loan.

Robert S. McNamara
President

Attachments
December 3, 1980
Washington, D.C.

ROMANIA - SOCIAL INDICATORS DATA SHEET

LAND AREA (THOUSAND SQ. KM.)	ROMANIA			REFERENCE GROUPS (WEIGHTED AVERAGES - MOST RECENT ESTIMATE) ^{/a}	
	1960 /b	1970 /b	MOST RECENT ESTIMATE /b	CENTRALLY PLANNED ECONOMIES	INDUSTRIALIZED COUNTRIES
TOTAL	237.5				
AGRICULTURAL	149.6				
GNP PER CAPITA (US\$)	180.0	510.0	1750.0	1188.8	8104.2
ENERGY CONSUMPTION PER CAPITA (KILOGRAMS OF COAL EQUIVALENT)	1342.0	3013.0	4042.0	2116.2	7021.1
POPULATION AND VITAL STATISTICS					
POPULATION, MID-YEAR (MILLIONS)	18.4	20.4	21.9	.	.
URBAN POPULATION (PERCENT OF TOTAL)	34.1	40.8	46.5	35.5	76.0
POPULATION PROJECTIONS					
POPULATION IN YEAR 2000 (MILLIONS)			26.0	.	.
STATIONARY POPULATION (MILLIONS)			30.0	.	.
YEAR STATIONARY POPULATION IS REACHED			2090	.	.
POPULATION DENSITY					
PER SQ. KM.	77.0	85.0	92.0	83.6	142.8
PER SQ. KM. AGRICULTURAL LAND	126.0	135.0	146.0	228.0	523.3
POPULATION AGE STRUCTURE (PERCENT)					
0-14 YRS.	28.2	25.9	25.9	30.8	23.5
15-64 YRS.	65.1	65.5	64.1	62.1	65.1
65 YRS. AND ABOVE	6.7	8.6	10.0	7.1	11.4
POPULATION GROWTH RATE (PERCENT)					
TOTAL	1.2	1.0	0.9	1.4	0.7
URBAN	3.8	2.8	2.5	2.9	1.3
CRUDE BIRTH RATE (PER THOUSAND)					
CRUDE BIRTH RATE (PER THOUSAND)	20.0	20.0	19.0	18.2	13.8
CRUDE DEATH RATE (PER THOUSAND)					
CRUDE DEATH RATE (PER THOUSAND)	9.0	10.0	9.0	7.1	9.1
GROSS REPRODUCTION RATE					
GROSS REPRODUCTION RATE	1.2	1.3	1.2	1.3	0.9
FAMILY PLANNING					
ACCEPTORS, ANNUAL (THOUSANDS)	..	..	..	..	..
USERS (PERCENT OF MARRIED WOMEN)	..	..	..	..	..
FOOD AND NUTRITION					
INDEX OF FOOD PRODUCTION					
PER CAPITA (1969-71=100)	89.0	89.0	152.0	108.5	110.8
PER CAPITA SUPPLY OF					
CALORIES (PERCENT OF					
REQUIREMENTS)	108.0	115.0	130.0	113.7	131.6
PROTEINS (GRAMS PER DAY)					
PROTEINS (GRAMS PER DAY)	86.0	90.0	103.0	75.1	98.0
OF WHICH ANIMAL AND PULSE					
OF WHICH ANIMAL AND PULSE	30.0	34.0	43.0	28.6	62.1
CHILD (AGES 1-4) MORTALITY RATE					
CHILD (AGES 1-4) MORTALITY RATE	3.0	2.4	1.0	1.1	0.8
HEALTH					
LIFE EXPECTANCY AT BIRTH (YEARS)					
LIFE EXPECTANCY AT BIRTH (YEARS)	66.0	68.0	70.0	70.1	73.5
INFANT MORTALITY RATE (PER					
THOUSAND)	75.7	49.4	31.0	22.4	13.2
ACCESS TO SAFE WATER (PERCENT OF					
POPULATION)					
TOTAL	..	..	..	..	..
URBAN	..	..	..	..	..
RURAL	..	..	..	..	..
ACCESS TO EXCRETA DISPOSAL (PERCENT					
OF POPULATION)					
TOTAL	..	..	..	..	..
URBAN	..	..	..	..	..
RURAL	..	..	..	..	..
POPULATION PER PHYSICIAN					
POPULATION PER PHYSICIAN	780.0/e	840.0/d	734.0	2070.8	624.8
POPULATION PER NURSING PERSON					
POPULATION PER NURSING PERSON	620.0/e	..	638.0	240.1	218.9
POPULATION PER HOSPITAL BED					
TOTAL	130.0/e	120.0	109.0	96.7	121.2
URBAN	50.0/e	50.0	60.0	..	..
RURAL	620.0/e	770.0	730.0	..	..
ADMISSIONS PER HOSPITAL BED					
ADMISSIONS PER HOSPITAL BED	..	23.0	..	..	17.0
HOUSING					
AVERAGE SIZE OF HOUSEHOLD					
TOTAL	..	3.2/e	..	..	..
URBAN	..	2.8/e	..	..	..
RURAL	..	3.4/e	..	..	..
AVERAGE NUMBER OF PERSONS PER ROOM					
TOTAL	..	1.4/e	..	..	..
URBAN	..	1.3/e	..	..	..
RURAL	..	1.4/e	..	..	..
ACCESS TO ELECTRICITY (PERCENT					
OF DWELLINGS)					
TOTAL	..	49.0/e	..	..	..
URBAN	..	86.0/e	..	..	..
RURAL	..	27.0/e	..	..	..

ROMANIA - SOCIAL INDICATORS DATA SHEET

	ROMANIA			REFERENCE GROUPS (WEIGHTED AVERAGES - MOST RECENT ESTIMATE) ^{/a}	
	1960 ^{/b}	1970 ^{/b}	MOST RECENT ESTIMATE ^{/b}	CENTRALLY PLANNED ECONOMIES	INDUSTRIALIZED COUNTRIES
EDUCATION					
ADJUSTED ENROLLMENT RATIOS					
PRIMARY: TOTAL	98.0	113.0	102.0	118.7	100.1
MALE	101.0	112.0	102.0	117.5	102.2
FEMALE	95.0	114.0	101.0	120.0	102.3
SECONDARY: TOTAL	24.0	45.0	77.0	100.2	87.1
MALE	27.0	51.0	81.0	101.9	84.4
FEMALE	22.0	38.0	73.0	97.8	84.3
VOCATIONAL ENROL. (% OF SECONDARY)	54.0	58.0	70.0	47.4	19.0
PUPIL-TEACHER RATIO					
PRIMARY	25.0	21.0	21.0	16.2	21.3
SECONDARY	16.0	18.0	19.0	13.0	16.4
ADULT LITERACY RATE (PERCENT)	..	..	98.0	..	98.9
CONSUMPTION					
PASSENGER CARS PER THOUSAND POPULATION	..	2.2	..	..	339.9
RADIO RECEIVERS PER THOUSAND POPULATION	120.0	152.0	146.0	403.5	932.9
TV RECEIVERS PER THOUSAND POPULATION	3.0	73.0	139.0	200.5	354.8
NEWSPAPER ("DAILY GENERAL INTEREST") CIRCULATION PER THOUSAND POPULATION	147.0	169.0	129.0	354.3	327.4
CINEMA ANNUAL ATTENDANCE PER CAPITA	9.0	9.8	8.7	14.4	3.3
LABOR FORCE					
TOTAL LABOR FORCE (THOUSANDS)	10509.5	11408.2	12015.8	.	.
FEMALE (PERCENT)	44.9	44.5	45.0	40.7	36.1
AGRICULTURE (PERCENT)	64.5	47.0	33.0	50.2	7.6
INDUSTRY (PERCENT)	20.5	26.3	33.2	30.8	38.8
PARTICIPATION RATE (PERCENT)					
TOTAL	57.1	56.0	55.9	47.3	44.6
MALE	64.5	63.3	62.8	57.1	58.1
FEMALE	50.1	49.0	49.1	37.0	31.7
ECONOMIC DEPENDENCY RATIO	0.7	0.7	0.7	0.7	0.8
INCOME DISTRIBUTION					
PERCENT OF PRIVATE INCOME RECEIVED BY					
HIGHEST 5 PERCENT OF HOUSEHOLDS	..	..	..	..	..
HIGHEST 20 PERCENT OF HOUSEHOLDS	..	..	..	..	..
LOWEST 20 PERCENT OF HOUSEHOLDS	..	..	..	..	..
LOWEST 40 PERCENT OF HOUSEHOLDS	..	..	..	..	..
POVERTY TARGET GROUPS					
ESTIMATED ABSOLUTE POVERTY INCOME LEVEL (US\$ PER CAPITA)					
URBAN	..	..	..	..	..
RURAL	..	..	..	..	..
ESTIMATED RELATIVE POVERTY INCOME LEVEL (US\$ PER CAPITA)					
URBAN	..	..	394.0	..	..
RURAL	..	..	394.0	..	..
ESTIMATED POPULATION BELOW ABSOLUTE POVERTY INCOME LEVEL (PERCENT)					
URBAN	..	..	..	..	..
RURAL	..	..	..	..	..

.. Not available
. Not applicable.

NOTES

^{/a} The group averages for each indicator are population-weighted arithmetic means. Coverage of countries among the indicators depends on availability of data and is not uniform.

^{/b} Unless otherwise noted, data for 1960 refer to any year between 1959 and 1961; for 1970, between 1969 and 1971; and for Most Recent Estimate, between 1974 and 1978.

^{/c} 1962; ^{/d} WHO estimates; ^{/e} 1966.

DEFINITIONS OF SOCIAL INDICATORS

Notes: Although the data are drawn from sources generally judged the most authoritative and reliable, it should also be noted that they may not be internationally comparable because of the lack of standardized definitions and concepts used by different countries in collecting the data. The data are, nonetheless, useful to describe the orders of magnitude, indicate trends, and characterize certain major differences between countries.

The reference groups are (1) the same country group of the subject country and (2) a country group with somewhat higher average income than the country group of the subject country (except for "Capital Surplus and Exporters" group where "Middle Income North Africa and Middle East" is chosen because of at least half of the countries in a group has data for that indicator. Since the coverage of countries among the indicators depends on the availability of data and is not uniform, caution must be exercised in relating averages of one indicator to another. These averages are only useful in comparing the value of one indicator at a time among the country and reference groups.

LAND AREA (thousand sq. km.)

Total - Total surface area comprising land area and inland waters.

Agricultural - Estimate of agricultural area used temporarily or permanently for crops, pastures, market and kitchen gardens or to lie fallow; 1977 data.

GDP PER CAPITA (US\$) - GDP per capita estimates at current market prices, calculated by same conversion method as World Bank Atlas (1976-78 basis); 1960, 1970, and 1978 data.

ENERGY CONSUMPTION PER CAPITA - Annual consumption of commercial energy (coal and lignite, petroleum, natural gas and hydro-, nuclear and geothermal electricity) in kilograms of coal equivalent per capita; 1960, 1970, and 1978 data.

POPULATION AND VITAL STATISTICS

Total Population, Mid-Year (millions) - As of July 1; 1960, 1970, and 1978 data.

Urban Population (percent of total) - Ratio of urban to total population; different definitions of urban areas may affect comparability of data among countries; 1960, 1970, and 1978 data.

Population Projections

Population in year 2000 - Current population projections are based on 1980 total population by age and sex and their mortality and fertility rates. Projection parameters for mortality rates comprise three levels assuming life expectancy at birth increasing with country's per capita income level, and female life expectancy stabilizing at 77.5 years. The parameters for fertility rate also have three levels assuming decline in fertility according to income level and past family planning performance. Each country is then assigned one of these nine combinations of mortality and fertility trends for projection purposes.

Stationary population - In a stationary population there is no growth since the birth rate is equal to the death rate, and also the age structure remains constant. This is achieved only after fertility rates decline to the replacement level of unit net reproduction rate, when each generation of women replaces itself exactly. The stationary population size was estimated on the basis of the projected characteristics of the population in the year 2000, and the rate of decline of fertility rate to replacement level.

Year stationary population is reached - The year when stationary population size has been reached.

Population Density

Per sq. km. - Mid-year population per square kilometer (100 hectares) of total area.

Per sq. km. agricultural land - Computed as above for agricultural land only.

Population Age Structure (percent) - Children (0-14 years), working-age (15-64 years), and retired (65 years and over) as percentages of mid-year population; 1960, 1970, and 1978 data.

Population Growth Rate (percent) - total - Annual growth rates of total mid-year populations for 1950-60, 1960-70, and 1970-78.

Population Growth Rate (percent) - urban - Annual growth rates of urban populations for 1950-60, 1960-70, and 1970-78.

Crude Birth Rate (per thousand) - Annual live births per thousand of mid-year population; 1960, 1970, and 1978 data.

Crude Death Rate (per thousand) - Annual deaths per thousand of mid-year population; 1960, 1970, and 1978 data.

Gross Reproduction Rate - Average number of daughters a woman will bear in her normal reproductive period if she experiences present age-specific fertility rates; usually five-year averages ending in 1960, 1970, and 1977.

Family Planning - Acceptors, Annual (in thousands) - Annual number of acceptors of birth-control devices under auspices of national family planning program.

Family Planning - Users (percent of married women) - Percentage of married women of child-bearing age (15-49 years) who use birth-control devices to all married women in same age group.

FOOD AND NUTRITION

Index of Food Production per Capita (1959-71=100) - Index of per capita annual production of all food commodities. Production excludes seed and feed and is on calendar year basis. Commodities cover primary goods (e.g. sugarcane instead of sugar) which are edible and contain nutrients (e.g. coffee and tea are excluded). Aggregate production of each country is based on national average producer price weights; 1961-65, 1970, and 1978 data.

Per capita supply of calories (percent of requirements) - Computed from energy equivalent of net food supplies available in country per capita per day. Available supplies comprise domestic production, imports less exports, and changes in stock. Net supplies exclude animal feed, seeds, quantities used in food processing, and losses in distribution. Requirements were estimated by FAO based on physiological needs for normal activity and health considering environmental temperature, body weights, age and sex distribution of population, and allowing 10 percent for waste at household level; 1961-65, 1970, and 1977 data.

Per capita supply of protein (grams per day) - Protein content of per capita net supply of food per day. Net supply of food is defined as above. Requirements for all countries established by USDA provide for minimum allowance of 60 grams of total protein per day and 20 grams of animal and pulse protein, of which 10 grams should be animal protein. These standards are lower than those of 75 grams of total protein and 23 grams of animal protein as an average for the world, proposed by FAO in the Third World Food Survey; 1961-65, 1970 and 1977 data.

Per capita protein supply from animal and pulse - Protein supply of food derived from animals and pulses in grams per day; 1961-65, 1970 and 1977 data.

Child (ages 1-4) Mortality Rate (per thousand) - Annual deaths per thousand in age group 1-4 years, to children in this age group; for most developing countries data derived from life tables; 1960, 1970 and 1977 data.

HEALTH

Life Expectancy at Birth (years) - Average number of years of life remaining at birth; 1960, 1970 and 1978 data.

Infant Mortality Rate (per thousand) - Annual deaths of infants under one year of age per thousand live births.

Access to Safe Water (percent of population) - total, urban, and rural - Number of people (total, urban, and rural) with reasonable access to safe water supply (includes treated surface waters or untreated but uncontaminated water such as that from protected boreholes, springs, and sanitary wells) as percentages of their respective populations. In an urban area a public fountain or standpost located not more than 200 meters from a house may be considered as being within reasonable access of that house. In rural areas reasonable access would imply that the household or members of the household do not have to spend a disproportionate part of the day in fetching the family's water needs.

Access to Sewage Disposal (percent of population) - total, urban, and rural - Number of people (total, urban, and rural) served by sewerage disposal as percentages of their respective populations. Sewerage disposal may include the collection and disposal, with or without treatment, of human excreta and wastewater by water-borne systems or the use of pit latrine and similar installations.

Population per Physician - Population divided by number of practicing physicians qualified from a medical school at university level.

Population per Nursing Person - Population divided by number of practicing male and female graduate nurses, practical nurses, and assistant nurses.

Population per Hospital Bed - total, urban, and rural - Population (total, urban, and rural) divided by their respective number of hospital beds available in public and private general and specialized hospital and rehabilitation centers. Hospitals are establishments permanently staffed by at least one physician. Establishments providing principally custodial care are not included. Rural hospitals, however, include health and medical centers not permanently staffed by a physician (but by a medical assistant, nurse, midwife, etc.) which offer in-patient accommodation and provide a limited range of medical facilities. For statistical purposes urban hospitals include WHO principal general and specialized hospitals, and rural hospitals local or rural hospitals and medical and maternity centers.

Admissions per Hospital Bed - Total number of admissions to or discharges from hospitals divided by the number of beds.

HOUSING

Average Size of Household (persons per household) - total, urban, and rural - A household consists of a group of individuals who share living quarters and their main meals. A boarder or lodger may or may not be included in the household for statistical purposes.

Average number of persons per room - total, urban, and rural - Average number of persons per room in all urban, and rural occupied conventional dwellings, respectively. Dwellings exclude non-permanent structures and unoccupied parts.

Access to Electricity (percent of dwellings) - total, urban, and rural - Conventional dwellings with electricity in living quarters as percentage of total, urban, and rural dwellings respectively.

EDUCATION

Adjusted Enrollment Ratios

Primary school - total, male and female - Gross total, male and female enrollment of all ages at the primary level as percentages of respective primary school-age populations; normally includes children aged 6-11 years but adjusted for different lengths of primary education; for countries with universal education enrollment may exceed 100 percent since some pupils are below or above the official school age.

Secondary school - total, male and female - Computed as above; secondary education requires at least four years of approved primary instruction; provides general, vocational, or teacher training instructions for pupils usually of 12 to 17 years of age; correspondence courses are generally excluded.

Vocational enrollment (percent of secondary) - Vocational institutions include technical, industrial, or other programs which operate independently or as departments of secondary institutions.

Public-teacher ratio - primary, and secondary - Total students enrolled in primary and secondary levels divided by numbers of teachers in the corresponding levels.

Adult literacy rate (percent) - Literate adults (able to read and write) as a percentage of total adult population aged 15 years and over.

CONSUMPTION

Passenger Cars (per thousand population) - Passenger cars comprise motor cars seating less than eight persons; excludes ambulances, hearse and military vehicles.

Radio Receivers (per thousand population) - All types of receivers for radio broadcasts in general public per thousand of population; excludes unlicensed receivers in countries and in years when registration of radio sets was in effect; data for recent years may not be comparable since most countries abolished licensing.

TV Receivers (per thousand population) - TV receivers for broadcast to general public per thousand population; excludes unlicensed TV receivers in countries and in years when registration of TV sets was in effect.

Newspaper Circulation (per thousand population) - Shows the average circulation of "daily general interest newspaper," defined as a periodical publication devoted primarily to recording general news. It is considered to be "daily" if it appears at least four times a week.

Cinema Annual Attendance per Capita per Year - Based on the number of tickets sold during the year, including admissions to drive-in cinemas and mobile units.

LABOR FORCE

Total Labor Force (thousands) - Economically active persons, including armed forces and unemployed but excluding households, students, etc. Definitions in various countries are not comparable; 1960, 1970 and 1978 data.

Female (percent) - Female labor force as percentage of total labor force.

Agriculture (percent) - Labor force in farming, forestry, hunting and fishing as percentage of total labor force; 1960, 1970 and 1978 data.

Industry (percent) - Labor force in mining, construction, manufacturing, and electricity, water and gas as percentage of total labor force; 1960, 1970 and 1978 data.

Participation Rate (percent) - total, male, and female - Participation or activity rates are computed as total, male, and female labor force as percentages of total, male and female population of all ages respectively; 1960, 1970, and 1975 data. These are ILO's participation rates reflecting age-sex structure of the population, and long time trends. A few estimates are from national sources.

Economic Dependency Ratio - Ratio of population under 15 and 65 and over to the total labor force.

INCOME DISTRIBUTION

Percentage of Private Income (both in cash and kind) - Received by richest 5 percent, richest 20 percent, poorest 20 percent, and poorest 40 percent of households.

POVERTY TARGET GROUPS

Estimated Absolute Poverty Income Level (US\$ per capita) - urban and rural - Absolute poverty income level is that income level below which a minimal nutritionally adequate diet plus essential non-food requirements is not affordable.

Estimated Relative Poverty Income Level (US\$ per capita) - urban and rural - Rural relative poverty income level is one-third of average per capita personal income of the country. Urban level is derived from the rural level with adjustment for higher cost of living in urban areas.

Estimated Population Below Absolute Poverty Income Level (percent) - urban and rural - Percent of population (urban and rural) who are "absolute poor".

ECONOMIC INDICATORS

GROSS NATIONAL PRODUCT IN 1978

	US\$Mln.	%	Average Annual Rate of Growth (%)			
			1961-65	1966-70	1971-75	1975-78
GNP at Market Prices	36,040	100.0	9.0 ^{1/}	7.7 ^{1/}	11.3 ^{1/}	9.1 ^{1/}
Gross Fixed Domestic Investment	10,905	30.3	11.3	11.2	11.2	11.9
Gross National Saving	10,126	28.1	..	..	..	..
Current Account Balance	-779	2.2				
Export of Goods, NFS	8,639	24.0	9.0 ^{2/3/}	10.9 ^{2/3/}	23.6 ^{2/3/}	11.5 ^{2/3/}
Imports of Goods, NFS	9,174	25.5	10.7 ^{2/3/}	12.7 ^{2/3/}	22.3 ^{2/3/}	15.5 ^{2/3/}

OUTPUT, LABOR FORCE AND PRODUCTIVITY IN 1978

	Net Value Added		Labor Force		N.V.A. Per Worker	
	US\$ Bln.	%	Mln	%	US \$	%
Agriculture	4.46	15.3	3.36	32.7	1,327	46.8
Industry	16.87	57.9	3.41	33.2	4,947	174.6
Construction	2.97	10.2	0.92	8.9	3,228	113.9
Other ^{2/}	4.83	16.6	2.59	25.2	1,865	65.8
Total/Average	29.13	100.0	10.28	100.0	2,834	100.0

GOVERNMENT FINANCE IN 1978

	Central Government	
	Lei Billions	% of GDP
Total Receipts	300.8	52.4
Total Expenditures	299.3	52.1
Total Surplus	1.5	0.3

MONEY, CREDIT AND PRICES

(in billions of Lei, end of year)

	1975	1976	1977	1978
Money Supply	176.4	201.4	207.5	232.5
Short-Term Bank Credit	170.2	194.0	194.5	212.8
Retail Prices (1975 = 100)	103.9	104.4	105.0	107.3
Percentage Changes in Retail Prices	0.2	0.5	0.5	2.2

- ^{1/} Growth rate of national income
^{2/} In current prices
^{3/} Growth rates of exports and imports only.
^{4/} National income (SMP methodology) and output of the non-productive sector.
^{5/} Includes net output of the non-productive sector.

EMENA CP1D
May 23, 1980

BALANCE OF PAYMENTS (Convertible Currencies)

	1977		1978		1979	
	\$m	Conv.(%) ^{1/}	\$m	Conv.(%) ^{1/}	\$m	Conv.(%) ^{1/}
Exports of Goods, NFS	7,357	55	8,728	52	10,094	59
Imports of Goods, NFS	7,529	55	9,319	55	11,389	63
Resource Gap	-172	75	-591	102	-1,295	99
Interest Payments (net)	-132	108	-168	102	-358	101
Balance of Current Account	-304	90	-759	103	-1,653	101
MLT Borrowing						
Disbursements	861	98	1,174	99	2,065	99
Amortization	-562	99	-586	99	-809	99
Net	299	94	588	99	1,256	99
MLT Lending						
Disbursements	485	51	483	62	486	59
Amortization	-127	44	-137	71	-177	57
Net	-358	53	-346	58	-309	60
Short-term Credit	256	69	487	94	981	99
Net Errors and Omissions	-	-	-13	7	-68	98
IMF	38	100	-20	100	21	100
IBEC	101	-	103	-	96	-
Change of reserves	-32	100	-40	100	-324	100

	1977	1978	1979
Imports of oil and oil products	875	1,218	2,051
Exports of oil and oil products	688	746	1,744

MERCHANDISE EXPORTS, 1978

	US\$ Mn	%
Capital Goods	2,289	28
Consumer Goods	1,405	17
Foodstuffs	784	10
Intermediate Goods	667	8
Raw Materials	2,911	37
Industrial	(2,538)	32
Agricultural	(373)	5
	<u>8,056</u>	<u>100</u>

EXTERNAL DEBT, December 31, 1979

	US\$Mln
Total MLT	5,564
of which convertible currencies	5,467

DEBT SERVICE RATIO, Dec. 31, 1979

	%
All Currencies, gross ^{2/}	12.3
All Currencies, net ^{3/}	6.6
Convertible Currencies, gross ^{2/}	20.6

IBRD LENDING, December 31, 1979

	US\$Mln
Outstanding and Disbursed	589.6
Undisbursed	580.7
Outstanding and Undisbursed	1,170.3

EXCHANGE RATES

1. Official Rate

Before August 1971	6.0 Lei: US\$1
August 1971-February 1973	5.53 Lei: US\$1
February 1973-March 1978	4.97 Lei: US\$1
Since March 1978	4.47 Lei: US\$1

2. Tourist Rate

Before August 1971	18.0 Lei: US\$1
August 1971-February 1973	16.0 Lei: US\$1
February 1973-October 1974	14.35 Lei: US\$1
Since October 1972	12.0 Lei: US\$1

3. Conversion Rate for Traded Goods

July 1973-March 1978	20.0 Lei: US\$1
Since March 1978	18.0 Lei: US\$1
Starting January 1981	15.0 Lei: US\$1

- ^{1/} Convertible currency as a percentage of total.
^{2/} Debt service payments for credits received only.
^{3/} Net of debt service payment receipts for export credits extended.

STATUS OF BANK GROUP OPERATIONS IN ROMANIA
Statement of Bank Loans
(As of October 31, 1980)

Loan Number	Fiscal Year	Borrower	Purpose	US \$ Million		
				Amount Bank	TW	IDA Undisbursed
Five loans fully disbursed				280.0		-
1083-RO	1975	BAFI ^{a/}	Agricultural Credit	30.0		1.5
1169-RO	1976	BAFI	Flood Recovery	40.0		1.6
1242-RO	1976	Investment Bank	Hydropower	50.0		8.6
1247-RO	1976	BAFI	Irrigation	60.0		4.2
1368-RO	1977	BAFI	Irrigation	60.0		12.5
1436-RO	1977	Investment Bank	Bearings	38.0		7.1
1447-RO	1977	Investment Bank	Glass Fiber	18.1		0.1
1448-RO	1977	Investment Bank	Polyester	50.0		10.2
1479-RO	1978	BAFI	Agricultural Credit	71.0		26.7
1509-RO	1978	BAFI	Irrigation	40.5		21.1
1536-RO	1978	Investment Bank	Tire	85.0		50.8
1581-RO	1978	Investment Bank	Post Earthquake	60.0		34.3
1634-RO	1979	Investment Bank	Chemicals	40.0		27.0
1651-RO	1979	Investment Bank	Pipe	40.0		38.6
1652-RO	1979	Investment Bank	Thermal Power	70.0		45.2
1669-RO	1979	BAFI	Livestock	75.0		46.5
1670-RO	1979	BAFI	Irrigation	70.0		70.0
1764-RO	1980	BAFI	Livestock	85.0		76.2
1794-RO	1980	Investment Bank	Canal	100.0		90.9
1795-RO	1980	BAFI	Irrigation	90.0		90.0
1876-RO	1980	BAFI	Orchards	50.0		50.0
Total				1,502.6 ^{c/}		713.1
of which has been paid				24.2		
Total now outstanding				1,478.4		
Amount sold				19.8		
of which repaid				15.1	4.7	
Total now paid by Bank ^{b/}				1,473.7		
Total undisbursed						713.1

^{a/} Bank for Agriculture and Food Industry.

^{b/} Excluding exchange adjustments.

^{c/} In addition, a \$125 million loan for the Fourth Power Project and a \$75 million loan for the Bucsani-Buzau-Siret-Prut Irrigation (BBSP) Project are being processed at the same time as this proposed loan.

PROJECTS IN EXECUTION^{1/}

Ln No. 1020 Bacau Fertilizer Project; US\$60 Million Loan of June 28, 1974; Date of Effectiveness: December 31, 1974; Closing Date: September 30, 1980

After initial delays due to changes in site and project scope, and delays in design and construction, most plant units have been commissioned during 1978/79 except for the urea plant. The urea plant is delayed due to slow delivery of local equipment and is now expected to be commissioned in late 1980. The final project cost is expected to be close to the appraisal estimate.

Ln No. 1027 Otelinox Special Steel Project; US\$70 Million Loan of July 10, 1974; Date of Effectiveness: April 3, 1975; Closing Date: December 31, 1979.

Execution of the project was delayed about one year, primarily because of the complexity of two large bid packages, the Romanians' lack of familiarity with international competitive bidding procedures under the Bank's Guidelines, and lack of interest and competition among suppliers. More recent delays have been caused by late delivery of Romanian manufactured equipment. The cold mill was commissioned in July 1979 and construction on the bar mill is progressing somewhat behind contracted schedules with commissioning expected in June 1980. Total project costs are expected to be essentially equal to appraisal estimates. The project is expected to be fully completed in 1980. The loan is now fully disbursed.

Ln. No. 1028 Turceni Thermal Power Project; US\$60 Million Loan of July 10, 1974; Date of Effectiveness: November 6, 1974; Closing Date: June 30, 1979.

Delays in construction due to late delivery of equipment and skilled labor shortages are likely to result in a 15-month delay in commissioning of generating units. Project execution is otherwise according to plan, but in connection with Turceni II some modifications in the coal handling equipment mills are underway because the coal (lignite) was found to be harder and of poorer quality than originally expected. Training of future operational staff is in hand. The loan is now fully disbursed.

^{1/} These notes are designed to inform the Executive Directors regarding the progress of projects in execution and, in particular, to report any problems which are being encountered, and the action being taken to remedy them. They should be read in this sense, and with the understanding that they do not purport to present a balanced evaluation of strengths and weaknesses in project execution.

Ln. No. 1083 Sadova-Corabia Agricultural Credit Project; US\$30 Million Loan of February 6, 1975; Date of Effectiveness: April 29, 1975; Closing Date: December 31, 1980

Progress continues to be satisfactory in implementing subprojects. Construction of the pre-mix feed mill is satisfactory and final project procurement has been carried out under contracts tendered internationally.

Ln. No. 1169 Flood Recovery Project (Agricultural Component); US\$40 Million Loan of November 12, 1975; Date of Effectiveness: December 2, 1975; Closing Date: December 31, 1980

Project execution is proceeding well except for the installation of the flood warning equipment which has been slow. Equipment procured under international competitive bidding has been delivered and only small quantities of spare parts remain to be procured. Delivery of flood warning equipment is expected to be completed in 1980 and installation will extend into 1981.

Ln. No. 1242 Riul Mare Retezat Hydropower Project; US\$50 Million of April 28, 1976; Date of Effectiveness: July 26, 1976; Closing Date: December 31, 1981

Due to shortage of manpower, tunneling works have been delayed and mechanized excavation is expected to begin early in 1980. Project execution is currently about one year behind schedule. Civil works for the dam and underground power station are well underway, and 100 percent of the loan amount has been omitted.

Ln. No. 1247 Rasova-Vederoasa Irrigation and Agriculture Development Project; US\$60 Million Loan of April 28, 1976; Date of Effectiveness: November 3, 1976; Closing date; June 30, 1981

Construction of pumping stations, canals, and other project works is progressing satisfactorily. Out of 11 dairy farms, six farms are completed and contracts for purchase of 9,130 imported heifers (100 percent of total) valued at over US\$8 million have been awarded. Procurement contracts for all equipment have been awarded. The feedmill and silo in Negruvoda is completed while the silo for 44,000 tons in Baneasa is delayed. Work on soil erosion control and the land levelling is behind schedule.

Ln. No. 1368 Ialomita-Calmatui Irrigation Project; US\$60 Million Loan of March 2, 1977; Date of Effectiveness: June 23, 1977; Closing Date: June 30, 1982

Contracts for all equipment and materials have been awarded. Some construction equipment and about 50 percent of pipe has been delivered. Construction of project works is underway, progress is satisfactory. In 1979 about 18,000 ha have been irrigated. Works on surface and tile drains, land levelling and soil erosion control works are behind schedule.

Ln. No. 1436 Brasov Bearings Project; US\$38 Million Loan of June 15, 1977; Date of Effectiveness: August 11, 1977; Closing Date: December 31, 1982

Contracts on virtually all major packages except one, have now been signed and implementation of the project is proceeding ahead of the original schedule. Project costs are expected to be close to, or slightly over, appraisal estimates. Overall economic aspects of the project look somewhat more favorable than at appraisal due to the improved market outlook, improved product mix, and changes in project design to achieve lower product costs.

Ln. No. 1447 Bucharest Glass Fiber Project; US\$18.1 Million of June 15, 1977; Date of Effectiveness: August 11, 1977; Closing Date: December 31, 1980

Project implementation is progressing satisfactorily. The Bank has reviewed the procurement of roving machines and has decided that procedures undertaken by the Borrower were inconsistent with those required under the Loan Agreement. Therefore the portion of the loan (US\$197,080) that would have otherwise been eligible for disbursement has been cancelled. The procurement of equipment for Section II (Spinning) financed by the Bank is nearly completed. Start-up of this section has been delayed about 12 months behind appraisal estimate. This is mainly due to civil construction delays because of severe winter conditions and also delays in imported equipment delivery and erection. Commissioning and three-shift operation is targeted for June 1980.

Ln. No. 1448 Cimpulung-Muscel Polyester Project; US\$50 Million Loan of June 15, 1977; Date of Effectiveness: October 3, 1977; Closing Date: March 31, 1981

The main supply contract has been signed, and execution of the project is proceeding satisfactorily with production expected to begin in June 1980.

Ln. No. 1479 Pig Production and Processing Project; US\$71 Million Loan of July 15, 1977; Date of Effectiveness: September 28, 1977; Closing Date: June 30, 1982

The project represents the Bank's first participation in Romania in a development plan on a nationwide basis. It provides for the development of a large multiplier herd, establishment of testing and selection centers, expansion of industrialized swine production, and provision of slaughtering and processing facilities. Project implementation is proceeding satisfactorily, although disbursements are lagging 31 percent behind Plan targets. Construction materials and slaughterhouse equipment procurement under ICB is almost complete.

Ln. No. 1509 Viisoara Irrigation Project; US\$40.5 Million Loan of January 27, 1978; Date of Effectiveness: May 15, 1978; Closing Date: December 31, 1983

Bids for all procurement contracts were received in November and December 1978, and almost all contracts have been awarded. Construction of project works is proceeding satisfactorily, and about 25 percent of irrigation works have been completed.

Ln. No. 1536 Tires Project; US\$85.0 Million Loan of March 31, 1978; Date of Effectiveness: June 9, 1978; Closing Date: December 31, 1981

Construction of the Zalau plant (truck tires) is slightly behind schedule with expected completion in the second quarter of 1980. The Turnu-Severin plant (off-the-road tires) has been delayed 2 years mainly as a result of difficulties in obtaining adequate responses from prospective suppliers of the main technology and equipment package. The Romanian Government is now at an advanced stage of negotiations with a prospective supplier for the OTR package.

Ln. No. 1581 Post Earthquake Construction Assistance Project; US\$60.0 Million Loan of June 12, 1978; Date of Effectiveness: September 5, 1978; Closing Date: June 30, 1981

Procurement is proceeding satisfactorily and contracting is around 70 percent complete. The pace of disbursement has also picked up in recent months and is expected to be maintained. The enterprises assisted under the loan generally recorded substantial output growth in 1979.

Ln. No. 1634 Craiova Chemical Project; US\$40.0 Million Loan of January 15, 1979; Date of Effectiveness: May 2, 1979; Closing Date: December 31, 1982

Initial procurement and execution of the project are proceeding satisfactorily, and the final commissioning is expected by end 1981, as scheduled, although partial commissioning of some units is delayed by a few months. The final project cost is expected to be close to the appraisal estimate.

Ln. No. 1651 Roman Seamless Pipe Project; US\$40.0 Million Loan of February 26, 1979; Date of Effectiveness: July 30, 1979; Closing Date: December 31, 1982

After an initial delay of nine months procurement is proceeding satisfactorily. The contract for the main technology package was signed in November 1979 and other packages have been prepared for international bidding. Site clearing started in May 1980. The project is expected to start commercial operation in the first quarter of 1983.

Ln. No. 1652 Second Turceni Thermal Power Project; US\$70.0 Million Loan of February 26, 1979; Date of Effectiveness: June 29, 1979; Closing Date: December 31, 1982

The project is expected to be delayed by about one year because of delays in Turceni I and the necessary sequential arrangements for implementation of both projects. Orders for the three Bank financed 330 MW thermo-electric units have been placed. Procurement for about 3 percent of the goods being financed from the loan is in process.

Ln. No. 1669 Second Livestock Project; US\$75.0 Million Loan of April 16, 1979; Date of Effectiveness: July 6, 1979; Closing Date: June 30, 1984

Progress in project implementation is satisfactory and disbursements are in line with appraisal forecasts. Tender documents for procurement of construction materials and slaughterhouse equipment have been approved.

Ln. No. 1670 Mostistea and Calmatui Irrigation and Drainage Project; US\$70 Million Loan of April 16, 1979; Date of Effectiveness: July 16, 1979; Closing Date: June 30, 1984

Initial preparatory works are proceeding satisfactorily. Bids for procurement of equipment and material, under ICB, have been opened and are being evaluated by the Borrower.

Ln. No. 1764 Third Livestock Project; US\$85.0 Million Loan of December 17, 1979; Date of Effectiveness: April 15, 1980; Closing Date: December 31, 1985

Project implementation is beginning. Tender documents for procurement of construction materials have been approved subject to some modifications.

Ln. No. 1794 Danube-Black Sea Canal Project; US\$100 Million Loan of April 30, 1980; Date of Effectiveness: (September 5, 1980); Closing Date: December 31, 1983

The bidding process for both equipment and materials is proceeding on schedule.

Ln. No. 1795 Covurlui Irrigation Project; US\$90 Million Loan of April 8, 1980; Date of Effectiveness: July 8, 1980; Closing Date: December 31, 1987

Preparation of tender documents for procurement of equipment and materials and initial execution of the project are proceeding satisfactorily.

Ln. No. 1876 Orchards Project; US\$50 Million Loan of June 19, 1980; Date of Effectiveness: September 16, 1980; Closing Date: December 31, 1985

This loan became effective only recently. No problems are expected with the initial execution of the project.

ANNEX III

ROMANIA

LIVESTOCK IV (CATTLE) PROJECT

Summary Project Data Sheet

Section I: Timetable of Key Events

- | | | |
|----|---|---|
| a) | Time taken by the country to prepare the project: | 12 months (May 1979-April 1980) |
| b) | Agency which has prepared the project: | Ministry of Agriculture and Food Industry |
| c) | Date of first presentation to the Bank, and date of first Bank mission to consider the project: | May 1979 |
| d) | Date of departure of Appraisal Mission: | April 10, 1980 |
| e) | Date of completion of negotiations: | November 14, 1980 |
| f) | Planned date of effectiveness: | March 1981 |

Section II: Special Bank Implementation Actions: None

Section III: Special Conditions

Special conditions of the loan would be as follows;
Prior to disbursement for the following individual components, BAFI would submit to the Bank for its approval:

- (i) details of the National Feed Analysis Service including an implementation timetable, location of laboratories, equipment, staffing and training (para. 52);
- (ii) a program and timetable for training and equipping the Milking Machine Testing and Maintenance Service (para. 52).

SOCIALISTIC REPUBLIC OF ROMANIA LIVESTOCK IV (Cattle) PROJECT Location of Project Investments



This map has been prepared by the World Bank's staff exclusively for the convenience of the readers of the report to which it is attached. The nomenclature used and the boundaries shown on this map do not imply on the part of the World Bank and its affiliates, any judgement on the legal status of any territory or any endorsement or approval of such boundaries.