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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 REPUBLICKI FOND VODA
(WATER FUND OF THE SOCIALIST REPUBLIC OF SERBIA)
WITH THE GUARANTEE OF
THE SOCIALIST FEDERAL REPUBLIC OF YUGOSLAVIA
FOR THE
MORAVA REGION DEVELOPMENT PROJECT:
WATER SUPPLY, SEWERAGE AND WATER RESOURCES

May 6, 1976

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CURRENCY EQUIVALENTS *

Currency Unit	Yugoslav Dinar (Din.)
US\$1	Din. 18.00
Din. 1	US\$0.0555
Din. 1,000	US\$55.55
Din. 1,000,000	US\$55,555.55

* The Yugoslav Dinar has been floating since July 13, 1973.
The currency equivalents given above are as of April 30, 1976.

FISCAL YEAR

January 1 - December 31

INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT

REPORT AND RECOMMENDATION OF THE PRESIDENT
TO THE EXECUTIVE DIRECTORS ON A
PROPOSED LOAN TO THE REPUBLICICKI FOND VODA
WITH THE GUARANTEE OF THE SOCIALIST FEDERAL REPUBLIC OF YUGOSLAVIA

1. I submit the following report and recommendation on a proposed loan to the Republicki Fond Voda (Water Fund of the Socialist Republic of Serbia or SWF), with the guarantee of the Socialist Federal Republic of Yugoslavia, for the equivalent of US\$20 million to help finance a regional development project consisting of water supply and sewerage systems, as well as water resources and economic development studies. The loan would have a term of 20 years, including 4-1/2 years of grace, with interest at 8-1/2 percent per annum. US\$13.5 million of the loan would be on-lent by SWF to five sub-borrowers on the same terms as those of the Bank loan.

PART I - THE ECONOMY

2. A basic economic mission visited Yugoslavia in November 1972; its report entitled "The Economic Development of Yugoslavia" (194a-YU) was distributed to the Executive Directors on January 2, 1974. An updating Economic Memorandum (662a-YU) was distributed to the Executive Directors on June 23, 1975. An economic mission visited Yugoslavia in October 1975 and the findings of this mission are incorporated in this report. Basic data on the economy are given in Annex I.

Economic Trends and Development Issues

3. The Yugoslav economy has experienced rapid growth during the last two decades, with total GDP at constant prices having increased by an average rate of 6.3 percent, and per capita GDP at 5.2 percent annually. In 1973, per capita GNP came to about US\$1010 (World Bank Atlas methodology). This impressive record of growth was accompanied by some fundamental structural changes in the economy which has moved towards a modern industry/service oriented urban society. The share of agriculture in GDP declined from 38 to 20 percent while the share of industry and mining increased from 16 to 37 percent.

4. The population growth rate averaged 1 percent per year during the last two decades, but with considerable regional variations ranging from an average rate of 1.6 percent for the less developed Republics and Provinces to 0.7 percent for the developed ones. The structural changes in the economy permitted a sizeable transfer of labor force from agriculture to industry and services. However, by 1974 nearly 45 percent of the resident active labor force was still engaged in agriculture and forestry, mostly on small private farms; industry (including mining) accounted for 21 percent, and other sectors for 34 percent.

5. The socio-political framework evolved through several constitutional amendments which were consolidated in the new constitution of 1974. It strengthens three important features of the socio-political system of Yugoslavia. First, self-management, whereby the use and control of the socially owned means of production is entrusted to the workers' collectives, is the fundamental right and obligation of every "basic organization of associated labor" (the smallest technologically identifiable unit of operation) in every sector and activity. Second, the responsibility for most important social and policy decisions has been shifted from the Federation down to the Republics and Provinces, and on to the communes. And third, the management and financial responsibility for social activities (like health, education, welfare, etc.) is transferred from the realm of the state to "communities of interest" (decision-making bodies which comprise delegates of both suppliers and users of the specific services). Responsibility for certain economic activities affecting large segments of the society (like communal services, power production, highways and water management) can be - and progressively is - similarly organized through communities of interest.

6. The social sector, which includes government, most enterprises and public institutions such as libraries, hospitals, theatres and schools, has the leading role in economic and social development; it accounts for 85 percent of GDP and employs over half of the total labor force. The private sector is predominantly comprised of peasant farms (with a 10 hectare limit to land holdings) and small enterprises (with a 5 person limit on the number of non-family workers), mainly in handicrafts, construction, trade, transport and tourism. In the past, the private sector had been relatively neglected by government policy. However, lately more attention is being devoted to private farmers with a view to accelerating the growth of agricultural production and reducing the rural/urban income disparity.

7. Regional income disparity - with a gradient of per capita income falling generally from North to South - has emerged as one of the most important development issues of the country. Four distinct regions can be distinguished by stage of development. The Republic of Slovenia is the high income region with almost double the national average. The Republics of Serbia and Croatia and the Autonomous Province of Vojvodina make up the middle income regions, ranging from 100 to 125 percent of the national average; however, even within these regions pockets of underdevelopment persist. The Republics of Bosnia-Herzegovina, Montenegro and Macedonia - with per capita income between 67 to 75 percent constitute the upper group among the officially designated "less developed regions". The Autonomous Province of Kosovo, with an average income of only 33 percent of the national average, is at the bottom of the spread. These inter-regional disparities can be traced back further to intra-regional disparities. Within Republics and Provinces the spread between communes can extend over the range of 10 to 1, and it is the prevalence of stagnating poor rural communes within the less developed regions which largely determines the disparity between the regions. The rate of economic growth of the less developed regions as a whole was only slightly below the average for Yugoslavia, but

due to the faster population growth (1.6 percent per year versus 0.7 percent in the more developed regions) the income disparity had tended to widen significantly during the last two decades. In order to reverse this trend and to accelerate economic growth and social development in the less developed regions, mechanisms have been instituted for sizeable transfers of financial resources. In 1973, credits on highly favorable terms (containing a grant element of around 50 percent) were made available through the "Federal Fund" to the less developed regions in the amount of almost US\$250 million, equivalent to more than 20 percent of their total investment in the social sector. An additional US\$130 million for social services were transferred as budgetary grants. Both categories of transfers have been growing since in line with the growth in total GDP.

8. Open unemployment has not been a serious problem and is estimated to be only around 3-4 percent of the resident labor force in 1974. However, this low rate conceals three important aspects of the employment problem. First, an estimated one million out of a total labor force of around 9 million (in 1974) has assumed temporary employment abroad. Second, there is some evidence of growing regional and occupational imbalances, due to low inter-regional mobility of labor and to unmatched skill requirements in a fast changing economy. Third, severe underemployment persists in the private agricultural sector.

Recent Developments

9. In 1974, Yugoslavia recorded a rapid increase of GDP of 9 percent in real terms as compared to 5 percent and 4 percent in 1973 and 1972 respectively. Industry was the leading sector with an estimated growth rate of 11 percent in 1974; however, the growth of agricultural production, enhanced by favorable weather conditions, and of services (with the exception of tourism) also accelerated during the year. This rapid expansion of economic activity permeated the whole economy. Investment outlays grew in nominal terms by almost 40 percent (9 percent in real terms) and total consumption expenditures by about 41 percent (13 percent in real terms). The resulting rapid increase in total demand for goods and services was reflected both in the rise of employment and of imports - both in nominal and real terms - and domestic prices. The gain in total employment amounted to about 5 percent in 1974 and exceeded for the first time the natural increase of the labor force. Industrial producer prices rose by almost 30 percent while the cost of living rose less rapidly by some 21 percent. Since fiscal policy leaves, for institutional reasons, little room for demand management, the major response to the inflationary pressures was in terms of monetary policy and direct controls through prices and income policy, including recent legislation placing greater control on investment expenditures. After an expansionary phase during 1972 and 1973, the money supply increased by only 24 percent as compared to a nominal increase of social product of about 36 percent. The shift to a large deficit in the balance of payments in 1974 also contributed to the increased effectiveness of the monetary policy.

10. The balance of trade deficit increased from US\$1.7 billion in 1973 to almost US\$3.7 billion in 1974 both on account of an increase in the volume and the rapid rise in the price of imports and the stagnation of real exports (the terms of trade for the country are estimated to have deteriorated by about 11 percent). The recession in Western Europe has led to a sharp decline in exports to that area. The traditionally large surplus for invisibles (mostly from workers remittances and tourism receipts) failed to compensate for the large trade deficit and the country recorded a current account deficit in excess of US\$1 billion in 1974 as compared to a surplus of US\$464 million in 1973. In response to the circumstances, the import regime has been gradually tightened since August 1974, affecting a large variety of consumer goods and some capital and intermediate goods. In addition, the National Bank raised the intervention point in the foreign exchange market, in effect devaluing the dinar by about 7 percent as against the currencies of Yugoslavia's major trading partners. The large current account deficit has led to some loss of foreign exchange reserves; the official reserves fell by US\$345 million in 1974 (compared to a gain of US\$632 million in 1973). In addition, net foreign borrowing, which averaged US\$390 million during 1971-73, increased to around US\$650 million in 1974. Commercial import credits from suppliers and credits from financial institutions continued to be the major sources of foreign capital. Long-term funds related to financing of development are being made available mainly by the Bank and some bilateral sources (particularly the US Export-Import Bank and Federal Republic of Germany). Yugoslavia has also been one of the beneficiaries of the IMF's Special Oil Facility. Yugoslavia's medium- and long-term external debt outstanding as of December 31, 1973 was US\$4,319 million (disbursed only) and is expected to have increased to about US\$5.0 billion during 1974. Debt service payments amounted to about 15.9 percent of foreign exchange earnings (including workers remittances) in 1973 and 15.3 in 1974.

11. In 1975, the growth rate of the economy is estimated to have receded to 4.5 percent, due mainly to the combined effects of a restrictive monetary policy, stagnating exports and a reduced growth of personal incomes; economic investment and housing construction provided the major growth stimulus during 1975. The inflationary pressure which built up during 1974 and extended into 1975 receded drastically in the second half of the year; the rate of increase of industrial producer prices decreased from 30 percent in 1974 to an annual rate of 12 percent for the first ten months of 1975 and the index of real net personal income remained unchanged for the same period. The good harvest in 1974 has had a favorable impact on the balance of payments, although meat exports were severely affected by the European Community ban on meat imports. Exports to oil producing countries and to the non-convertible currency area have continued to expand rapidly in 1975, but are not expected to compensate for the sharp decline in exports to the convertible currency area. Workers' remittances and receipts from tourism have increased marginally. The current account deficit for 1975 was estimated to approximate the level of 1974 on the basis of preliminary estimates, but there are now indications that it may have dropped by 20 to 25 percent due to a curtailment of imports and an increase in exports during the last third of 1975.

Prospects for 1976

12. The balance of payments is expected to remain the central problem in 1976 as well as for the years to come. The current account deficit is expected to decline somewhat as imports are restrained and there is a recovery in the level of economic activity in Western Europe. The inflationary momentum will probably be curtailed further through improved investment control, closer alignment of real income changes with improvements of productivity and restrictive monetary policy. The real growth rate of GDP is expected to be constrained to about 4.5 percent in 1976 with a gradual recovery in subsequent years.

Medium- and Long-Term Objectives and Prospects

13. The aggravation of major economic problems during 1974, such as rapid inflation and balance of payments pressures, has led to a reappraisal of development objectives. In the light of the recent shift of relative prices in favor of raw materials, more emphasis will be given to the development of Yugoslavia's own natural resources. In this connection, the development of the energy sector is given the highest priority. It focuses on electric power, where the generating capacity is likely to fall critically short of the rapidly rising power requirements of the expanding economy. The development of the power sector will largely be based on the large unutilized hydropower potential and soft-coal reserves of the country. Other priority activities are ferrous metallurgy, some segments of non-ferrous metallurgy (notably lead, zinc, copper, nickel and bauxite/aluminum), technologically advanced production equipment, basic chemicals including petroleum refining, agriculture and food processing, interpublic transportation, multipurpose works, and housing and basic construction material.

14. This emphasis on accelerated development of the raw material basis and the deepening of the economic infrastructure requires a more capital-intensive investment pattern, associated with longer time-lags between investment and output. To sustain this development path, both continued high borrowing abroad and an increased savings rate will be essential. Since, with the possible exception of private savings, interest rates do not play a significant role in the determination of the level of aggregate savings, the income policy - i.e. the guidelines governing the distribution of enterprise income between workers' income and accumulation - will have a crucial role.

15. The new Five Year Plan (1976-1980), presently under preparation, will focus on the implementation of these objectives. For growth, an average rate of 7 percent per year is proposed as feasible, comparing with a target growth rate of the previous Plan of 7.5 percent and an expected realized growth rate of 6.5 percent. For employment, the average planned growth rate would come to about 3 percent with annual increments exceeding the natural increase of the labor force by growing margins. This would permit more vigorous pursuit of two major social objectives: the reduction of the number

of temporary migrants abroad, and an increased absorption of the rural under-employment into the social sector. The economy will continue to be open to the world market although the composition of foreign trade is expected to change with a reduced share for raw material, semifinished products and consumer goods on the import side, and an increased share for agricultural products and manufactured goods on the export side. Workers' remittances are not expected to increase in real terms, but rising tourism receipts are expected to compensate for the expected declining importance of workers' remittances.

16. The reduction of regional disparities is another priority objective of the new Five Year Plan. To that end, the transfer of financial resources to the less developed regions in the form of loans at concessionary terms for economic investment and budgetary grants for social development will be continued and probably will increase as a proportion of total GDP. Since most of the natural resources of the country, including hydropower, are to be found in the less-developed regions, they will, in addition to the transfers, benefit from the increased emphasis on the development of basic industries and power which will to a considerable degree be financed through direct financial contributions from the consuming regions.

17. The new Five Year Plan is being prepared according to the self-management principle as stipulated by the Constitution of 1974. "Self-management planning" is perceived as an iterative process of sequential, converging consensus-finding. In the initial stage, broad priorities (as to sectors and activities) and general quantitative targets and constraints (like growth rates of social product and the volume of savings and investment) are determined by political consensus of the assemblies of the socio-political communities (Communes, Republics and Provinces, Federation). Subsequently, the planning process starts at the bottom with individual enterprises and communities of interest setting out their expectations and targets. The planning process then proceeds through successive and partially overlapping stages of horizontal adjustments within sectors and branches (aimed primarily at eliminating gross duplications), vertical adjustments between closely interdependent sectors and branches (aimed at determining realistic orders of magnitudes of production, conceptually within an input/output framework), and regional adjustments between Republics and Provinces (aimed at both horizontal and vertical consolidation). The socio-political communities participate in this process by ensuring observance of the broad priorities, targets and constraints, and by resolving conflicts which cannot be resolved by the direct participants. The evolving consolidated programs of action, which in their totality constitute the operational portion of the Plan, are codified in the form of "social contracts" or "self-management agreements" which are legally binding for the whole Plan period unless renegotiated in the case of major deviations occurring in the course of Plan implementation. The new Plan, which is currently under preparation, is, thus, expected to differ from the previous Plan in strengthening and formalizing the commitments for implementation by enterprises, banks and government institutions.

Creditworthiness

18. In spite of the present balance of payments problems, the prospects for Yugoslavia's continued economic growth during the next decade are good. The country's endowment of natural and human resources, its relatively low dependence on imported primary energy, its pragmatic approach to economic problems and its readiness to undertake institutional changes, combine to give grounds for a favorable assessment of future prospects. Yugoslavia will need to continue to raise foreign capital on a fairly large scale, mostly from established channels such as the Euro-currency market, suppliers credits and the World Bank. In addition, greater use may be made of credit lines from COMECON countries and the EC, and efforts are being intensified to open up new sources of capital in OPEC countries. Due to the size and structure of external borrowing during 1974 and the years to come, the debt service ratio is expected to increase from 15.3 in 1974 to 18.2 in 1976. Although the debt service ratio may continue to increase gradually, it is expected to peak around 1980 at about 19 percent and decline thereafter. However, taking into account Yugoslavia's debt service record and the measures taken in the past to control balance of payments problems, as well as the prospective growth of production and structural improvement of the balance of trade, Yugoslavia remains creditworthy for a substantial amount of Bank lending.

PART II - BANK GROUP OPERATIONS IN YUGOSLAVIA

19. The Bank has made 35 loans totalling about US\$1,160 million to Yugoslavia. Of this amount approximately 50 percent (US\$571.4 million) has been for 13 loans for the transportation sector - seven for highways totalling US\$220 million, four for railways totalling US\$248 million, US\$108.4 million for natural gas and oil pipelines, and \$44 million for a port project. Bank lending has generally concentrated on infrastructure including, in addition to the transportation loans, power (three loans totalling US\$135 million), telecommunications (one loan for US\$40 million), three multipurpose projects totalling US\$103 million and US\$6 million for a water supply and sewerage project. Nine loans have also been made for industry and two each for tourism and agriculture. IFC has made investments in nine Yugoslav enterprises totalling about US\$130 million. The Bank disbursed \$126 million during FY75, compared with \$59.4 million in FY74, and about \$140 million is projected for FY76. Annex II contains a summary statement of Bank loans and IFC investments as of March 31, 1976, and notes on the execution of on-going projects.

20. The major objectives of current and future Bank lending to Yugoslavia are to accelerate development in the less-developed regions of the country; to promote agricultural development, particularly among the small private farmers by providing basic infrastructure and credit for the financing of farm development, equipment and processing facilities; to promote structural reforms in major sectors of the economy through improved coordination and the strengthening of institutions; and to provide Yugoslavia with long-term external capital and thus help to alleviate critical shortages of convertible foreign exchange, while encouraging and promoting Yugoslavia's efforts to tap other sources of medium and long-term capital. These objectives are basically the same as those

which have guided Bank lending in previous years, but efforts to give special support to the less-developed regions are being strengthened.

21. Proposed loans for the Sarajevo water supply and sewerage project (US\$45.0 million), the Sarajevo air pollution control project (US\$38.0 million), and a second industrial credit project (US\$50 million) have been negotiated and are expected to be submitted shortly for consideration by the Executive Directors. Over the next two years loans envisaged include a second loan for agricultural credit, two loans for irrigation, and a loan for agricultural industries, all for the less developed regions. Highway, railway and power transmission projects during the same period will both assist the less-developed regions and promote structural reforms in the transport and energy sectors. IFC is currently investigating several new investment opportunities to encourage joint ventures which would provide technical, management and marketing expertise as well as long-term capital.

22. In addition to substantial assistance given in identifying and preparing projects for Bank financing, the Bank is providing technical assistance in several areas. A series of regional studies of the four less-developed regions of Yugoslavia was initiated three years ago and three studies, covering Kosovo, Macedonia and Bosnia-Herzegovina, have been completed. The fourth study, of Montenegro, will be completed soon. This series will contribute to better assessment of development programs and will assist both the Governments and the Bank in formulating development strategies for these regions. An energy sector review was undertaken by the Bank in cooperation with the Federal Government to review the energy sector survey which the Federal Government had been undertaking as well as to review the work being done on energy problems in the individual Republics with the objective of analyzing the main problems, issues and policy options for meeting Yugoslavia's future energy needs. A Bank assisted study on the improvement of the financial mechanism has been concluded and its recommendations have been included in draft legislation for a new banking law. Bank cooperation in a training program for auditors of the Social Accounting Service, which audits all enterprises and Government activities, including Bank financed projects, has progressed satisfactorily and further training is underway in cooperation with an international accounting firm. Assistance from EDI, as well as through Bank operations, has been directed towards the improvement of project evaluation.

23. The level of Bank lending has remained constant averaging about US\$200 million annually during the period FY74-76. Although this represents only a small proportion of the country's need for external finance, it is equivalent to almost one-third of the annual long-term official capital inflow in convertible currencies. The outstanding debt to the Bank is expected to gradually decline from its current level of less than 10 percent of Yugoslavia's total external debt. Service on Bank loans as a proportion of total debt service was 4.0 percent in 1974 and is projected to increase to about 6 percent in 1980.

PART III -- WATER RESOURCES SECTOR IN THE MORAVA REGION

24. Water related problems have hindered economic development in many regions of Yugoslavia. Climate and topographical (primarily orographical) characteristics, which cause variable rainfall distribution both in time and place, result in frequent flooding in spring and winter and acute water shortages in the summer and fall, when urban and agricultural demand is highest. Pollution of primary water sources occurs frequently due to discharges of untreated sewage, particularly during low flow periods.

25. The Morava River Basin is the second largest river basin in Yugoslavia; about 80 percent of the watershed is in central Serbia (see Maps 11603 and 11639). It covers 38,000 sq. km. (12 percent of the country's area), contains an estimated population of 3.6 million (about 16 percent of Yugoslavia's total population and over 50 percent of Serbia's population) and encompasses one of the least developed areas of Serbia. An estimated 60 percent of the population of the region is still rural, engaged mainly in small-scale agriculture. Due to the generally mountainous terrain, the habitable valleys are densely populated with numerous, relatively small towns (Nis, the largest, has a population of 200,000). Flooding of agricultural land has historically been the main problem, but with an increasingly urbanized and industrialized population, the flood hazard has increased and problems of urban water supply and water pollution have grown enormously. Almost all towns in the basin have industrial plants, including several which are quite large such as the copper and aluminum processing plant near Titovo Uzice, which make significant demands on water supply and cause pollution.

26. The Republic of Serbia is formulating a long-term program for developing the water resources of the area in order to accelerate economic development. The first stages of this program aim at improving the planning and management of water resources, including the establishment of the appropriate institutional framework and providing specific urgent investments required to meet the water supply and sewerage needs of the two small, but relatively important industrial towns of Titovo Uzice and Cacak.

Water Resources and Regional Development

27. The Morava River, the dominant physical feature in the region, is a large perennial river with variations in stream flows that are the cause of the many water-related problems in the basin. An estimated 2,800 km² of valley bottom lands, comprising the best agricultural land, as well as most of the towns and economic infrastructure are exposed to flooding. Between 1920 and 1965, a total of 36 floods of varying intensity were recorded in the basin, 20 of which lasted for more than 30 days. More recent floods have had damages approximately estimated as follows: 1965 - \$61 million; 1969 - \$27 million; 1970 - \$39 million. Approximately 60 percent of the damages are suffered by agriculture. The average area flooded annually in the Basin has been estimated at 1,400 km², with damages of the order of \$14 million annually.

28. Soil erosion which takes place in the Basin during periods of intense precipitation has removed high quality topsoil from agricultural land which is then washed into the river system as sediment, reducing channel capacities and further increasing potential flood hazards.

29. Irrigation systems in the Morava region have been utilized on only about 20,000 ha, compared to an estimated 700,000 ha which have potential for irrigation. In this region the type of irrigation system likely to be most economic is a low cost system providing water for supplementary irrigation during the dry summer months; however, development of this type of irrigation has been lacking because with sufficient precipitation existing to permit rainfed agriculture during most of the year, farmers have had only modest incentive to turn to the more intensive cultivation that irrigation would permit. In addition, there have been few organized efforts in the agriculture sector to demonstrate the possibilities of low cost supplementary irrigation schemes or efforts to provide the necessary financial and technical assistance for such undertakings.

30. With most of the urban centers located in the river valleys, water supplies for households and industries depend on the river flows or ground-water alluvial aquifers. Increasing urbanization has brought about growing demands which local water supply systems are frequently unable to meet. Urbanization has, along with changed agricultural practices, also contributed to recent and severe degradation in the water quality of the rivers throughout much of the region. Most towns do not have sewage treatment facilities and with the limited dilution capability of the rivers during low flow periods water pollution has become an increasingly worrisome health problem, particularly for downstream communities whose main sources of water supply are the rivers.

31. Although the hydroelectric power potential of the region is estimated to total approximately 7,000 GWh/year, only about 5 percent is presently developed, comprising some 20 small plants with a total installed capacity of 85 Mw.

Regional Water Resources Planning and Management

32. Initiatives by Serbian water planners to resolve basin-wide problems began in 1958 and by 1965 a master plan had been produced for the regulation of the Morava River flows. However, the master plan programs have concentrated almost entirely on the structural measures (dams and other flow regulation works) to regulate river flows and control flooding, to the exclusion of other aspects of river basin development, such as water supply systems, wastewater treatment and sewerage systems, irrigation systems and hydroelectric power plants. There has also been a lack of meaningful economic analysis, such as the study of alternatives; hence, with a lack of good benefit/cost exposition, the programs have given little guidance to decision makers as to the optimum staging of facilities, much less to the benefits that might accrue commensurate with the costs involved. Although the Republic Water Fund (SWF) was created in 1965 to provide financial resources for this plan and the Morava River Corporation (MRC) was created in 1967 to be responsible for the coordination of planning and construction, few of the programs of the master plan have been implemented because they have not had sufficiently demonstrable benefits for the

communities which would be expected to undertake them. In the context of the Yugoslav system of decentralization of economic and political decision-making individual workers' organizations and enterprises (industrial, power, agricultural), towns, and communes have enjoyed considerable autonomy regarding the investment of funds in water-related activities, making it difficult for them to collaborate for regional or multipurpose projects unless the benefits from doing so are clearly demonstrable.

33. In realization of some of these past difficulties in the organization of this sector, the Serbian Assembly passed new legislation in 1975 calling for a fundamental reform in the management of the Republic's water resources. In accordance with the 1974 constitution of Yugoslavia, Serbia's Law on Water Management calls for the establishment of a Republic Water Community of Interest and three regional communities of interest to coordinate water resource development for the benefit of all users and producers in each region. Such communities of interest are usually established by self-management agreement among work organizations providing services and consumer groups (enterprises, communes, towns); they are thus replacing both the market mechanism and the state as regulating agents with direct and organized cooperation between the affected parties. The Morava Region Water Community of Interest (MRWCI) will be responsible for the Morava River Basin. The SWF, and probably the MRC, will be phased out after the new law is fully implemented and the Republic Water Community of Interest and the MRWCI have been established.

34. In the water supply and sewerage sector, primary responsibility in the Morava region, as throughout Yugoslavia, has rested with the local municipalities or communes. Development in this sector has been impeded by a number of problems among which have been the lack of technical expertise at the communal level to plan and implement the infrastructure necessary to cope with industrial and urban growth and the lack of capital to construct adequate facilities. The capital scarcity is being partially overcome in many communes by voluntary self-imposed taxing schemes, but, understandably, such savings campaigns usually get underway only when the physical situation has already deteriorated badly. This frequently results in a considerable lag before sufficient funds are raised to enable the improved infrastructure to be constructed. Republican sources of financing, particularly from the SWF, are limited and directed primarily for river flow regulation facilities.

Water Supply and Sewerage Situation in Titovo Uzice and Cacak

35. The town of Titovo Uzice has an estimated population of 46,000 including nearby Sevojno, site of a large copper and aluminum processing complex. Population is presently growing at about 4.5 percent annually and rapid industrial growth is expected to continue. Titovo Uzice is situated in the steep valley of the Djetinja River at the headwaters of the Zapadna Morava River (see Maps 11637 and 11638). The water supply situation for the inhabitants and local industry is very bad. Only 55 percent of the population are connected to the system, shortages are significant and increasing, and the lack of safe water supplies has caused epidemics, most recently in 1974 when some 2,000 people were affected and several hundred hospitalized by a diarrheal epidemic. The limited capacity of the public water system has forced

five industries to provide their own supplies. A network of sewers removes sewage from only 65 percent of the Titovo Uzice premises connected to the water system. All sewers discharge directly into the Djetinja River without treatment. At Sevojno an industrial waste treatment plant has been constructed but is not yet operational. Other industries, including textile, metal and leather factories, discharge untreated wastes directly into the river, which during low flows depletes the dissolved oxygen in the water and makes it incapable of supporting fish life.

36. The town of Cacak has an estimated population of 44,000 which is increasing at about 4.8 percent annually. The town is a traditional agricultural center, situated in a valley of the Zapadna Morava River (see Maps 11640 and 11641). Local shallow wells have previously served as the town's water source but the alluvial aquifer has become increasingly polluted as urbanization and industrialization have proceeded. The piped water supply serves only an estimated 60 percent of the population from a series of wells recharged by river water pumped into infiltration basins. Limited source capacity caused shortages and delayed system expansion in earlier years. Cacak has separate sanitary and storm drainage sewers, with only 55 percent of the water consumers connected to the sewers and the remainder using septic tanks or pit privies. The pulp and paper factory and a bottling plant discharge their untreated wastes directly into the river.

PART IV - THE PROJECT

37. Yugoslavia first requested Bank assistance for the project in May 1972 when it sought financing for eight independent sub-projects, comprising seven dams and a water supply system for a small town. A series of Bank missions, beginning in May 1973 and aided by staff from the FAO cooperative program and by consultants, have carried out several reviews of the planning procedures and proposed project components. Project objectives and, to a greater extent project definition, have evolved considerably as a consequence of the appraisal process. It has become more of a water resources and river development planning project, viewed as a first step to encourage the generation of future priority projects for the broader economic development of the Morava River Basin. The Morava project will start with water supply and sewerage systems for two towns (Titovo Uzice and Cacak), two pilot irrigation projects, and three studies for river basin development. A second phase envisages siltation and flood control works, irrigation, water supply and pollution control systems, and possibly a rural development program.

38. Negotiations were held in March, 1976 in Washington. The Yugoslav delegation was led by Mr. Branco Jovanovic, Secretary for Agriculture, Forestry and Water Economy for the Republic of Serbia.

Project Objectives and Description

39. The proposed loan and project are summarized in Annex III and the project is described in detail in the report "Appraisal of Morava Region Development Project: Report No. 991-YU, dated May 3, 1976" which is being distributed separately to the Executive Directors. The project objectives are threefold: first, to assist the planning and management of water resources within the Morava region in order to promote accelerated economic development in some of the least-developed areas in the region; second, to provide improved water supplies to meet the demands of about 90 percent of the population in the towns of Titovo Uzice and Cacak by 1980, to provide adequate supplies of water to industry, and to extend the sewer networks in the two towns; third, to demonstrate the feasibility of low cost irrigation systems.

40. The components of the project designed to assist in the improvement of water resources planning and management and economic development in the Morava Basin would include the following studies:

- (a) A study of methods to accelerate economic development in three of the least developed regions in the Morava River Basin (Prokupulje, Leskovac, and Vranje) in order to identify and describe specific investment opportunities for projects and programs and to make recommendations for new policies, programs and projects in all sectors of the economy in the regions;
- (b) A study of measures to adjust to the flood hazards throughout the basin in order to mitigate property damage, improve land use and protect life in the Morava River Basin;
- (c) A study to develop a program to improve water quality in part of the Morava watershed, as a pilot project for the entire basin; and
- (d) Staff training for MRWCI.

41. The proposed water supply and sewage disposal systems for the town of Titovo Uzice would include:

- (a) A concrete arch dam (70 m high) on the Djetinja River;
- (b) A water transmission line from the main reservoir;
- (c) A water treatment plant;
- (d) Transmission and distribution pipelines;

- (e) Pumping stations and distribution reservoirs;
- (f) A sewerage system;
- (g) Engineering services, including the final design for the future sewage treatment plant; and
- (h) Construction of offices and workshops.

42. The proposed water supply and sewage disposal systems for the town of Cacak would include:

- (a) A wellfield development 2 km upstream of Cacak;
- (b) Collector pipeline and balancing reservoir;
- (c) Transmission and distribution pipelines;
- (d) Pumping station and distribution reservoirs;
- (e) A sewerage system;
- (f) Storm drains to alleviate local flooding;
- (g) A water supply system development study; and
- (h) Engineering services, including the final design for the future sewage treatment plant.

43. In order to demonstrate the feasibility and economics of low cost irrigation schemes the project would include the construction, operation and monitoring of pilot irrigation schemes covering approximately 400 ha in the area of Milosevac and 200 ha in Aleksinac (see Map 11603).

The Borrower

44. As noted in paragraph 33, institutional arrangements within the water resources sector in Serbia are in a transitional state. The water law enacted in July 1975 provides for the establishment of a new socio-economic entity, the Morava Region Water Community of Interest (MRWCI) to manage water resources in the proposed project area. However, pending the establishment of MRWCI, which is not expected to become fully staffed and operational before 1977, SWF has been selected as the borrower of the proposed loan. When MRWCI becomes fully established, when it has access to adequate financial resources, and when a manager and staff have been appointed, MRWCI would assume, on terms and conditions acceptable to the Bank, all the obligations entered into by SWF under the Loan Agreement (Loan Agreement Section 6.01(o)). Provision has been made in the proposed project for training future staff or expert groups engaged by MRWCI and it has been agreed that MRWCI would formulate a program for staff training for review by the Bank (Loan Agreement Section 3.04).

Project Execution

45. As a consequence of the fact that the proposed project deals with several aspects of the development of the Morava River Basin, many components of the proposed project would be under the operational responsibility of five different entities. SWF, and later MRWCI, would be the borrower and fiscal and coordinating agent for the proposed loan, but would be only directly responsible for the construction of the Vrutci Dam and the carrying out of the flood hazard and water quality studies. The regional development study would be administered and partly financed by the Republic Fund for the Promotion of Development of Underdeveloped Regions (SFUR). For the towns of Titovo Uzice and Cacak, project components would form part of the investment programs for the enterprises operating water and sewerage services (Bioktos and Cacak Vodovod, respectively). The pilot irrigation studies would be the responsibility of the two cooperative agricultural enterprises in Milosevac and Aleksinac. For those components dealing with physical works, the Bank would enter into four separate Project Agreements with the four entities concerned: Bioktos, Vodovod, and the Milosevac and Aleksinac agricultural enterprises. The communal assemblies of Titovo Uzice and Cacak in their capacities as supervisory municipal authorities for Bioktos and Vodovod, respectively, are parties to the respective Bioktos and Vodovod Project Agreements. The separate administrative and financial arrangements for these four entities and SFUR are discussed briefly in sections below.

46. SWF (see paragraphs 32 and 44) was established in 1965 for the purpose of collecting and administering funds on behalf of the Republic for various aspects of river basin development. SWF has a management committee of 19, of which 6 are nominated by the Executive Council (i.e., Government) of Serbia and the remainder by various water enterprises. SWF has a full-time staff of only 10-12 people who are technical, economic, accounting, legal and administrative specialists concerned with the administration of its funds and it does not itself undertake operational or construction work. This staff would be increased to fulfill its responsibilities under the project. SWF's main operations are carried out under contract with various water management organizations, either for planning or construction work. General supervision of SWF's work is exercised by the Republic Executive Council.

47. Water Resources and Economic Development Studies: SWF would be responsible for the studies concerning adjustments to flood hazards and water quality improvement. Implementation of the regional development study would be the responsibility of SFUR. Since SFUR is primarily a financial conduit through which funds are made available by the Republic for projects in the less-developed areas of Serbia, it does not possess an operational staff other than that needed for financial administration; therefore, technical assistance is expected to be provided to it, primarily by the Serbian Institute for Social Planning, which prepared the initial proposal. SWF and SFUR would engage experienced and qualified consultants to undertake each study on terms and conditions acceptable to the Bank (Loan Agreement Sections 3.05(a) and 3.05(d)). The studies are expected to commence in 1977 and require the following periods for completion: adjustments to flood hazards - 30 months; water quality improvement - 18 months; and regional economic development - 12 months.

48. Facilities for Titovo Uzice: The Communal Enterprise "Bioktos"-Titovo Uzice (Bioktos) would implement the water supply and sewerage components of the project for the town of Titovo Uzice. Bioktos is an Organization of Associated Labor. It is operated on the principle of workers' self-management, as are all enterprises in Yugoslavia, but because it provides vital public services the workers share control of certain activities with the Titovo Uzice communal authorities. The town's communal assembly approves Bioktos' working statutes, work program, functional or organizational changes, appointment of manager and tariff rates. Bioktos is responsible for the water and sewerage systems of the commune, as well as for other municipal services including street cleaning, refuse collection, septic tank emptying and storm drainage. The administration of Bioktos is satisfactory.

49. The construction and operation of the Vrutci dam and reservoir would be the responsibility of SWF. All previous planning and the final designs currently underway for the dam have been prepared by the Jaroslav Cerni Institute, Yugoslav consultants with limited experience in the implementation, as opposed to planning, of large-scale projects; therefore, SWF has agreed to engage suitably qualified and experienced consultants to assist in procurement and supervision of construction of the dam (Loan Agreement Section 3.05(b)). Because of the complexity of the thin concrete arch design of the dam, assurances have been obtained that a panel of highly qualified and internationally experienced engineers would be engaged to provide independent expert advice during the construction period (Loan Agreement Section 3.05(c)) and that acceptable consultants to the Bank would be engaged to periodically inspect the dam after its completion to ensure that operation and maintenance procedures are satisfactory (Loan Agreement Section 4.01(f)).

50. The Vrutci Reservoir will be operated to serve multiple purposes: supply of water for Titovo Uzice; release of flows downstream for industrial abstraction; augmentation of low flows for enhancement of river quality; and storage of flood waters. Consequently, detailed operating rules would be required and agreement has been reached that such operating rules would be prepared before December 31, 1978 for review by Bioktos and the Bank (Loan Agreement Section 4.03).

51. Bioktos has been assisted by consultants in preliminary planning for its water supply and sewerage systems and it has recently strengthened its technical staff for project implementation, but further consultant assistance in the final design, procurement and construction supervision of the water supply and sewerage systems and preparation of the final designs for the sewerage treatment plant would be required (Bioktos Project Agreement Section 2.02).

52. Construction of the Vrutci Dam would begin in the fall of 1976 and it is expected to be completed by end 1979. Construction of the associated water supply facilities would begin by mid-1976 and are expected to begin operating at the end of 1979. Temporary facilities constructed and financed by Bioktos are expected to augment the water supply in the interim period.

53. Facilities for Cacak: The Water Supply and Sewerage Enterprise Vodovod-Cacak (Vodovod) would implement the water supply and sewerage components of the project for the town of Cacak. As in the case of Bioktos, Vodovod is an Organization of Associated Labor, sharing control of certain of its activities with the town's communal assembly. Vodovod is responsible for the water and sewerage system of Cacak and the town's stormwater system. Although overall administration of Vodovod is satisfactory, medium and long-term planning in both technical and financial matters needs to be improved. Vodovod is considering reorganization and would consult the Bank prior to undertaking any proposed reorganization (Vodovod Project Agreement Section 3.03).

54. Vodovod has been assisted by consultants in the preliminary design for most project facilities in Cacak, but separate consultants had been engaged by the local water economy enterprise associated with MRC for final designs of certain water supply facilities; these were related to the Semedraz Dam, the construction of which has been postponed and for which MRC would have been responsible. It has been agreed that Vodovod would have sole responsibility for all facilities in Cacak to be financed by the proposed Bank loan (Vodovod Project Agreement Section 5.05). Vodovod would engage consultants to assist in final designs, procurement, and construction supervision of the project facilities and for the final design of the sewerage treatment plant (Vodovod Project Agreement Section 2.02(b)).

55. The groundwater source to be developed in an unpolluted water aquifer upstream from Cacak, together with an existing source, should meet Cacak's requirements until about 1984. To meet demand thereafter, several possible sources of additional water have been identified, including the Semedraz Dam. Consequently, Vodovod would engage qualified consultants to undertake a system planning study, on terms and conditions acceptable to the Bank, of future demands and alternative sources to determine an optimum development program. This study would be completed within 18 months from the date of the Loan Agreement (Vodovod Project Agreement Section 2.02(c)), and Vodovod and SWF would not undertake any investments for additional water source facilities for Cacak prior to the completion of this study (Loan Agreement Section 4.05 and Vodovod Project Agreement Section 3.04).

56. The groundwater facilities to augment Cacak's water supplies are expected to begin operating by end 1976. Water supply and sewerage networks would be extended in phases throughout the project period 1976-1979.

57. Pilot Irrigation Projects: Construction, operation and maintenance of both pilot projects would be undertaken by agricultural enterprises in Milosevac and Aleksinac. Preliminary feasibility studies have been undertaken by Yugoslav consultants and reviewed by the Bank. In Milosevac, where land consolidation has already been carried out at the initiative of the farmers, the construction and operation of the pilot irrigation project would be undertaken by the Milosevac Farmers' Cooperative. In Aleksinac, the commune has given assurances that a program would be authorized for land consolidation or

adjustment of farm boundaries within the project area and the Aleksinac Agro-Industrial Kombinat would implement the irrigation project (Aleksinac Project Agreement Section 3.03). Consultants would be engaged to assist in the final design, procurement and construction of the pilot projects. Appropriate arrangements also would be made with the Republic of Serbia's Secretariat for Agriculture to monitor, evaluate and disseminate the results of these projects (Loan Agreement Recital M and Section 7.01(g)).

Project Cost Estimates and Financing Plan

58. The total estimated cost of the project is US\$51.4 million. The estimate includes duties and taxes (about 5 percent of project costs) and allowances for physical contingencies of 25 percent for the Vrutci Dam, 10 percent for water pipelines, and 15 percent for all other items. Price contingencies of about 12 percent per annum in the years 1977-79 have been provided. Project expenditures for the water supply, sewerage and storm water systems in Titovo Uzice and Cacak account for 91 percent of total project costs, including the Vrutci Dam which accounts for 27 percent of the total. The foreign exchange costs are estimated at US\$16.2 million and include estimates of the foreign exchange component of internationally and locally bid contracts expected to be won by Yugoslavs (see paragraph 66). Interest during construction on the proposed loan would add an additional US\$4.5 million in foreign exchange costs. Details of the cost estimates are shown in Annex III.

59. The proposed loan of US\$20 million would cover about 36 percent of the estimated project financial requirements and 97 percent of the foreign exchange requirements, including interest during construction on the Bank loan. SWF would onlend the respective portions of the loan on the same terms as those of the Bank loan. The following table summarizes the cost estimates and financing plan for the project:

Project Cost Estimates and Financing Plan

	<u>SWF</u>	<u>Bioktos</u>	<u>Vodovod</u>	<u>SFUR</u>	<u>Milosevac</u>	<u>Aleksinac</u>	<u>Total</u>
	(US\$ millions)						
<u>Project Requirements:</u>							
Project Cost	16.61	18.68	14.28	0.51	0.81	0.55	51.54
Interest During Construction	<u>1.31</u>	<u>1.58</u>	<u>1.38</u>	<u>0.06</u>	<u>0.08</u>	<u>0.06</u>	<u>4.47</u>
Total Requirements	17.92	20.26	15.66	0.57	0.89	0.61	55.91
<u>Sources of Funds:</u>							
IBRD Loan	6.46	7.26	5.55	0.20	0.32	0.21	20.00
Other Funds							
Republic	8.60			0.37	0.57	0.40	9.94
Local	<u>2.86</u>	<u>13.00</u>	<u>10.11</u>				<u>25.97</u>
Total Sources	17.92	20.26	15.66	0.57	0.89	0.61	55.91

In addition to the Bank loan, the remainder of the financial requirements for the project would come from the Republic of Serbia (18 percent), and other local funds (46 percent). The bulk of such other local funds would be capital contributions from the communities of Titovo-Uzice and Cacak. The internal cash generations of the Bioktos and Vodovod enterprises provide the balance (Bioktos and Vodovod Project Agreements, Sections 4.04 and 4.03, respectively).

60. It has been agreed that the Republic of Serbia would provide or secure additional funds to meet any project costs related to those parts of the project to be carried out by SWF, SFUK, Aleksinac and Milosevac in excess of present estimates which the borrower would be unable to secure (Loan Agreement Recitals K and L, and Section 7.01(g)). For the Bioktos and Vodovod components of the project, arrangements have been made with a commercial bank to provide guarantees for any additional funds necessary to meet construction cost overruns (Loan Agreement Recitals G and I, and Section 7.01(h)). In addition, the respective communal assemblies have agreed to provide or secure additional funds necessary to meet Bioktos' and Vodovod's construction costs in excess of present estimates (Bioktos and Vodovod Project Agreements, Sections 5.01).

Financial Performance

61. SWF. The majority of SWF's present funds come from the assignment by the Republic of a certain percentage of general taxes and from direct contributions voted periodically by the Republican Assembly. Certain direct sources of revenue related to water usage are also available to it. In order to administer the Bank loan for the entire project, including the re-lending of funds to the other participating enterprises, SWF would establish and maintain, in consultation with the Bank, adequate accounting arrangements.

62. Bioktos and Vodovod. To generate the funds needed for the project and future system operation (including an appropriate share of the Vrutci Reservoir operating and amortization costs) Bioktos would increase its tariffs by 50 percent in 1976 and in 1977, followed by annual increases of 40 percent in 1978, 1979, and 1980. Due to the difference in project costs, arising from the inclusion of the Vrutci Dam in Bioktos' system, Vodovod would require lower tariff rate increases to generate the funds needed for its project and future system operation. It would increase its tariffs by 20 percent annually from 1976 to 1979. In each subsequent year, after 1979 for Vodovod and after 1981 for Bioktos, tariffs would be set so as to ensure a contribution of not less than 30 percent from internal funds towards a three-year average of capital investment requirements (Vodovod and Bioktos Project Agreements, Sections 4.03 and 4.04, respectively). The respective communal assemblies in each town have agreed to approve Vodovod's and Bioktos' requests for tariff increases to meet the above requirements (Vodovod and Bioktos Project Agreements, Sections 5.02(b)).

63. Bioktos' and Vodovod's rates of return on average net fixed assets for water and sewerage services combined were each 9.3 percent in 1973 and 9.0 percent and 13.8 percent, respectively, in 1974, and are estimated to

average about 5.9 percent and 5.0 percent, respectively (on annually re-valued average net fixed assets), during the 1976-80 period and each would be about 4 percent in 1984. In both cases, these rates are reasonable in view of the fact that the projected internal cash generation of funds would be adequate and that a large portion of the fixed assets would have been financed by contributions from consumers, local enterprises and the respective towns (implying increased local taxation) reflecting substantial local participation and local community sacrifice.

64. Bioktos' and Vodovod's debt equity ratios in 1974 were 7:93 and 17:83, respectively, reflecting their low levels of debt. With the increase in borrowing for the project, Bioktos' debt equity ratio would rise to 39:61 in 1981 and Vodovod's to 39:61 in 1983. Both Bioktos and Vodovod have agreed that, except as the Bank shall otherwise agree, they would not incur additional debt unless their respective net cash generation before depreciation and interest exceeds 1.5 times their respective debt service in any future year, including debt service on the amount to be borrowed (Bioktos and Vodovod Project Agreements, Sections 4.05 and 4.04, respectively).

65. Pilot Irrigation Projects. In addition to the portions of the proposed Bank loan to be allocated to Milosevac and Aleksinac, the Republic of Serbia would make available counterpart funds to permit construction of works, provide working capital to cover operation and maintenance pending receipt of crop sales revenues and provide agricultural credit sufficient to cover the capital outlay of farmers to convert to higher yielding crops (Loan Agreement Recital L and Section 7.01(g)).

Procurement and Disbursement

66. Equipment and materials contracts estimated to cost more than US\$100,000 would be awarded after international competitive bidding (ICB), in accordance with the Bank Guidelines for Procurement. For the purpose of bid comparison, qualified domestic manufacturers of these goods would be given a margin of preference of 15 percent or customs duties, whichever is lower. Civil works contracts estimated to cost more than US\$500,000 would be awarded after ICB. The other equipment supply and civil works contracts would be awarded on the basis of competitive bidding advertised locally, in accordance with local procedures which are acceptable. Local contractors are expected to win contracts for most of the construction work in the towns of Titovo Uzice and Cacak, but Bioktos and Vodovod will carry out minor works by force account (such as renovations and modifications to existing facilities or installing new pipes) using their existing staff and equipment. The total value of such works carried out by force account would be limited to US\$4.0 million (8 percent of the project cost). Most equipment supply and civil works contracts are expected to be won by Yugoslav firms. Retroactive financing from January 1976 is proposed for expenditures of about US\$1.0 million which are expected to be incurred prior to loan signature (Loan Agreement, Schedule 1, Paragraph 4).

67. The proceeds of the proposed loan would be disbursed as follows (Loan Agreement, Schedule 1):

- (a) 100 percent of foreign expenditures and 35 percent of contracts won locally (including disbursements of up to US\$1.4 million on force account work for Titovo Uzice and Cacak) for all civil works and equipment contracts.
- (b) 100 percent of the foreign cost of consultants, engineering services and training for MRWCI staff and 35 percent of the cost of local consultant costs.
- (c) 100 percent of interest and other charges on the Bank loan.

Disbursements would begin in the last quarter of 1976 and be completed for the total project by December 1980.

Audit

68. All participants in the project, even though they have somewhat different accounting procedures, must follow the regulations and controls established by the Social Accounting Service (SAS), including the preparation of annual financial statements. The accounting procedures established by SAS for capital works projects are satisfactory. With Bank encouragement, the SAS started a program in January, 1974 under which its staff is being trained by foreign consultants in auditing methods consistent with modern auditing standards. The program is currently in its second phase in which additional SAS staff is being trained, under the consultants' guidance, by those who participated in the first phase. SWF, Aleksinac, Milosevac, Bioktos and Cacak gave the Bank assurances that the group of specially trained auditors would be asked to conduct their audits beginning with the accounts for the financial year 1976, or such other later year as shall be agreed between the enterprises and the Bank. Until such time, Bioktos and Vodovod, along with all other beneficiaries in the project would prepare separate annual financial statements for project activities in a manner acceptable to the Bank and such statements would be audited by SAS.

Justification

69. The major objective of the project is to improve the planning and management of water resources within the Morava region in order to overcome water-related problems and accelerate the economic development of the least developed areas in the region. To this end, the water resources and economic development studies are designed to generate programs whose benefits are expected to be substantial, though unquantifiable; these would include reduction of flood damage, siltation control, improved irrigation practices, improved water supplies and river pollution control. In the next five years, SWF and its successors expect to spend US\$104 million on flow regulation structures in the Morava region and the decisions concerning these investments could be

greatly improved as a result of the recommendations of the studies concerning adjustments to flood hazards and water quality improvement, which together would cost less than 3 percent of the proposed five-year investment plan. SFUR invested approximately US\$59 million in the period 1971-74 for projects to accelerate development in the lesser developed areas of Serbia. Similar financial assistance is expected to continue and as a result of the proposed regional economic study, such assistance would be directed more effectively towards economically sound projects.

70. A national objective in Yugoslavia, as well as in Serbia, is to assist small farmers to increase agricultural output and improve their standard of living. One method of accomplishing this in the Morava region would be to increase agricultural production through the use of low cost, supplemental irrigation schemes, the potential for which is considerable in the valley lands of the area. Preliminary information indicates that such schemes as the pilot irrigation projects in Milosevac and Aleksinac would be economically viable, providing rates of return of approximately 20 percent. The main benefit expected from these projects is the demonstration to farmers and agricultural planners throughout Serbia that low cost supplementary irrigation schemes are technically feasible and economically viable. This could lead to substantial benefits to small-scale farmers throughout the Morava region and Serbia in the future.

71. With the increasing concentration of people in urban areas in Serbia, generally along the river valleys and flood plains, a major constraint to future economic development in the Morava basin will continue to be the shortage of continuous supplies of water for people and industry. In both Titovo Uzice and Cacak, the industrial and domestic requirements for treated water exceed the available supplies. In Titovo Uzice additional supplies of untreated water for industrial processes must also be assured. In both towns existing facilities are inadequate, with less than 60 percent of the residents supplied by the water systems. With the expansion and improvement of the water supply and sewage disposal systems, adequate potable water would be available to 90 percent of the population and the threat of water-borne diseases would be significantly reduced. There would be a variety of benefits, including medical cost savings, increased productivity of workers, and savings on future septic tank expenditures. Both towns would become better places in which to live and work. Conventional economic analysis of the recommended investments for Titovo Uzice and Cacak does not produce meaningful information because of the difficulty in quantifying these project benefits. However, for each town, the project facilities are the least cost solution to meeting the project objectives.

PART V - LEGAL INSTRUMENTS AND AUTHORITY

72. The draft Loan Agreement between the Bank and the Republicki Fond Voda; the draft Project Agreement between the Bank and the Skupstina Opstine Cacak and Komnalna Organizacija Udruzenog Rada za Vodovod i Kanalizaciju

"Vodovod"-Cacak; the draft Project Agreement between the Bank and the Skupstina Opstine Titovo Uzice and Komunalno Preduzece "Bioktos"-Titovo Uzice; the draft Project Agreement between the Bank and Zemljoradnicka Zadruga "Milosevac"; the draft Project Agreement between the Bank and the Poljoprivredno-Industrijski: Kombinat Aleksinac; the draft Guarantee Agreement between the Socialist Federal Republic of Yugoslavia and the Bank; the report of the Committee provided for in Article III, Section 4(iii) of the Articles of Agreement; and, the text of a draft resolution approving the above loan, are being distributed to the Executive Directors separately.

73. Provisions of the agreements of special interest were noted in paragraphs 44 through 67 of this report. Special conditions of effectiveness (Loan Agreement Section 7.01) are:

1. The execution and delivery of each of the Project Agreements on behalf of the respective signatories have been duly authorized or ratified by all necessary corporate and governmental action;
2. The execution and delivery of each of the Subsidiary Loan Agreements on behalf of the Borrower and Vodovod and Bioktos, respectively, and arrangements between the Borrower and SFUR, Milosevac and Aleksinac, respectively, to make such portions of the loan allocated to such entities available to them, have been duly authorized or ratified by all necessary corporate and governmental action, all such agreements and arrangements to be satisfactory to the Bank;
3. All local financing arrangements referred to in paragraphs 59 and 60 of this report have been completed and are in full force and effect; and
4. The Republic of Serbia has made arrangements satisfactory to the Bank for the monitoring of the execution of the pilot irrigation schemes.

74. I am satisfied that the proposed loan would comply with the Articles of Agreement of the Bank.

PART VI - RECOMMENDATIONS

75. I recommend that the Executive Directors approve the proposed loan.

Robert S. McNamara
President

Attachments
May 6, 1976

TABLE 3A
- SOCIAL INDICATORS DATA SHEET

LAND AREA (THOU SQS)	YUGOSLAVIA			REFERENCE COUNTRIES (1970)					
	TOTAL AGRIC.	285.8 114.3		1960	1970	MOST RECENT ESTIMATE	ROMANIA, REP	SPAIN	GERMANY, FED. REP. **
GNP PER CAPITA (US\$)				360.0	740.0	1010.0	n.a. /a	1260.0	4210.0
POPULATION AND VITAL STATISTICS									
POPULATION (MID-YR, MILLION)				18.4	20.4	21.0	20.3	33.6	60.7
POPULATION DENSITY PER SQUARE KM.				72.0	80.0	82.0	85.0	66.0	240.0
PER SQUARE KM. AGRIC. LAND				115.0	..	..	..
VITAL STATISTICS									
CRUDE BIRTH RATE PER THOUSAND				24.0	17.8	18.0	21.1	19.6	13.4
CRUDE DEATH RATE PER THOUSAND				10.0	8.9	8.7	9.5	8.5	12.1
INFANT MORTALITY RATE (/THOU)				88.0	55.5	43.3	49.4	27.9	23.6
LIFE EXPECTANCY AT BIRTH (YRS)				62.0	67.0 /a	68.0	68.6	71.0	70.3
GROSS REPRODUCTION RATE				1.3	1.3	1.3	0.9	1.4	1.2
POPULATION GROWTH RATE (%)									
TOTAL				1.2	1.1	1.0	1.0	1.1	1.0
URBAN				6.0	4.6	..	3.4	1.9	4.3
URBAN POPULATION (% OF TOTAL)				27.2	38.7	39.0	41.0	59.1	82.4
AGE STRUCTURE (PERCENT)									
0 TO 14 YEARS				31.0	26.9	26.9	25.9	27.3	23.2
15 TO 64 YEARS				63.0	65.1	65.1	65.5	62.5	63.0
65 YEARS AND OVER				6.0	8.0	8.0	8.6	9.7	13.2
AGE DEPENDENCY RATIO				0.6	0.5	0.5	0.5	0.6	0.6
ECONOMIC DEPENDENCY RATIO				1.0	..	0.9	0.7 /a	1.1	0.9
FAMILY PLANNING-									
ACCEPTORS (CUMULATIVE, THOU)			
USERS (% OF MARRIED WOMEN)			
EMPLOYMENT									
TOTAL LABOR FORCE (THOUSAND)				8300.0	..	8900.0	9900.0	11900.0	26500.0
LABOR FORCE IN AGRICULTURE (%)				57.0	..	45.0	49.0	24.8	8.9
UNEMPLOYED (% OF LABOR FORCE)				7.0 /a	..	3.3 /a	..	2.0 /a	0.7
INCOME DISTRIBUTION									
% OF PRIVATE INCOME REC'D BY-									
HIGHEST 5% OF HOUSEHOLDS				16.4 /b	15.1	..	6.3 /b	..	..
HIGHEST 20% OF HOUSEHOLDS				41.5 /b	41.4	..	..	..	..
LOWEST 20% OF HOUSEHOLDS				6.9 /b	6.6	..	24.3 /c	..	..
LOWEST 40% OF HOUSEHOLDS				19.0 /b	18.4	..	..	..	..
DISTRIBUTION OF LAND OWNERSHIP									
% OWNED BY TOP 10% OF OWNERS									
% OWNED BY SMALLEST 10% OWNERS									
				..	15.1 /b	..	..	..	..
				..	84.9 /c	..	..	..	..
HEALTH AND NUTRITION									
POPULATION PER PHYSICIAN				1400.0 /a	1010.0	900.0	680.0	750.0 /b	580.0
POPULATION PER NURSING PERSON				500.0 /a,c	410.0	380.0	200.0	1430.0	350.0
POPULATION PER HOSPITAL BED				190.0 /a	180.0	170.0 /b	120.0	220.0	90.0
PER CAPITA SUPPLY OF -									
CALORIES (% OF REQUIREMENTS)				115.0	124.0	125.0	118.0	107.0	121.0
PROTEIN (GRAMS PER DAY)				91.0	92.0	94.0	92.0	81.0	88.0
-OF WHICH ANIMAL AND PULSE				27.0	29.0	..	28.0	40.0	56.0
DEATH RATE (/THOU) AGES 1-4				4.7 /a	2.5	2.5	3.0	0.9	0.9
EDUCATION									
ADJUSTED ENROLLMENT RATIO									
PRIMARY SCHOOL				96.0	94.0	96.0	112.0	131.0	117.0 /a
SECONDARY SCHOOL				34.0	45.0	48.0	46.0	57.0	45.0 /a
YEARS OF SCHOOLING PROVIDED (FIRST AND SECOND LEVEL)				12.0	12.0	12.0	14.0	13.0	15.0
VOCATIONAL ENROLLMENT (% OF SECONDARY)				72.0	72.0	74.0	58.0 /d	20.0	48.0 /a
ADULT LITERACY RATE (%)				77.0	85.0	..	99.0	94.0	99.0
HOUSING									
PERSONS PER ROOM (AVERAGE)				1.7	..	1.3	1.3 /e	..	0.7 /b
OCCUPIED DWELLINGS WITHOUT PIPED WATER (%)				66.0 /c	88.0 /e,f	..	0.3 /c
ACCESS TO ELECTRICITY (% OF ALL DWELLINGS)				55.0	..	88.0	49.0 /a	..	100.0
RURAL DWELLINGS CONNECTED TO ELECTRICITY (%)				36.0	..	80.0	27.0 /e	..	..
CONSUMPTION									
RADIO RECEIVERS (PER THOU POP)				84.0	163.0	176.0	152.0	214.0	318.0
PASSENGER CARS (PER THOU POP)				3.0	35.0	54.0	..	70.0	223.0
ELECTRICITY (KWH/YR PER CAP)				529.0	1288.0	1570.0	1615.0	1627.0	4128.0
NEWSPRINT (KGYR PER CAP)				2.3	4.3	3.5	2.6	5.8	17.5

SEE NOTES AND DEFINITIONS ON REVERSE

NOTES

Unless otherwise noted, data for 1960 refer to any year between 1959 and 1961, for 1970 between 1968 and 1970, and for Most Recent Estimate between 1971 and 1973.

** Selection of Federal Republic of Germany as an objective country is based on the close economic ties maintained by the two countries, as well as on the fact that the greater part of Yugoslavia's around one million workers temporarily abroad have found employment in the Federal Republic of Germany.

<u>YUGOSLAVIA</u>	1960	/a 1962; /b 1963; /c Including midwives and midwifery, and nursing auxiliaries.
	1970	/a 1966-67; /b Agriculture land held by Social Sector Kombinate; /c Agriculture land held by private small-holders.
	<u>MOST RECENT ESTIMATE:</u>	/a Ratio of registered job seekers to active population; /b Government hospitals only; /c Water piped inside.
<u>ROMANIA</u>	1970	/a The calculation of these figures is under discussion; based on information supplied by the Romanian Government, and using a currency conversion rate of 20 Lei to the US\$, the per capita GNP would amount to \$890 for 1973, and the preliminary estimate for 1974 would be \$910. These figures are, however, not strictly comparable with those for other reference countries, as presented here; /b Percent of salaried workers earning more than 2,500 Lei; /c Percent of salaried workers earning less than 1,100 Lei; /d Full-time education only; /e 1966; /f Piped water inside only; /g Ratio of population under 15 and 65 and over to total labor force.
<u>SPAIN</u>	1970	/a Registered unemployed; /b Registered, not all practicing in the country.
<u>GERMANY, FED. REP.</u>	1970	/a Includes the relevant data relating to Berlin for which separate data have not been supplied; /b Total, urban and rural; /c Inside only.

RL2, May 3, 1976

DEFINITIONS OF SOCIAL INDICATORS

<p>2</p> <p><u>Land Area (thou km²)</u> Total - Total surface area comprising land area and inland waters. Agric. - Most recent estimate of agricultural area used temporarily or permanently for crops, pastures, market & kitchen gardens or to lie fallow.</p> <p><u>GNP per capita (US\$)</u> - GNP per capita estimates at market prices, calculated by same conversion method as World Bank Atlas (1972-74 basis).</p> <p><u>Population and vital statistics</u> <u>Population (mid-yr. million)</u> - As of July first; if not available, average of two end-year estimates.</p> <p><u>Population density - per square km</u> - Mid-year population per square kilometer (100 hectares) of total area. <u>Population density - per square km of agric. land</u> - Computed as above for agricultural land only.</p> <p><u>Vital statistics</u> <u>Crude birth rate per thousand</u> - Annual live births per thousand of mid-year population; usually five-year averages ending in 1960, 1970 and 1975 for developing countries. <u>Crude death rate per thousand</u> - Annual deaths per thousand of mid-year population; usually five-year averages ending in 1960, 1970 and 1975 for developing countries. <u>Infant mortality rate (thou)</u> - Annual deaths of infants under one year of age per thousand live births. <u>Life expectancy at birth (yrs)</u> - Average number of years of life remaining at birth; usually five-year averages ending in 1960, 1970 and 1975 for developing countries. <u>Gross reproduction rate</u> - Average number of live 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 1975 for developing countries. <u>Population growth rate (%) - total</u> - Compound annual growth rates of mid-year population for 1950-60, 1960-70, and 1960 to most recent year. <u>Population growth rate (%) - urban</u> - Computed like growth rate of total population; different definitions of urban areas may affect comparability of data among countries. <u>Urban population (% of total)</u> - Ratio of urban to total population, different definitions of urban areas may affect comparability of data among countries. <u>Age structure (percent)</u> - Children (0-14 years), working-age (15-64 years), and retired (65 years and over) as percentages of mid-year population. <u>Age dependency ratio</u> - Ratio of population under 15 and 65 and over to those of ages 15 through 64. <u>Economic dependency ratio</u> - Ratio of population under 15 and 65 and over to the labor force in age group of 15-64 years. <u>Family Planning - acceptors (cumulative, thou)</u> - Cumulative number of acceptors of birth-control devices under auspices of national family planning program since inception. <u>Family planning - users (% of married women)</u> - Percentages of married women of child-bearing age (15-44 years) who use birth-control devices to all married women in same age group.</p> <p><u>Employment</u> <u>Total labor force (thousand)</u> - Economically active persons, including armed forces and unemployed but excluding housewives, students, etc.; definitions in various countries are not comparable. <u>Labor force in agriculture (%)</u> - Agricultural labor force (in farming, forestry, hunting and fishing) as percentage of total labor force. <u>Unemployed (% of labor force)</u> - Unemployed are usually defined as persons who are able and willing to take a job, out of a job on a given day, remained out of a job, and seeking work for a specified minimum period not exceeding one week; may not be comparable between countries due to different definitions of unemployed and source of data, e.g., employment office statistics, sample surveys, compulsory unemployment insurance.</p> <p><u>Income distribution</u> - Percentage of private income (both in cash and kind) received by richest 5%, richest 20%, poorest 20%, and poorest 40% of households.</p> <p><u>Distribution of land ownership</u> - Percentages of land owned by wealthiest 10% and poorest 10% of land owners.</p> <p><u>Health and Nutrition</u> <u>Population per physician</u> - Population divided by number of practicing physicians qualified from a medical school at university level.</p>	<p><u>Population per nursing person</u> - Population divided by number of practicing male and female graduate nurses, "trained" or "certified" nurses, and auxiliary personnel with training or experience.</p> <p><u>Population per hospital bed</u> - Population divided by number of hospital beds available in public and private general and specialized hospital and rehabilitation centers; excludes nursing homes and establishments for custodial and preventive care.</p> <p><u>Per capita supply of calories (% of requirements)</u> - 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 distributions of population, and allowing 10% for waste at household level.</p> <p><u>Per capita supply of protein (grams per day)</u> - 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 Economic Research Services provide for a 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.</p> <p><u>Per capita protein supply from animal and pulse</u> - Protein supply of food derived from animals and pulses in grams per day.</p> <p><u>Death rate (/thou) ages 1-4</u> - Annual deaths per thousand in age group 1-4 years, to children in this age group, suggested as an indicator of malnutrition.</p> <p><u>Education</u> <u>Adjusted enrollment ratio - primary school</u> - Enrollment of all ages as percentage of primary school-age population, includes children aged 6-11 years but adjusted for different lengths of primary education; for countries with universal education, enrollment may exceed 100% since some pupils are below or above the official school age. <u>Adjusted enrollment ratio - secondary school</u> - Computed as above; secondary education requires at least four years of approved primary instruction; provides general, vocational or teacher training instructions for pupils of 12 to 17 years of age, correspondence courses are generally excluded. <u>Years of schooling provided (first and second levels)</u> - Total years of schooling; at secondary level, vocational instruction may be partially or completely excluded. <u>Vocational enrollment (% of secondary)</u> - Vocational institutions include technical, industrial or other programs which operate independently or as departments of secondary institutions. <u>Adult literacy rate (%)</u> - Literate adults (able to read and write) as percentage of total adult population aged 15 years and over.</p> <p><u>Housing</u> <u>Persons per room (average)</u> - Average number of persons per room in occupied conventional dwellings in urban areas, dwellings exclude non-permanent structures and unoccupied parts. <u>Occupied dwellings without piped water (%)</u> - Occupied conventional dwellings in urban and rural areas without inside or outside piped water facilities as percentage of all occupied dwellings. <u>Access to electricity (% of all dwellings)</u> - Conventional dwellings with electricity in living quarters as percent of total dwellings in urban and rural areas. <u>Rural dwellings connected to electricity (%)</u> - Computed as above for rural dwellings only.</p> <p><u>Consumption</u> <u>Radio receivers (per thou pop)</u> - All types of receivers for radio broadcasts to 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. <u>Passenger cars (per thou pop)</u> - Passenger cars comprise motor cars seating less than eight persons; excludes ambulances, hearses and military vehicles. <u>Electricity (kwh/yr per cap)</u> - Annual consumption of industrial, commercial, public and private electricity in kilowatt hours per capita; generally based on production data, without allowance for losses in grids but allowing for imports and exports of electricity. <u>Newsprint (kg/yr per cap)</u> - Per capita annual consumption in kilograms estimated from domestic production plus net imports of newsprint.</p>
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ECONOMIC DEVELOPMENT DATA
(Amounts in Million US Dollars)

NATIONAL ACCOUNTS ^{3/}	Actual		1/ Projected		1965-72	1972-75	1973-76	1972	1974	1976	
	1972	1973	1974	1975 ^{2/} 1976							Average Annual Growth Rates			As Percent of GDY
	Constant 1974 Prices and Exchange Rate of \$1=17.0 Din.										
Gross Domestic Product	21,638	22,720	24,765	25,887	27,033	5.6	6.2	6.0	97.8	100.0	100.6
Gains from Terms of Trade (+)	+468	+681	-	-175	-150				2.2	-	0.6
Gross Domestic Income	22,106	23,401	24,765	25,712	26,884	5.5	5.2	4.7	100.0	100.0	100.0
Imports (incl. NFS)	6,588	7,600	8,312	8,036	8,216	12.6	6.9	2.6	29.7	33.6	30.6
Exports (incl. NFS)	5,437	5,788	5,694	5,678	6,187	8.8	1.5	2.3	24.5	23.0	23.0
Resource Gap	1,151	1,812	2,618	2,358	2,029						
Consumption Expenditures	16,139	17,716	19,953	20,151	20,639	6.7	7.7	5.2	73.0	80.6	76.8
Investment Expenditures (incl. stocks)	6,650	6,816	7,429	8,095	8,424	6.0	6.8	7.3	30.0	30.0	31.3
National Savings	6,904	6,806	6,241	7,169	7,756	6.6	1.3	4.5	31.2	25.2	28.8
Domestic Savings	5,499	5,004	4,812	5,736	6,394	3.1	1.4	8.5	24.9	19.4	23.8
MERCHANDISE TRADE	Annual Data At Current Prices					As a Percentage of Total					
Imports											
Capital Goods	688.6	1003.8	1305.0	1909.5	2132.3						
Petroleum	82.5	219.8	681.2	730.9	818.4				21.3	17.4	23.6
Intermediate Goods	1953.9	2589.1	4560.8	4659.8	5268.8				63.1	69.7	67.5
Consumption Foods	502.3	698.1	970.0	792.3	798.3				15.6	12.9	8.9
Total Merch. Imports (c.i.f.)	3227.3	4510.7	7518.0	8092.5	9017.8				100.0	100.0	100.0
Exports											
Capital Goods	316.1	389.1	514.0	655.0	776.9				14.1	13.5	16.0
Textile and Leather Products	382.4	409.2	477.0	548.0	650.0				16.2	12.5	13.4
Non-Ferrous Metalurgy	272.0	324.0	556.0	458.0	585.1				12.2	14.6	12.1
Agricultural produce (incl. food)	476.0	621.0	604.0	503.0	591.2				21.3	15.9	12.2
Other	810.7	1107.7	1654.0	1824.0	2248.3				36.2	43.5	46.3
Total Merch. Exports (f.o.b.)	2237.2	2852.0	3805.0	3980.0	4851.5				100.0	100.0	100.0
MERCHANDISE TRADE INDICES	1974=100										
Export Price Index	63.0	76.0	100.0	107.0	108.0						
Import Price Index	58.0	68.0	100.0	111.0	121.0						
Terms of Trade Index	109.0	112.0	100.0	96.0	98.0						
Export Volume Index	93.3	98.4	100.0	100.0	110.0						
VALUE ADDED BY SECTOR	Annual Data in Constant 1974 Prices and Exchange Rate of \$1=17.0 Din.					As Percentage of Total					
Agriculture	3213	3496	3765	3727	3876	2.7	5.1	3.5	15.6	16.0	15.1
Manufacturing & Mining	6374	6712	7471	7930	8379	6.6	7.6	7.7	31.0	31.8	32.6
Other	10956	11362	12276	12927	13418	5.4	5.7	5.7	53.3	52.2	52.3
Total	20543	21570	23512	24584	25873	5.3	6.2	6.0	100.0	100.0	100.0
PUBLIC FINANCE^{4/}	Current Prices					As Percent of GDP/Market Prices					
Current Receipts	2772.0	3489.0	..	..	..	..	..	..	17.5	..	..
Current Expenditures	2520.8	3154.8	..	..	..	..	..	..	1.6	..	..
Budgetary Savings	251.2	334.2	..	..	..	..	..	..	1.6	..	..
Public Sector Investment	224.9	281.3	..	..	..	..	..	..	1.4	..	..
LABOR FORCE AND OUTPUT PER WORKER 1974^{5/}	TOTAL LABOR FORCE					VALUE ADDED PER WORKER (CONSTANT 1974 PRICES AND EXCHANGE RATE OF \$1=17.0 Din.)					
	In Millions		% of Total		Average Annual Growth Rate	In US Dollars		Percent of Average		1972-74	
	1972	1974	1972	1974		1972	1974	1972	1974	Average Annual Growth Rate	1972-74
Agriculture ^{6/}	3.9	3.8	47.8	45.0	-1.9	823	1003	32.7	35.6		10.4
Manufacturing and Mining	1.6	1.7	19.1	20.4	4.3	4075	4395	162.1	155.8		3.9
Other	2.7	2.9	33.1	34.6	3.2	4050	4258	161.1	150.9		2.5
Total ^{6/}	8.2	8.3	100.0	100.0	1.0	2514	2821	100.0	100.0		5.9

1/ Preliminary.

2/ Estimate.

3/ Figures may not add exactly due to rounding.

4/ Federation, Republics and Autonomous Provinces and Communes; figures cannot be projected because of the far reaching effects of the new Constitution on the role of the State and the size of its budget.

5/ Total resident active labor force.

6/ Labor force in agriculture and non-agricultural private employment, and, accordingly, total employment economy are estimates.

BALANCE OF PAYMENTS AND EXTERNAL ASSISTANCE AND DEBT

	1972	Actual 1973	1974	Estimated 1975	Projected 1976	Average Annual Growth Rates 1972-75				
SUMMARY OF BALANCE OF PAYMENTS										
Exports (incl. NFS)	3425	4407	5694	6088	7319	21.1				
Imports (incl. NFS)	3821	5168	8312	8891	9961	32.5				
Resource Balance (X-M)	-395	-761	-2618	-2803	-2642					
Interest	-165	-222	-285	-305	-407	22.7				
Worker Remittances	889	1310	1511	1700	1926	24.1				
Other factor services net	17	50	93	70	-	60.3				
Current Transfers (net)	74	87	110	120	132	17.5				
Balance on Current Account	419	454	-1189	-1218	-991					
M< Loans ^{1/}										
Disbursements	943	1170	1426	2101	2449	30.6				
Repayments	-570	-686	-814	-1106	-1279	24.7				
Net Disbursements	373	484	612	995	1170	38.7				
Capital Transactions n.e.i. ^{2/}	-117	-285	139	320	-					
Use of Reserves	-675	-663	438	-97	-179					
GRANT AND LOAN COMMITMENTS										
Official Grants & Grant-like	-	-	-	-	-					
Public M< Loans										
IBRD	75.0	104.9	256.5	-	-					
IDA	-	-	-	-	-					
Other Multilateral	-	-	-	-	-					
Governments	182.9	175.0	612.7	-	-					
Suppliers	82.3	3.1	.6	-	-					
Financial Institutions	142.0	19.4	367.5	-	-					
Bonds	-	-	-	-	-					
Public Loans n.e.i.	-	-	-	-	-					
Total Public M< Loans	482.2	302.4	1237.3	-	-					
Actual Debt Outstanding on Dec. 31, 1974										
	Disbursements Only		Percent							
World Bank	424.6		19.9							
IDA	-		-							
Other Multilateral	6.9		.3							
Governments	1149.7		53.8							
Suppliers	143.6		6.7							
Financial Institutions	392.5		18.4							
Bonds	19.0		.9							
Public Debt n.e.i.	.3		-							
	2136.6		100.0							
Other M< Debts	2833.2									
Short-term Debt (disb. only)	-									
						DEBT AND DEBT SERVICE ^{2/}				
						Public Debt Out. & Disbursed	1972	1973	1974	Estimated 1975
						Interest on Public Debt	63.1	96.4	102.6	114.5
						Repayments on Public Debt	154.1	208.0	288.1	313.3
						Total Public Debt Service	217.3	304.4	390.7	427.8
						Other Debt Service (net)	634.5	722.6	821.4	975.1
						Total Debt Service (net)	851.8	1027.0	1212.1	1502.9
						Burden on Export Earnings ^{4/} (%)				
						Public Debt Services Ratio	5.0	5.3	5.4	5.5
						Total Debt Service Ratio	19.7	18.0	16.8	19.3
						TDS - Direct Investment Inc.	-	-	-	-
						Average Terms of Public Debt				
						Int. as % Prior Year DO&D	4.7	5.9	5.4	5.4
						Amort as % Prior Year DO&D	11.4	12.8	15.1	14.7
						IBRD Debt Outs. & Disbursed				
						" as % Public Debt O&D	19.5	18.4	19.9	-
						" as % Public Debt Services	14.7	12.6	11.3	11.6

^{1/} Includes direct foreign investment.

^{2/} Includes errors and omissions, short term loans, net export credits, IMF account, National Bank and Commercial Bank Credits.

^{3/} Figures on debt service do not correspond with balance of payments figures due to differences in coverage.

^{4/} Includes workers remittances.

THE STATUS OF BANK GROUP OPERATIONS IN YUGOSLAVIA

A. STATEMENT OF BANK LOANS (as at March 31, 1976)

<u>Number</u>	<u>Year</u>	<u>Borrower</u>	<u>Purpose</u>	US\$ million	
				<u>Bank</u>	<u>Undisbursed</u>
Fifteen Loans fully disbursed				434.7	
657	1970	Yugoslav Investment Bank	Telecommunications	40.0	0.2
751	1971	SFRY	Roads	35.0	0.4
752	1971	Hotel "Bernardin", Piran	Tourism	10.0	3.6
777	1971	SFRY	Multipurpose Water	45.0	34.7
782	1971	"Babin Kuk" Hotelsko Turisticki Centar, Dubrovnik	Tourism	20.0	9.9
836	1972	Twelve Electric Power Enterprises in Yugoslavia	Power	75.0	23.1
894	1973	Stopanska Banka, Skopje	Agricultural Industries	31.0	12.3
916	1973	Naftagas	Gas Pipeline	59.4	24.8
947	1973	Kikinda	Iron Foundry	14.5	4.3
965	1974	IMT	Tractor Factory	18.5	1.5
966	1974	FOB	Iron Foundry	15.0	8.5
990	1974	Bosnia-Herzegovina Road Funds	Roads	30.0	4.4
1012	1974	Stopanska Banka, Skopje	Industrial Credit	28.0	22.2
1013	1974	Privredna Banka Sarajevo	Industrial Credit	22.0	18.6
1026	1974	Community of Yugoslav Railways	Railways	93.0	76.3
1060	1974	Port of Bar	Harbor Expansion	44.0	43.8
1066	1974	Vodovod Dubrovnik	Water Supply and Wastewater	6.0	6.0
1129	1975	Vojvodjanska Banka	Agricultural Credit	50.0	50.0
1143	1975	Republic Road Organization in Slovenia, Montenegro and Serbia	Roads	40.0	40.0
1173/a	1975	Jugoslavenski Naftovod Pipeline		49.0	49.0
		Total (less cancellation)		1160.1	433.6
		of which has been repaid		136.3	
		Total now outstanding		1023.8	
		Amount sold	7.8		
		of which: Amount repaid	6.2	1.6	
		Total now held by Bank		1022.2	
		Total undisbursed			433.6

/a Not yet effective.

B. STATEMENT OF IFC INVESTMENTS (as at March 31, 1976)

<u>Year</u>	<u>Obligor</u>	<u>Type of Business</u>	<u>Amount in US\$ million</u>		
			<u>Loan</u>	<u>Equity</u>	<u>Total</u>
1970	International Investment Corporation for Yugoslavia	Investment Corporation	-	2.0	2.0
1970	Zavodi Crvena Zastava Fiat S.P.A.	Automotive Industry	5.0	8.0	13.0
1971	Tovarna Automobilov in Mororjev Maribor (TAM)/Klockner-Humboldt Deutz A.G. (KHD)	Automotive Industry	7.5	2.1	9.6
1972	FAP-FAMOS Belgrade/Daimler Benz A.G.	Automotive Industry	12.7	2.7	15.3
1972	Sava/Semperit	Tires	4.0	1.5	5.5
1973	Belisce/Bell	Pulp and Paper	13.3	-	13.2
1974	Zelezarna Jesenice/ARMCO	Special Steel	10.0	-	10.0
1974	Salonit Anhovo	Cement Plant	10.0	-	10.0
1975	Rudarsko Melaturski	Steel	<u>50.0</u>	<u>-</u>	<u>50.0</u>
Total Gross Commitments			112.5	16.3	128.8
less cancellations, terminations, repayment and sales			<u>57.8</u>	<u>2.2</u>	<u>60.0</u>
Total commitments held by IFC			<u>54.9</u>	<u>14.1</u>	<u>68.8</u>
Total Undisbursed			<u>36.6</u>	<u>5.8</u>	<u>39.4</u>

C. PROJECTS IN EXECUTION 1/

Loan 657 Telecommunications: US\$40.0 million Loan of February 20, 1970;
Effective Date: August 30, 1970; Closing Date: March 31, 1976.

After initial delays the Bank-financed part of the project is proceeding satisfactorily and is now nearing completion. The installation of trunk exchanges which are not financed by the Bank, has been delayed and will be fully completed shortly. We are in communication with the borrower with respect to the undisbursed balance of \$200,000.

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 understanding that they do not purport to present a balanced evaluation of strengths and weaknesses in project execution.

Loan 751 Fifth Highway: US\$35.0 million Loan of June 18, 1971; Effective Date: June 2, 1972; Closing Date: December 31, 1977.

After an initial delay of about eight months in fulfilling the conditions for effectiveness of the loan, construction work on all sections has progressed well. All road sections but one are open for traffic. Completion of the remaining section has been delayed due to lack of funds. While costs have increased, future earmarked revenues from fuel taxes, particularly on purchases of fuel by Italian motorists crossing the border to buy cheaper fuel in Yugoslavia, have decreased. The final section is now expected to be completed by September, 1977.

Loan 752 Bernardin Tourism: US\$10.0 million Loan of June 18, 1971; Effective Date: May 31, 1972; Closing Date: June 20, 1977.

There have been delays in implementation of the project due to delays in making the loan effective, appointing consultants, providing the necessary infrastructure and approvals by local authorities. As a result disbursements are behind schedule. Bids received in July 1974 indicated that the project, if it were to be implemented as originally envisaged (2,500 beds) would cost approximately 100 percent above the originally estimated cost of US\$25.6 million. This increase was mainly due to rapid inflation in construction costs. The Bank and the project sponsors have agreed to finance a reduced complex containing some 1,616 beds (Amendment to Loan 752-YU, December 16, 1974, R74-258). The total cost would be US\$39.9 million requiring additional financing of about US\$14 million. Financing for the revised project has been agreed upon. The port hotel is scheduled for pre-opening occupancy in April, 1976 and the village hotel complex is scheduled to open in May 1976; however, serious construction problems with regard to the foundations were encountered in the case of the cliff hotel, the completion of which has been delayed until October, 1976.

Loan 777 Ibar Multipurpose Water: US\$45.0 million Loan of June 20, 1971; Effective Date: May 31, 1972; Closing Date: December 31, 1976.

The start of project work was delayed for one year. Construction is now underway with the main dam scheduled for completion by late 1976. A small part of the irrigation network has been completed with the remainder expected to be completed in 1978. Project costs have been above appraisal estimates but the overrun financing is being provided by the Province of Kosovo. Delays have been encountered in the arrangements for boundary adjustment and agricultural extension services. Consultants have been recently engaged to help find solutions.

Loan 782 Babin Kuk Tourism: US\$20.0 million Loan of July 21, 1971; Effective Date: June 12, 1972; Closing Date: July 31, 1977.

There have been delays in the implementation of the project due to delays in making the loan effective and in mobilizing consultants. Accordingly disbursements are behind schedule. Although these problems have now been largely resolved, the project is almost two years behind schedule. Bids for civil works and estimates for other components indicated that the project would cost at least twice as much as originally estimated (US\$49.9 million). This increase is largely due to rapid inflation in construction costs. The Bank and the project sponsors have agreed to finance a reduced complex containing some 2,034 beds (Amendment to Loan 782-YU, December 16, 1974, R74-259). The total cost would be US\$51.5 million requiring additional financing of about US\$1.6 million. This additional financing for the revised project has been arranged but in light of the increased financial commitments necessary from the local banks and a re-evaluation of the financial capabilities of the sponsor necessary to implement a project of this size, the local banks and the Borrower have proposed and are discussing with the Bank a change in sponsorship. This proposed change in sponsorship will be submitted to the Executive Directors for their consideration after being fully reviewed by the Bank. Meanwhile, construction is proceeding well and all civil works are near completion. The hotels are scheduled to open in June, 1976.

Loan 836 Power Transmission: US\$75.0 million Loan of June 23, 1972; Effective Date: December 29, 1972; Closing Date: June 30, 1977.

Project execution began about one year behind schedule mainly because of coordination difficulties and inherent delays in reaching agreement among 12 borrowers. This is the first attempt at countrywide coordination in the sector. All main contracts have been awarded and construction is proceeding satisfactorily; however, the cost of the project has increased 84 percent from \$225 million to \$415 million chiefly due to escalation in overall costs, including both civil works and equipment. The cost overrun is expected to be financed from funds from the Federal Republic of Germany and the borrowers' own resources. Action on appointment of management consultants to help improve planning operation and management of the interconnected power system is still pending. Early difficulties with reporting, changes in the organization of the sector, and determination of the financial performance of individual borrowers have largely been resolved.

Loan 894 Agricultural Industries (Macedonia): US\$31.0 million Loan of May 25, 1973; Effective Date: November 28, 1973; Closing Date: December 31, 1978.

Sub-projects accounting for all but Din 7.75 million (\$430,500 equivalent) of the amount allocated have been approved by the lending institution. Private sector demands for sub-loans have by far been in excess of financing available under the project. Twenty-one sub-projects have been

completed and eighteen are under construction in the social sector. Of the three studies encompassed by the project the one on irrigation has been completed while the other two on marketing and private farm production are in the final draft stage.

Loan 916 Naftagas Pipeline: US\$59.4 million Loan of June 25, 1973; Effective Date: March 22, 1974; Closing Date: June 20, 1977.

Bids received on pipes and equipment exceeded appraisal estimates and civil works costs have increased so that project costs are now about 71 percent above the appraisal estimate. Accordingly the project has been re-defined. Phase I is a reduced version of the original plan. Phase II would provide for a pipeline extension to link up with the pipeline to be constructed under the proposed Sarajevo Air Pollution Control Project, for which additional Bank financing will be proposed. Naftagas has obtained additional local currency financing required for Phases I and II. The proposed change will be submitted to the Executive Directors for their consideration.

Loan 947 Kikinda Iron Foundry: US\$14.5 million Loan of November 30, 1973; Effective Date: May 28, 1974; Closing Date: March 31, 1978.

Effectiveness was delayed about five months due primarily to the extra time required for the ratification of the Guarantee Agreement by the Federal Assembly. Project implementation is about four months ahead of schedule. Total project costs now are about 13 percent (Din. 79.0 million, about US\$4.6 million equivalent) above appraisal estimates due to large increases in local costs. Financing of this cost overrun has been arranged with a local bank.

Loan 965 IMT Tractor Factory Expansion: US\$18.5 million Loan of February 22, 1974; Effective Date: June 11, 1974; Closing Date: December 31, 1977.

The factory was officially inaugurated on March 7, 1976. Completion work on minor portions of the project, however, is continuing.

Loan 966 FOB Iron Foundry: US\$15.0 million Loan of February 22, 1974; Effective Date: May 28, 1974; Closing Date: December 31, 1977.

There presently is a 3 month delay in project implementation but completion is expected to be on schedule. Local costs are about 27 percent (Din. 173 million, about US\$10.0 million equivalent) above appraisal estimates due to design changes and domestic inflation. Financing of this local cost overrun has been arranged with a local bank.

Loan 990 Sixth Highway: US\$30.0 million Loan of May 31, 1974; Effective Date: December 10, 1974; Closing Date: December 31, 1977.

Two out of six road sections are complete and the remainder should be completed by the end of 1976. Two requests for changes in road alignments have been agreed; both changes were requested to accommodate communities which would be better served by the realignments.

Loan 1012 Macedonia/Kosovo Industrial Credit: US\$28.0 million Loan of June 21, 1974; Effective Date: December 19, 1974; Closing Date: December 31, 1978.

It is expected that the loan would be fully committed by September 1976 and disbursed by end-1977, ahead of appraisal estimates. The reasons being: use of Bank funds to finance a greater than anticipated proportion of the foreign exchange requirements of projects financed by the banks; the suitability of Bank funds for investors' projects and the overall scarcity of investment resources in Yugoslavia; and the banks' ability to adapt quickly to the methodology proposed by IBRD for appraisal of projects submitted for Bank financing.

Loan 1013 Bosnia Herzegovina/Montenegro Industrial Credit: US\$22.0 million Loan of June 21, 1974; Effective Date: December 19, 1974; Closing Date: December 31, 1978.

The note under Loan 1012 above applies also to this loan.

Loan 1026 Fourth Railway: US\$93.0 million Loan of July 10, 1974; Effective Date: February 12, 1975; Closing Date: December 31, 1977.

The project consists of the 1974-76 slice of the railways' investment plan. After serious delays in 1974, project execution improved substantially in 1975 but remains somewhat below appraisal forecasts. Delays have been due principally to financial difficulties. Government and the Community of Railways are having difficulties in raising tariffs sufficient to cover inflationary costs and the Bank is currently reviewing this matter with the Government. There has been good progress on investment planning and project management.

Loan 1060 Port of Bar: US\$44.0 million Loan of December 11, 1974; Effective Date: June 13, 1975; Closing Date: June 30, 1978.

In general the Project is progressing well, but settlement of compensation to occupiers of expropriated land and construction of alternative housing must be accelerated to enable the construction of the railway marshalling yards serving the new port facilities in due time. The Bank contacted the Government of the Republic of Montenegro which has intervened in this matter.

Loan 1066 Dubrovnik Water Supply and Wastewater: US\$6.0 million Loan of December 24, 1974; Effective Date: June 26, 1975; Closing Date: December 31, 1978.

Preliminary works are underway, and services to the Bank financed Babin Kuk hotel complex (Loan 782-YU) will be finished in time for the initial operation of the hotel complex.

Loan 1129 Agricultural Credit: US\$50.0 million Loan of June 20, 1975; Effective Date: February 12, 1976; Closing Date: December 31, 1979.

Two sub-projects from the autonomous Province of Vojvodina have already been approved and more sub-project applications from the other Republics are presently being reviewed for approval.

Loan 1143 Seventh Highway: US\$40.0 million Loan of July 18, 1975; Effective Date: March 30, 1976; Closing Date: June 30, 1979.

This loan was declared effective on March 30, 1976.

Loan 1173 Naftovod Oil Pipeline: US\$49.0 million Loan of November 19, 1975; Closing Date: December 31, 1979.

Terminal date for declaring effectiveness is June 30, 1976.

YUGOSLAVIA: MORAVA REGION DEVELOPMENT PROJECT:
WATER SUPPLY, SEWERAGE AND WATER RESOURCES

Loan and Project Summary

- Borrower: Republicki Fond Voda (Socialist Republic of Serbia Water Fund).
- Guarantor: Socialist Federal Republic of Yugoslavia.
- Beneficiaries: Portions of the loan would be on-lent to the following organizations:
- (a) Komunalno Preduzece "Bioktos"-Titovo Uzice (Communal Enterprise "Bioktos"-Titovo Uzice)
 - (b) Komunalna Organizacija Udruzenog Rada za Vodovod i Kanalizaciju "Vodovod"-Cacak (Communal Organization for Water Supply and Sewerage Systems "Vodovod"-Cacak)
 - (c) Zemljoradnicka Zadruga "Milosevac" (Milosevac Farmers' Cooperative)
 - (d) Poljoprivredno-Industrijski Kombinat Aleksinac (Aleksinac Agro-Industrial Kombinat)
 - (e) Republicki Fond za Poststicanje Razvoja Nedovoljno Razvijenih Podrucja (Republic Fund for the Promotion of Development of Underdeveloped Regions or SFUR)
- Amount: US\$20 million equivalent in various currencies, of which US\$13.5 million would be on-lent to the beneficiaries.
- Terms: Amortization in 20 years, including a 4-1/2 year grace period, with interest at 8-1/2 percent.
- Relending Terms: Same as those for the Bank loan.
- Project Description: The project has three primary objectives and components:
- (a) Assistance to the Republic of Serbia to improve the planning and management of water resources within the Morava region in order to promote accelerated economic development in the least-developed areas of the Morava River Basin, to include:
 - (i) a study of ways to accelerate economic development in three of the least-developed areas of the Morava River Basin;

- (ii) a study of measures to adjust to the flood hazards throughout the Morava River Basin;
 - (iii) a study to develop a program to improve water quality in part of the Morava watershed, as a pilot project for the entire Basin; and
 - (iv) staff training for MRWCI.
- (b) Provision of improved water supplies and extension of the sewer networks in the towns of Titovo Uzice and Cacak, to include:
- (i) water supply and sewage disposal systems for the commune of Titovo Uzice comprising:
 - a concrete arch dam (70 m high),
 - a water transmission line from the main reservoir,
 - a water treatment plant,
 - transmission and distribution pipelines,
 - pumping station and distribution reservoirs,
 - sewage disposal systems, and
 - engineering studies, including the final design for a future sewage treatment plant.
 - (ii) water supply and wastewater disposal systems for the commune of Cacak comprising:
 - a wellfield development 2 km upstream of Cacak,
 - collector pipeline and balancing reservoir,
 - transmission and distribution pipelines,
 - pumping station and distribution reservoirs,
 - a sewage disposal system,
 - storm drains to alleviate local flooding,
 - engineering studies, including a water supply system development study and the final design for the future sewage treatment plant.
- (c) Demonstration of the feasibility and economics of low cost irrigation schemes, to include the construction, operation, and monitoring of pilot irrigation schemes covering approximately 400 ha in Milosevac and 200 ha in Aleksinac.

Estimated Cost:

<u>Beneficiary and Project Components</u>	<u>US\$ Million</u>			<u>Percent (of total project cost)</u>
	<u>Local</u>	<u>Foreign</u>	<u>Total</u>	
<u>Serbian Water Fund (SWF)</u>				
(a) Vrutci Dam	10.1	3.7	13.8	26.9
(b) Flood Hazard Adjustment Study	1.3	0.5	1.8	3.5
(c) Water Quality Study	0.5	0.4	0.9	1.8
(d) MRWCI Staff Training	0.05	0.05	0.1	0.2
<u>Titovo Uzice-"Bioktos"</u>				
(a) Water Supply and Sewerage System	12.2	6.5	18.7	36.3
<u>Cacak-Vodovod</u>				
(a) Water Supply and Sewerage System	8.3	3.8	12.1	23.6
(b) Storm Drainage System	1.5	0.6	2.1	4.2
<u>Republic Fund for the Promotion of Development of Under- developed Regions (SFUR)</u>				
(a) Regional Development Study	0.4	0.1	0.5	1.0
<u>Milosevac Farmers Cooperative</u>				
(a) Milosevac Pilot Irrigation Project	0.5	0.3	0.8	1.4
<u>Aleksinac Agrokombinat</u>				
(a) Aleksinac Pilot Irrigation Project	<u>0.4</u>	<u>0.2</u>	<u>0.6</u>	<u>1.1</u>
Total Project Cost	<u>35.3</u>	<u>16.1</u>	<u>51.4</u>	<u>100.0</u>
Interest During Construction on Bank Loan		4.5	4.5	
Total Project Financial Requirements (including interest during construction) of which:	<u>35.3</u>	<u>20.6</u>	<u>55.9</u>	
Physical Contingencies	3.2	1.7	4.9	9.6
Price Increases	6.3	2.9	9.3	18.0

Financing Plan:

	<u>SWF</u>	<u>Bioktos</u>	<u>Vodovod</u>	<u>SFUR</u>	<u>Milosevac</u>	<u>Aleksinac</u>	<u>Total</u>
	(US\$ millions)						
<u>Project Requirements:</u>							
Project Cost	16.61	18.68	14.28	0.51	0.81	0.55	51.44
Interest During							
Construction	<u>1.31</u>	<u>1.58</u>	<u>1.38</u>	<u>0.06</u>	<u>0.08</u>	<u>0.06</u>	<u>4.47</u>
Total Requirements	<u>17.92</u>	<u>20.26</u>	<u>15.66</u>	<u>0.57</u>	<u>0.89</u>	<u>0.61</u>	<u>55.91</u>
<u>Sources of Funds</u>							
IBRD Loan	6.46	7.26	5.55	0.20	0.32	0.21	20.00
Other Funds							
Republic	8.60			0.37	0.57	0.40	9.94
Local	<u>2.86</u>	<u>13.00</u>	<u>10.11</u>				<u>25.97</u>
Total Sources	<u>17.92</u>	<u>20.26</u>	<u>15.66</u>	<u>0.57</u>	<u>0.89</u>	<u>0.61</u>	<u>55.91</u>

- Expenditures to be Financed by the Loan:
- (i) Equipment and Materials--100 percent of the c.i.f. cost of directly imported equipment, materials and pipes; 35 percent of locally procured equipment, materials and pipes;
 - (ii) Civil works--100 percent of foreign expenditures and 35 percent of expenditures for locally won construction and installation contracts (for the Vrutci Dam, Titovo Uzice, Cacak, Milosevac, and Aleksinac facilities) including 35 percent or up to US\$1.4 million of force account work in Titovo Uzice and Cacak;
 - (iii) Consultant Services--100 percent of the foreign cost of consulting and engineering services; 35 percent for local consultants; 100 percent of foreign training costs of MRWCI staff;
 - (iv) Interest During Construction--100 percent of interest and other charges on the Bank loan during construction.

Estimated Disbursements:

<u>Calendar Year</u>	<u>Amount (US\$ million)</u>	
	<u>Annual</u>	<u>Cumulative</u>
1976	1.4	1.4
1977	5.5	6.9
1978	6.2	13.1
1979	5.3	18.4
1980	1.6	20.0

Procurement
Arrangements

Equipment and materials contracts estimated to cost more than US\$100,000 would be awarded after international competitive bidding (ICB) in accordance with the Bank Guidelines for Procurement. For the purpose of bid comparison, it is proposed that qualified domestic manufacturers of these goods would be given a margin of preference of 15 percent or custom duties, whichever is lower. Civil works contracts estimated to cost more than US\$500,000 would be awarded after ICB. The other equipment supply and civil works contracts would be awarded on the basis of competitive bidding advertised locally, in accordance with local procedures which are acceptable. Local contractors are expected to win contracts for most of the construction work in the towns of Titovo Uzice and Cacak, but Bioktos and Vodovod will carry out minor works by force account (such as renovations and modifications to existing facilities or installing new pipes) using their existing staff and equipment. The total value of such works carried out by force account would be limited to US\$4.0 million (8 percent of the project cost). Most equipment supply and civil works contracts are expected to be won by Yugoslav firms. Expenditures of about US\$1.0 million are expected to be incurred prior to loan signature on the water supply and wastewater systems of Bioktos and Vodovod. Retroactive financing of not more than US\$1.0 million is proposed.

Technical
Assistance:
(Consultants)

- (a) SWF: About 20 manyears for assistance with final design, tender documents, and supervision of construction of the Vrutci dam; about 70 manyears for assistance to carry out the flood hazard adjustment and water quality improvement studies; and, a panel of internationally experienced engineers to provide independent expert advice on the Vrutci dam construction.
- (b) Bioktos: About 35 manyears for assistance with final design, tender documents, and supervision of construction of the water supply and wastewater components and about 5 manyears for assistance of the design of the future wastewater treatment plant for Titovo Uzice.
- (c) Vodovod: About 20 manyears for assistance with final design, tender documents, and supervision of construction of the water supply and sewerage and storm drainage components; about 5 manyears for assistance for the design of the future sewage treatment plant for Cacak; about 5 manyears for assistance to complete a water supply system development study.

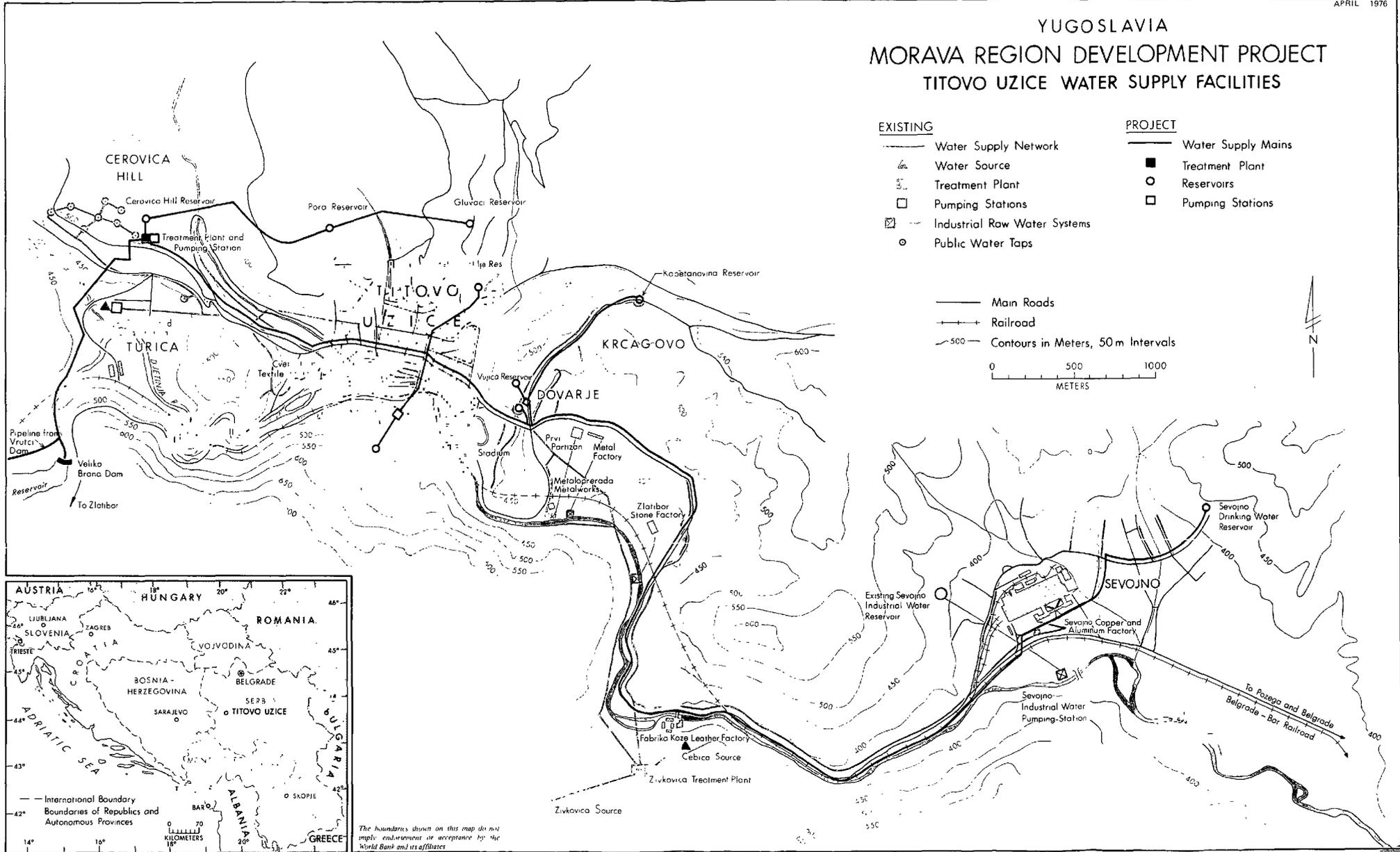
- (d) SFUR: About 23 manyears for assistance to carry out the regional development study.
- (e) Milosevac Farmers' Cooperative and Aleksinac Agrokombinat: About 3 manyears for assistance with final design and supervision of construction for the pilot irrigation system.

Rate of Return: Benefits not sufficiently quantifiable to calculate a rate of return on most project components. Pilot irrigation components would provide economic rates of return of approximately 20 percent.

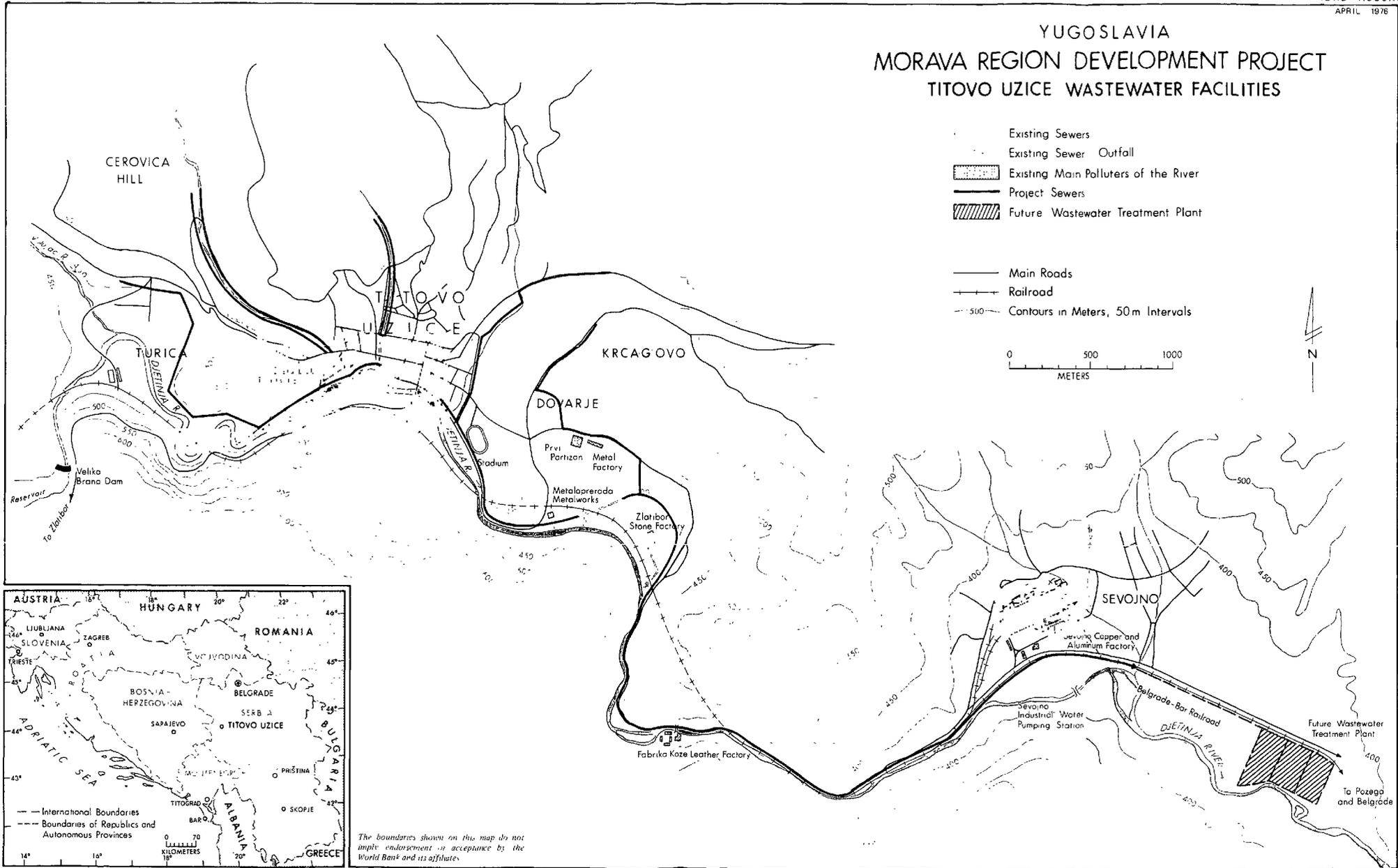
Estimated Project Completion Date: December 31, 1979

Appraisal Report: Report No. 991-YU
Date May 3, 1976
Water Supply & Sewerage Division
EMENA Projects Department

YUGOSLAVIA MORAVA REGION DEVELOPMENT PROJECT TITOVO UZICE WATER SUPPLY FACILITIES

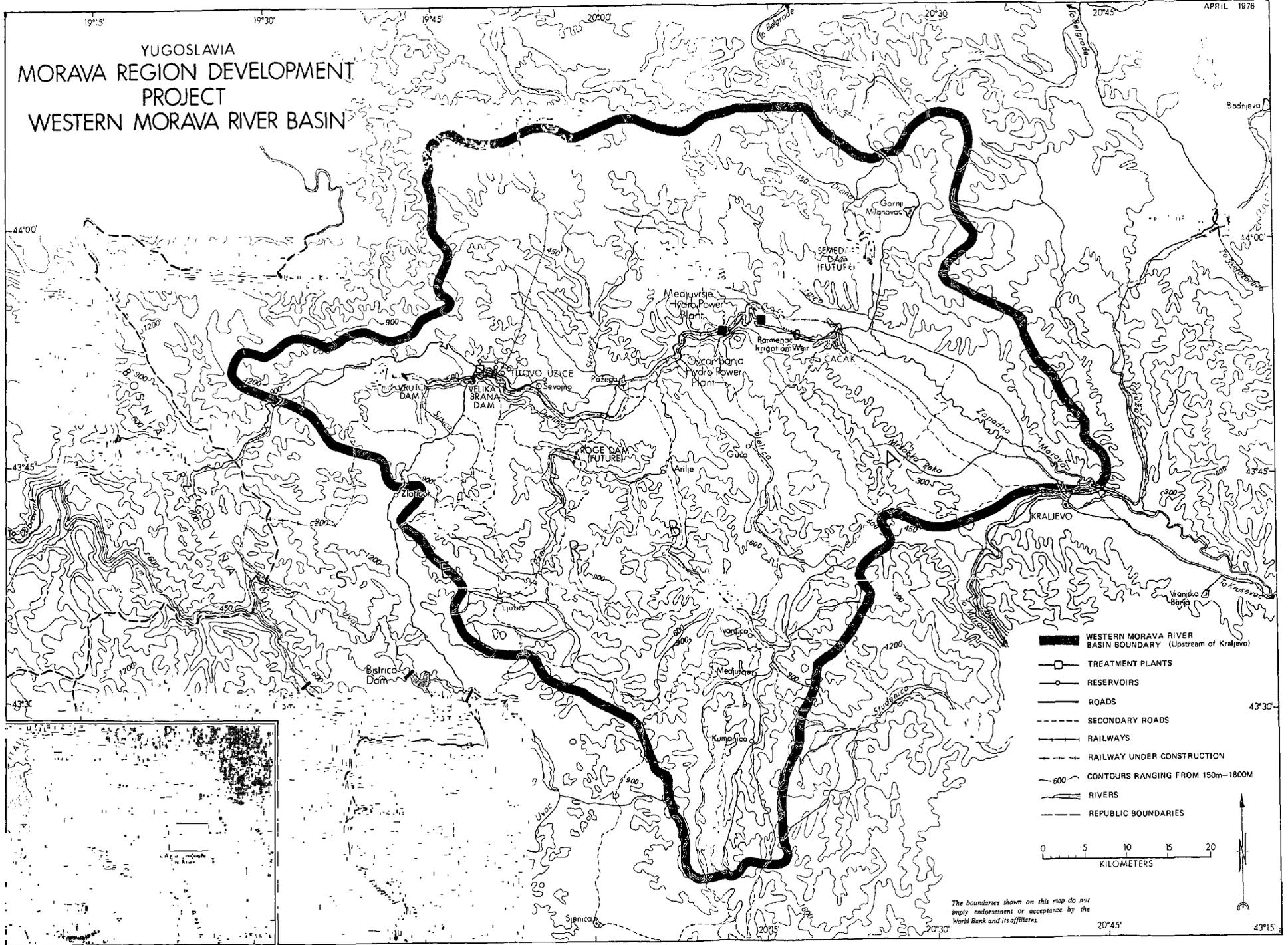


YUGOSLAVIA MORAVA REGION DEVELOPMENT PROJECT TITOVO UZICE WASTEWATER FACILITIES

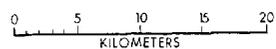


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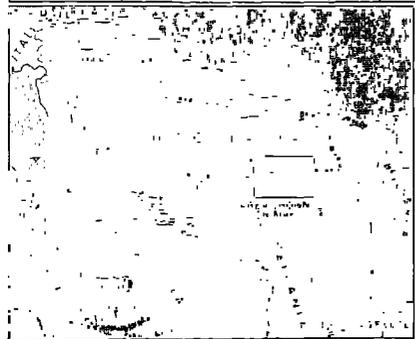
YUGOSLAVIA MORAVA REGION DEVELOPMENT PROJECT WESTERN MORAVA RIVER BASIN



- WESTERN MORAVA RIVER BASIN BOUNDARY (Upstream of Kraljevo)
- TREATMENT PLANTS
- RESERVOIRS
- ROADS
- SECONDARY ROADS
- RAILWAYS
- RAILWAY UNDER CONSTRUCTION
- CONTOURS RANGING FROM 150m-1800M
- RIVERS
- REPUBLIC BOUNDARIES

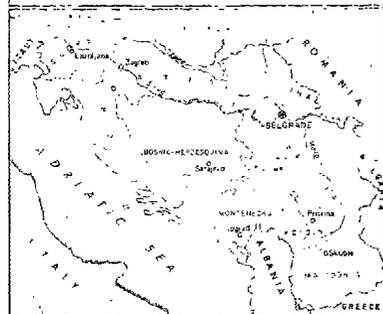
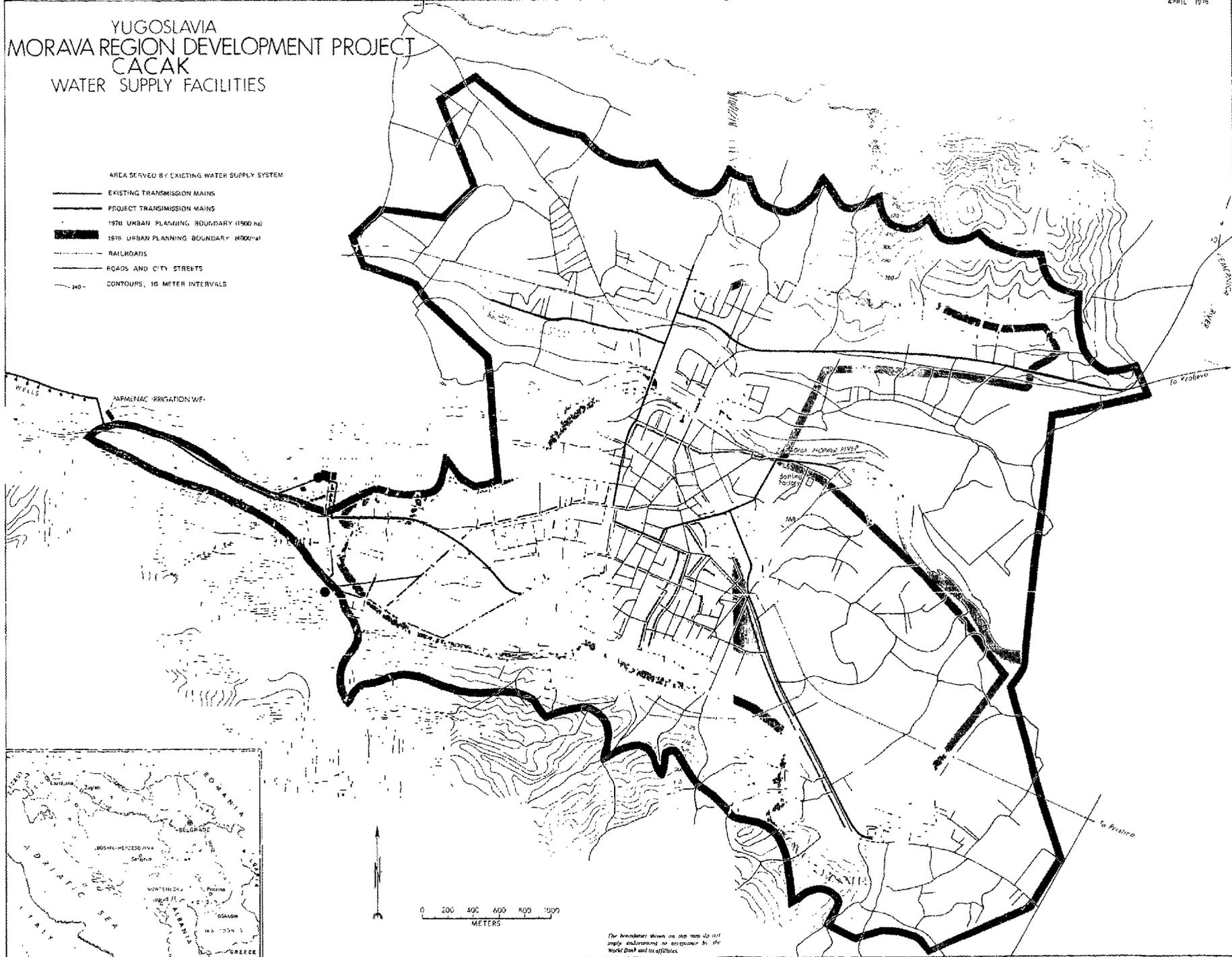


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YUGOSLAVIA MORAVA REGION DEVELOPMENT PROJECT CACAK WATER SUPPLY FACILITIES

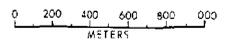
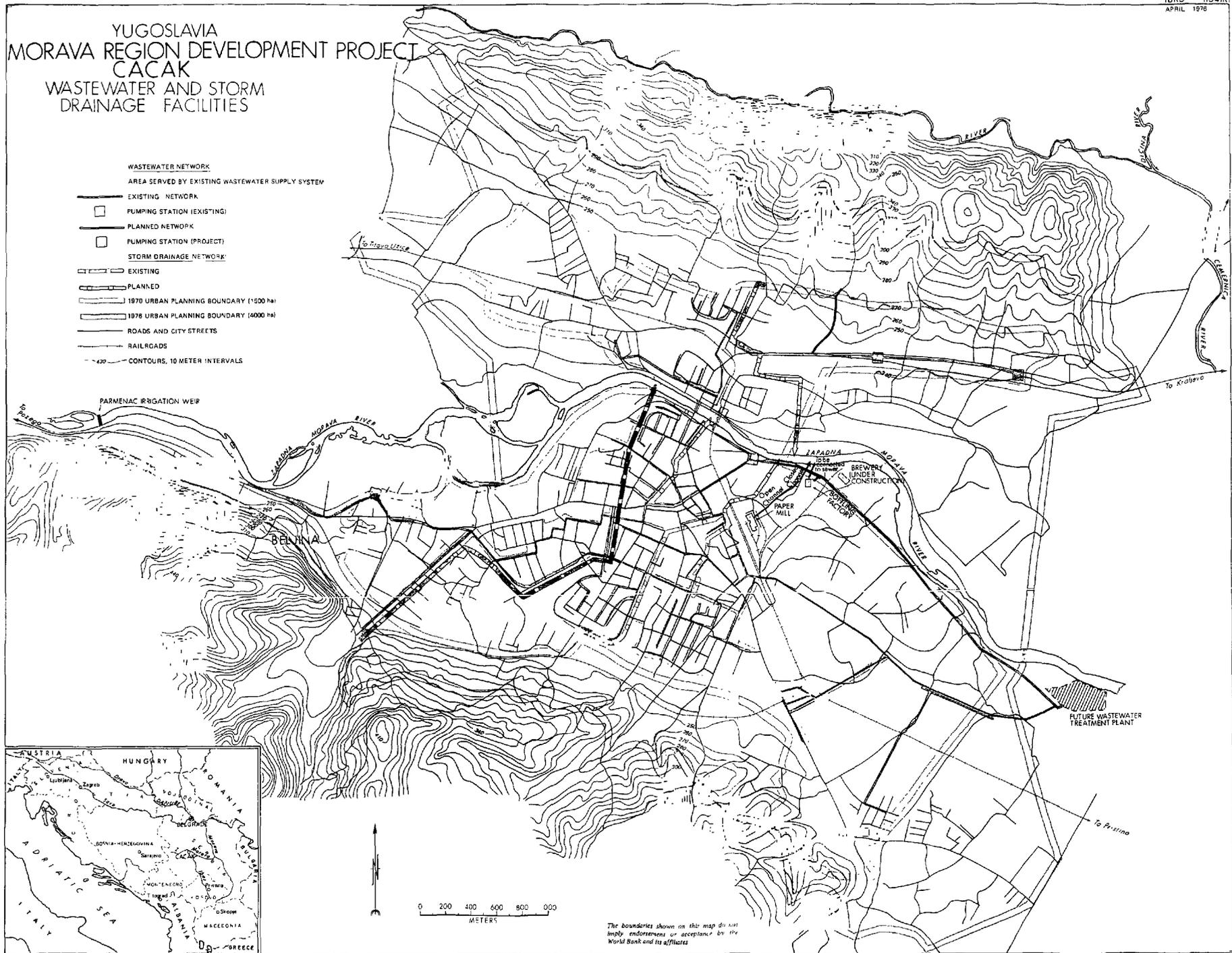
- AREA SERVED BY EXISTING WATER SUPPLY SYSTEM
- EXISTING TRANSMISSION MAINS
- PROJECT TRANSMISSION MAINS
- 1976 URBAN PLANNING BOUNDARY (1500 ha)
- 1978 URBAN PLANNING BOUNDARY (4000 ha)
- RAILROADS
- ROADS AND CITY STREETS
- 300 — CONTOURS, 10 METER INTERVALS



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YUGOSLAVIA MORAVA REGION DEVELOPMENT PROJECT CACAK WASTEWATER AND STORM DRAINAGE FACILITIES

- WASTEWATER NETWORK**
- AREA SERVED BY EXISTING WASTEWATER SUPPLY SYSTEM
 - EXISTING NETWORK
 - PUMPING STATION (EXISTING)
 - PLANNED NETWORK
 - PUMPING STATION (PROJECT)
- STORM DRAINAGE NETWORK**
- EXISTING
 - PLANNED
 - 1970 URBAN PLANNING BOUNDARY (1500 ha)
 - 1978 URBAN PLANNING BOUNDARY (4000 ha)
 - ROADS AND CITY STREETS
 - RAILROADS
 - CONTOURS, 10 METER INTERVALS



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