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REPORT AND RECOMMENDATION

OF THE

PRESIDENT

TO THE

EXECUTIVE DIRECTORS

ON A

PROPOSED LOAN

TO

GUYANA

FOR

TAPAKUMA IRRIGATION PROJECT

June 3, 1974

CURRENCY EQUIVALENTS 1/

Currency Unit	=	Guyana Dollar (G$)
US$1	=	GS$2.17
G$1	=	US$0.46
G$1,000	=	US$460.36
G$1,000,000	=	US$460,364,683

1/ As of May 31, 1974. The Guyana Dollar has been floating with the Pound Sterling since July, 1972.

INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT

REPORT AND RECOMMENDATION OF THE PRESIDENT TO THE EXECUTIVE DIRECTORS ON A PROPOSED LOAN TO GUYANA FOR TAPAKUMA IRRIGATION PROJECT

1. I submit the following report and recommendation on a proposed loan to Guyana for the equivalent of US$12.9 million to help finance an irrigation project. The loan would have a term of 30 years, including 6 years of grace, with interest at 7¼ percent per annum.

PART I - THE ECONOMY

2. The Bank's most recent economic report (Current Economic Position and Prospects of Guyana, Report No. 242a-GUA, dated December 19, 1973) was distributed to the Executive Directors on December 27, 1973. Basic data are shown in Annex I.

Recent Economic Developments and Prospects

3. Guyana has a modern mining sector and a relatively efficient sugar industry; but its overall economic development in the past has been hampered by an adverse physical environment, a small domestic market, and political uncertainty. Per capita GNP (US$390 in 1971), while fairly evenly distributed, is low in comparison with per capita GNP in most other countries of the Western Hemisphere. The path of economic growth has been marked by persistent high unemployment, slow agricultural growth, poor export performance, and a lag in private investment. Real growth of the economy, at a rate of between 3 and 4 percent annually in the past two decades, has barely kept pace with the increase in population. GDP actually contracted by 3.5 percent in real terms in 1972, and there are indications that GDP may also have fallen last year. The slowdown in 1972 and 1973 was caused largely by a decline in bauxite output and by adverse weather conditions. Since 1971, private investment has been declining, in part due to uncertainty in the private sector about government policy towards the relative economic roles of the public and private sectors.

4. The development strategy of Guyana since independence in 1966 has been to increase the role of the public sector and to promote cooperatives. The government has expanded state enterprises, created new state-owned financial institutions, and nationalized the country's largest bauxite producer. The public sector now occupies a dominant position in the commercial and industrial sectors. The growing role of the public sector is reflected in the increase in its share of gross domestic capital formation from 40 percent in 1968 to 60 percent in 1972. Increasingly, therefore, the level of public savings will depend on the surpluses realized by public enterprises.

5. The immediate economic outlook is clouded by the balance of payments impact of the higher petroleum prices and by the stringency of public finances. Although it is not possible at this stage to assess the effect of the recent increases in petroleum prices on the economy in all its ramifications, it is estimated that the cost of necessary fuel imports will rise from about US$20 million in 1973 to US$60 million in 1974. With reserves falling to perilously low levels, the government embarked on a severe austerity program in January 1974 to conserve foreign exchange. The measures taken include: (i) discontinuance of the exchange of Guyanese currency returned from abroad; (ii) restrictions on foreign exchange allocations for overseas travel and other purposes; (iii) prohibition of local borrowing by foreign companies and their subsidiaries; (iv) banning of imports of motor cars of over 1600 c.c. and of certain other consumption items; and (v) licensing of all imports not already banned.

6. In the five-year period prior to 1973, although current expenditures grew rapidly, modest current surpluses were available from the budget to finance capital expenditures. Further, the growth of capital expenditures, which were 40 percent higher in 1972 than in 1968, was accompanied by efforts to mobilize domestic savings. In 1973, current expenditures rose by 40 percent, largely because of salary increases awarded to civil servants, while current revenues failed to grow at the expected rate, partly because of lower tax receipts from agriculture and mining. The budgetary deficit on current account amounted to over 25 percent of current expenditure. Capital spending continued its strong upward trend, rising by about 50 percent. To cover the budgetary deficits, the government's short-term borrowing from the Bank of Guyana increased substantially. The budget for 1974 left the current expenditure unchanged from the previous year's level and provided for growth in current revenues (over 35 percent) to achieve a balance. A "national development surcharge" on income tax collections, increases in various consumption and excise taxes, and a new tax on exports of sugar were introduced. As a result, the deficit in the current account in 1974 is likely to be about G$25 million, as compared with over G$50 million in 1973. The government, after reviewing the financial position, and with the support of IMF, has also decided to hold capital expenditures to about G$120 million. It is now expected that the 1974 current and capital accounts will leave a deficit of about G$60 million; the government is exploring ways of financing this deficit.

7. The rate of development that Guyana is likely to realize over the medium term will depend heavily on its ability to increase the production and export of its three key commodities--bauxite, sugar and rice-- which account for 30 percent of GDP and 85 percent of exports. Bauxite production has fallen in recent years, partly because of a weak market demand and partly due to a lack of product diversity (i.e., inadequate capacity for calcined bauxite production). Production of sugar and rice has lagged because of unfavorable weather conditions. The market prospects for these major commodities are now good. Calcined bauxite capacity will increase substantially when the new investments planned by the

government are completed. Higher returns to producers from the recent increase in the price of sugar exported to the United Kingdom should stimulate sugar production. Sugar production in the Caribbean Common Market (CARICOM) area as a whole is low and Guyana is in a position to increase its exports to the United Kingdom and other countries. Rice constitutes about 10 percent of both value-added in agriculture and of total exports. With production in 1973 about 30 percent below the 1970 level, the scope for increased output is substantial. Improved domestic pricing policies, availability of credit and other facilities as well as new investments will, however, be needed if the recent downward trend in production is to be reversed. The proposed project would constitute a major step towards this end. Thus, with reasonably good management, a good deal of progress may be expected toward closing the present gap in the balance of payments.

8. The government's Second 5-Year Development Plan, 1972-76, outlines a fairly ambitious public sector program aimed at accelerating the annual real rate of growth of GDP to 8.5 percent and reducing unemployment from about 15 percent to about 5 percent by the end of the period. The allocation of public investment gives high priority to transport and communications (24.5 percent), manufacturing and power (16.3 percent), and agriculture (15.8 percent). For a variety of reasons, including shortages of skilled manpower and limited domestic savings, however, it is not likely that the plan objectives as a whole will be attained during the plan period. In view of the present prospects for domestic and external financing, a capital investment program of G$865 million, about 25 percent lower than the planned level, with shares of public and private sectors amounting to G$550 million and G$315 million respectively, may be a more realistic target for the government to pursue. The real rate of growth during the Plan period may not exceed 5 percent per annum and unemployment may still remain well above the 5 percent target. Nevertheless, a real growth rate of 5 percent in GDP and a reduction in the unemployment rate would represent significant improvements over the past record. Among the sources of public sector financing for the Second Development Plan, current account surpluses may account for about 23 percent, net domestic borrowing for 10 percent, and net external borrowing 45 percent. During the preceding 5-year period, net external borrowing accounted for about 40 percent of the total financing. The greater role of foreign financing under the current 5-year plan is justified in the context of substantially higher development efforts and the more vigorous mobilization of domestic resources (paragraph 6).

9. The longer term economic prospects of Guyana are favorable, as discussed in the latest economic report. There should be considerable scope for development of the country's traditional exports. A substantial increase in the acreage under sugar and rice is planned. Considerable expansion in the capacity for producing calcined bauxite is also envisaged. Opportunities exist for greater diversification in the agricultural sector both for import substitution and for export. Government policy is aimed at increasing the output of fruits, vegetables and livestock. Imports of a wide range of agricultural commodities were banned at the end of 1971 to stimulate local production and to deflect consumer tastes towards domestic products. The country's forestry and fishery resources have yet to be effectively exploited. The existence of an adverse trade balance in forestry products, despite the fact that over 80 percent of the country's total land area is under forests, emphasizes the need to develop forestry. Export prospects for shrimp and fish are good, especially since other members of CARICOM have a deficit in these products. A greater rate of industrial development is also possible, provided foreign capital and expertise can be attracted to participate in development projects in Guyana and policies to enable the country to compete successfully with the industrially more developed CARICOM countries are pursued. Thus, with appropriate development strategy, including sound fiscal and monetary policies, Guyana can also improve its economic development performance significantly over the longer term.

External Assistance and Creditworthiness

10. Guyana has received considerable aid on concessionary terms in the past from bilateral doners. In its own lending activities, the Bank has taken into account the efforts of other multilateral and bilateral agencies, notably the UNDP, USAID, the United Kingdom (ODA), and CIDA. Guyana is not a member of the OAS or, as yet, IDB; it is expected that, following a resolution by the IDB Governors' meeting in Santiago this year, IDB will soon accept Guyana as a member. The Bank at present is the executing agency for two UNDP-financed studies (highways and fisheries), and expects to execute two further UNDP studies (highways and power) shortly. USAID's program has been extensive, including road construction, water and sewerage projects, and agricultural assistance, mainly through the construction of a rice research station and six rice drying and storage installations. The Bank and USAID have cooperated in studies of the Tapakuma and Black Bush irrigation and drainage rehabilitation and development schemes. USAID-financed consultants have prepared or are preparing feasibility studies for these projects. The Bank cooperation with CIDA is in the fields of education, forestry, and power. Until recently, CIDA financed the training of teachers for the Bank's first education project; CIDA is also financing a forestry products marketing study which may lead to a possible Bank loan. CIDA joined with the Bank and ODA in a loan to the Guyana Electricity Corporation in FY73. In view of Guyana's increased aid requirements, there will be a greater need for aid coordination.

11. Past loans and grants by sector from the principal aid agencies are summarized below:

Loans/Grants (Commitments)	IBRD	IDA	USAID	CIDA	U.K. 1/	Total	Percentage
			(in US$ million)				
1966-1972							
Transport	-	4.4	25.0	6.0	-	35.4	(22.5%)
Power, communi- cations	-	-	-	-	17.8 2/	17.8 2/	(11.3%)
Water, sewerage	-	-	2.6	2.3	-	4.9	(3.1%)
Sea defense	10.4	-	1.0	-	7.2	18.6	(11.8%)
Education	2.9	2.9	0.6	3.4	0.2	10.0	(6.4%)
Agriculture	-	2.2	14.6	-	2.6	19.4	(12.3%)
Other	-	-	13.3	5.2	32.9	51.4	(32.6%)
Total	13.3	9.5	57.1	16.9	60.7	157.5	
Percentage	(8.4%)	(6.0%)	(36.3%)	(10.7%)	(38.6%)		(100.0%)

1/ Includes grants of $18.6 million, based on disbursement estimates.
2/ Private bank loans and suppliers' credits guaranteed by Government of Guyana.

12. It is estimated that some US$30 million annually in inflows of long-te[rm] capital to the public sector in Guyana would be called for during the Second Devel[op]opment Plan period. Until recently, a considerable proportion of Guyana's capital requirements from abroad came on highly concessionary terms. As a result, the debt service ratio remained fairly moderate. The government may now find it difficult to meet its capital requirements through loans and credits from official sources alone. Last year, the government borrowed in the Euro-dollar market for the first time and also placed increased reliance on suppliers' credits. This practice may continue. The external public debt outstanding at the end of 1972 amounted to US$153 million. The service charges on this debt amounted to 4.5 percent of the export proceeds and were expected to rise to 11 percent by 1979. Since exports account for over one-half of Guyana's GNP, a debt service ratio of this magnitude is high. Nevertheless, with proper debt management, this should not prove to be overly burdensome. Guyana, while remaining creditworthy for Bank and other conventional long term lending, would also benefit from concessionary

aid in order to ease its debt servicing problem. Extended amortization periods on conventional loans are also justified. It is estimated that the Bank Group's share in Guyana's projected debt may increase from 3 percent in 1972 to 18 percent in 1979, and the Bank share in debt service would rise from 4 percent to 16 percent over the same period. While it has not been possible at this time to assess fully the impact of petroleum prices on the Guyanese economy, the effect would be substantially alleviated if the expected increases in the prices of bauxite, alumina and sugar materialize.

PART II - BANK GROUP OPERATIONS IN GUYANA

13. The first Bank loan to then British Guiana was US$1.3 million in 1961 for agricultural credit. The loan has been repaid in full. Since independence, Guyana has received from the Bank Group loans and credits totalling US$28.8 million, US$19.3[1/] million from the Bank and US$9.5 million from IDA. The proposed loan would be the seventh Bank Group operation since FY1969 and would be the only loan in FY1974. Reflecting Guyana's development needs, past lending has been for infrastructure (sea defense, highways, and power projects accounted for 69 percent of lending), education (19 percent), and agriculture and livestock (12 percent). There have been no IFC operations in Guyana and no investments are at present being considered. While some delays occurred in the early stages of the execution of the sea defense, livestock, and education projects, the projects currently are proceeding satisfactorily. Annex II contains a summary statement of Bank loans and IDA credits as of February 28, 1974, with notes on the status of on-going projects.

14. Future Bank Group lending in Guyana is expected to grow moderately as the pipeline of projects grows and managerial constraints to project implementation are gradually overcome. During the years ahead, Bank Group lending is likely to place heavy emphasis on the development of agriculture and natural resources. A fisheries project, which would involve both the private and public sectors, would provide for fish processing, shrimp trawlers, and possibly port facilities. A forestry project would support a program to exploit, process and market the tropical hardwoods of a forest area of some 880,000 acres in central Guyana. A second livestock project would support the program now being assisted under a FY1971 project (Credit No. 221-GUA). After the Tapakuma project, a second major irrigation and drainage project is planned in the Black Bush Polder area to promote a diversified crop production as well as rice cultivation. In the social field, a second education project is planned to increase the supply of teachers and technicians, to expand nonformal training and to broaden the curricula at the secondary level. A water supply and sewerage project, for which a USAID-financed feasibility study is in progress, would be the Bank Group's first venture in this field in Guyana. As regards to power and transport, we are assisting in the preparation of a hydroelectric power project to enable Guyana to smelt aluminum based on electricity at reasonable prices, and in the identification of a project aimed at the development of the inland water transportation system.

1/ Including a US$6.0 million loan made in FY1973 for a power project.

PART III - AGRICULTURE AND RICE PRODUCTION IN GUYANA

15. Agricultural development is accorded a high priority in the Guyana government's Second Development Plan for 1972-76. During the last decade, the growth of agricultural output, at about 1.5 percent annually (at constant prices), lagged behind the rate of population growth. The sector's contribution to GDP declined from 26 percent in 1960 to about 20 percent in 1972. There has been a virtual stagnation in both rice and sugar production. Annual sugar production averaged 328,000 long tons in the triennium 1960-62 and 332,000 long tons in 1970-72; and rice production decreased from an average of 127,000 long tons to 119,000 long tons during the same periods. The proportion of the total labor force employed in agriculture has also declined from 45 percent in 1950 to about 30 percent at present.

16. Unlike sugar, rice production is dominated by small, independent farmers. In response to the stimulus of high world prices, rice production grew at an annual rate of about 6 percent during the 1955-65 period, from 89,000 to 165,000 long tons, mainly by expanding the area under cultivation through large investments in water control works. Guyana became the major rice producer and exporter in the Caribbean region. As the new cultivation was extended into marginal lands, however, yields fell from 2,100 lbs. per acre in 1960 to about 1,640 lbs. per acre in 1965. Producers attempted to cut costs by substituting machinery for increasingly expensive labor. After 1965, annual production leveled off as the expansion of the area under cultivation came to a halt. The situation was aggravated from 1967 onwards as a result of low world prices for rice and, in the past two years, by adverse weather conditions in Guyana. The position has recently changed for the better, however, and rice prices are now quite high and should remain reasonably remunerative in the future.

17. The government controls the Guyana rice industry. At present, the principal government agency charged with responsibility for providing credit and technical services to rice farmers is the Guyana Rice Board (GRB), a statutory body responsible to the Ministry of National Development and Agriculture (MNDA). The GRB provides production credit to farmers in the form of fertilizers, insecticides and other essential inputs; it is the principal buyer and processor and sole exporter of rice. For exports to the CARICOM area, its principal market, contracts are negotiated each year at prices which are more stable than in outside world markets.

18. In 1969, the government initiated a rice modernization program to revitalize the industry. With financial support from USAID, the GRB has been improving its processing facilities to cut down on losses incurred in the harvesting, storage and distribution stages of production. The program should markedly improve the quality of rice for export and promote a higher capacity utilization. Improvement and expansion of irrigation and drainage systems in the two major rice producing areas, Tapakuma and the Black Bush

Polder, are important components of the government's 1972-76 Development Plan. In comparison with other areas, the Tapakuma area is depressed economically and is in urgent need of rehabilitation.

PART IV - THE PROJECT

19. The project proposed for Bank financing is designed to rehabilitate and extend the existing irrigation development in the Tapakuma area. The Bank appraisal mission in May 1973 concluded that three adjacent areas, Supenaam, Johanna Cecilia, and Somerset-Berks, should be included together with the Tapakuma scheme. The feasibility studies for these areas were received in October 1973 and provided the basis for the report entitled "An Appraisal of the Tapakuma Irrigation Project" (No. 388-GUA dated May 31, 1974), which is being circulated separately to the Executive Directors. The main features of the loan and the project are summarized in Annex III.

20. Negotiations for the proposed loan were held in Washington on May 6-10, 1974. The borrower was represented by Messrs. Winston King, Economic Adviser, Ministry of Economic Development; Phillip Allsopp, Chief Works and Communications Officer, Ministry of Works and Communications; B.I.T. Pollard, Chief Parliamentary Counsel, Attorney General's Office; Ben A. Carter, Chief Agricultural Officer, MNDA; and Mr. Edward A. Agostini, Deputy Secretary to the Treasury.

Project Description

21. The proposed project would provide for the rehabilitation, improvement and extension of irrigation and drainage systems and other services for the development of 41,750 acres (net) of land in four contiguous areas along the Essequibo coast. This would include 27,700 acres in the existing Tapakuma irrigation scheme and the construction of new irrigation and drainage systems for the rest of the project area. The principal objectives of the project are to increase rice production and to improve rice quality. This would strengthen Guyana's position as the major rice producer and exporter in the CARICOM region. It would benefit about 5,000 farmers, mostly smallholders with 2 to 20 acres each, who are among the poorest in the country. At present, the main constraints in the region are inefficient drainage, poor roads, lack of land leveling, inadequate extension services, and lack of good management. The proposed project would address these problems. It would also enable the government to improve farmer incomes in the project region.

22. On-farm development would consist primarily of land leveling on about 20,000 acres at present cropped to rice, and clearing and leveling about 7,000 additional acres of bush land which is suitable for rice production. After completion of the civil works and on-farm development, about 6,000 acres of land suitable for irrigated cropping would be available for new settlers.

23. The project would assist in expanding and improving the extension services in the project area and would provide for improved seed production. Consultants would assist in preparing, for Bank approval, a program to strengthen the Extension Division of MNDA through improved extension services to farmers, training, field trials and soil testing. The MNDA Extension Division staff in the project area would be increased from 3 to 6 extension agents, and they would be trained by a consultant in specific fields of agricultural production. Provision would also be made for field equipment to serve the farmers, principally for soil testing to determine fertilizer requirements, efficient water use and proper cultivation practices. The GRB's technical assistance and research programs would be expanded to include three applied research farms for research on rice varieties, fertilizer response, water requirements, pest and disease control, seed testing and improved cultivation techniques. A new building for seed storage and new seed processing machinery would also be provided, as well as equipment to operate experimental farms and to conduct research.

24. GRB will maintain a reserve fund out of profits earned from export sales of rice to stabilize the prices paid to farmers and to cover the costs of replacement and major repairs of its farm machinery and rice processing equipment. The technical assistance staff of the GRB would be strengthened and would be aided by consultants. The project-related operations of the MNDA Extension Service and of the GRB would be coordinated; the staff of both agencies would participate in a farmer-training program to be developed by consultants.

25. To replace and consolidate existing facilities, a new headquarters building at Anna Regina would be constructed to accommodate the project staff. In addition to the office of the Project Manager, the new headquarters building would provide office space for the MNDA Tapakuma Extension Service, Land Development Division, Operation and Maintenance Division, the administrator for the Cooperative Societies and the Chairman of the Rice Action Committee. The new facilities would also include a machinery repair and servicing shop for equipment to be used in the project area. Equipment and vehicles would be provided to assist in project administration. An Operation and Maintenance Division, with adequate staff and equipment, would be established to improve water management and maintenance works for the project.

26. Consultant services would be provided for engineering design, supervision of construction of civil works and for on-farm development. Consultants would also advise the GRB and the MNDA Extension Division on research, agricultural development and seed production. A total of 26 man-years of consultant services would be provided under the loan. Employment of consultants, acceptable to the Bank and contracted under appropriate terms and conditions, would be a condition of effectiveness of the proposed loan.

<u>Project Management and Organization</u>

27. The MNDA would be responsible for implementing the project over a 6-year period, for providing supporting services and for operating and maintaining the project when it is completed. A Project Manager, under terms of reference

determined in consultation with the Bank, would supervise and coordinate all project activities. The appointment of a Project Manager, with adequate powers to supervise and coordinate the execution of the project, and of a Project Engineer, both acceptable to the Bank, would be conditions of effectiveness of the proposed loan. The land leveling program would be carried out by the Land Development Division of the MNDA with equipment provided under the project. The surveys and designs for civil works would be carried out by the Drainage and Irrigation Board (D & I Board) of the MNDA with the assistance of consultants.

28. All of the major departments in the MNDA with responsibility for agricultural development would be participating in project operations. The Ministry has recently undergone a reorganization which greatly expanded its responsibilities, and some of the new departments and divisions are not yet fully integrated into the new structure. It is planned that the divisions at project level would be adequately strengthened to be able to handle their tasks. Supervision and coordination of all project activities would be centralized in the office of the Project Manager.

Costs, Financing and Project Charges

29. The project cost is estimated at US$18.5 million, net of taxes and import duties. A Bank loan of US$12.9 million would cover the estimated foreign exchange costs, including contingencies and interest during construction. It would be equivalent to about 70 percent of the total project cost. The period of the proposed Bank loan would be 30 years. The loan would have a 6-year grace period, corresponding to the construction period of the project.

30. The MNDA, through the D & I Board, is empowered to impose irrigation charges sufficient to cover operation and maintenance costs and the cost of capital investment. The charges levied at present in the Tapakuma area cover only 80 percent of the operating and maintenance costs, with no provision for capital recovery. It is now planned to gradually introduce charges which would cover all operation and maintenance costs plus recovery of all investment costs over a period of 50 years at an interest rate of 6 percent per annum. The charges would be graduated according to farm size and would amount to an estimated 7-28 percent of net farmer incomes. It is proposed that farmers continue to pay the rates now in force during the execution of the project and that payments of the new rates be imposed progressively as project facilities are completed and lands come into full use. It is expected that full charges could be imposed on about 10,000 acres in 1978 and on the entire project by 1982. The level of charges would be reviewed by the government in consultation with the Bank, at least once every two years, taking into account changes in farmers' incomes having occurred since the last review.

Procurement and Disbursement

31. Except for contracts too small to attract foreign bidders, all contracts for civil works and equipment, which would account for

about US$7.0 million of the foreign exchange component excluding contingencies, would be awarded through international competitive bidding under the Bank's Guidelines. For purposes of bid comparisons and the award of contracts for equipment, preference would be granted to local suppliers equal to 15 percent of the CIF costs of competing imports or to the existing rate of duty, whichever is lower. Suppliers in the CARICOM countries other than Guyana would be accorded preference equal to 15 percent of the CIF price or to the difference in tariff between CARICOM and external suppliers, whichever is lower. For civil works, it is likely that foreign contractors will form joint ventures with local contractors, which would help local contractors to improve their capability for this type of work. The procurement for on-farm development and office buildings would be made under procedures appropriate for each category: buildings would be constructed under contracts awarded through local competitive bidding; consultants by direct negotiation; and on-farm development would be carried out by the Land Development Division of MNDA.

32. The proposed Bank loan would be disbursed against 65 percent of the total cost of civil works (including buildings); 66 percent of on-farm development costs; 100 percent of the CIF cost of imported equipment, 80 percent of the cost of imported equipment purchased locally, or 100 percent of the exfactory price of locally manufactured equipment; and 100 percent of the foreign exchange cost of foreign consultants' services and of salaries of local consultants. It is estimated that survey and design work would begin during the second half of 1974; the Closing Date would be June 30, 1980.

Economic Justification

33. The major benefit of the project for Guyana would be the increases in rice production and higher foreign exchange receipts from rice exports. Increased sales would lead to higher farm incomes (representing an increase in farm income of 200 percent by 1980 in the case of subsistence farmers and 37 percent for large farmers) and, as the project would be located in a depressed rural area, to a better income distribution. The average annual per capita cash income of the farmers affected by the project would increase from about US$50 at present to US$80 when the project is in full operation. With the increased cropping intensity, seasonal underemployment would decline. The newly-developed rice lands available for settlement would enable the government to accommodate an additional 500 to 600 low-income farm families.

34. At full agricultural development, 9 years after commencement of the project, the net value of production at constant prices would be US$9.8 million per year, while the corresponding value without the project would be about US$4.9 million. With the project costs and benefits discounted over a 50-year period, a conservative estimate of the most probable economic rate of return is about 20 percent. A sensitivity analysis shows that with a combination of a 20 percent cost overrun and a 20 percent decrease in expected yields, the economic rate of return would be reduced to 10 percent, which would still be acceptable.

35. No adverse ecological effects are expected.

PART V - LEGAL INSTRUMENTS

36. The draft Loan Agreement between the Bank and Guyana, 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 proposed loan are being distributed to the Executive Directors separately.

37. The special features of the proposed project concerning the employment of consultants, the appointment of the Project Manager and the Project Engineer, and the system of water charges, which are referred to in paragraphs 26, 27, and 30 of this report, are reflected in Sections 3.03(a), 3.03(b), 6.01(a), and 6.01(b); 3.02(a), 3.02(b); and 4.07 of the draft Loan Agreement, respectively.

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

PART VI - RECOMMENDATION

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

Robert S. McNamara
President

Attachments

COUNTRY DATA - GUYANA

AREA	POPULATION	DENSITY
214,969 km^2	0.74 million (mid-1973)	133 /a,b Per km^2 of arable land

SOCIAL INDICATORS

	Guyana		Reference Countries		
			Trinidad & Tobago	Jamaica	Canada
	1960	1970	1970	1970	1970
GNP PER CAPITA US$ (ATLAS BASIS) /1	370 /c	370 /d	860 /d	670 /d	3,700 /d
DEMOGRAPHIC					
Crude birth rate (per thousand)	43	34	24	33	17
Crude death rate (per thousand)	10	7	7	7	8
Infant mortality rate (per thousand live births)	49 /e	38 /f	40	32	19 /g
Life expectancy at birth (years)	61	66 /h	67	68	72
Gross reproduction rate /2	..	2.4 /f	2.0	2.7	1.5
Population growth rate /3	..	2.5	2.1	1.6	1.8
Population growth rate - urban	..	..	4.2	4.7	0.6 /i
Age structure (percent)					
0-14	46	..	41	46	31
15-64	51	..	55	49	61
65 and over	3	..	4	5	8
Dependency ratio /4	1.6 /j	..	1.3	1.2 /j	1.0 /j
Urban population as percent of total	29 /k	..	50	37	74 /l
Family planning: No. of acceptors cumulative (thous.)	..	..	49	..	..
No. of users (% of married women)	..	..	..	..	..
EMPLOYMENT					
Total labor force (thousands)	175	210	363	749	8,465
Percentage employed in agriculture	37	32	20	33	8
Percentage unemployed	8	15	13.0	18.0	6.0
INCOME DISTRIBUTION					
Percent of national income received by highest 5%	..	..	27	..	..
Percent of national income received by highest 20%	..	..	..	..	..
Percent of national income received by lowest 20%	..	..	4	..	..
Percent of national income received by lowest 40%	..	..	..	..	..
DISTRIBUTION OF LAND OWNERSHIP					
% owned by top 10% of owners	..	..	..	..	..
% owned by smallest 10% of owners	..	..	..	..	..
HEALTH AND NUTRITION					
Population per physician	..	4,810 /g	2,310	2,820	700 /g
Population per nursing person	..	210 /g,m	360	340	170 /f
Population per hospital bed	..	220 /g	210	260	100 /f
Per capita calorie supply as % of requirements /5	..	83 /h	98	93 /n	116
Per capita protein supply, total (grams per day) /6	..	47 /h	83	59 /n	96 /o
Of which, animal and pulse	..	22 /h	34	29 /n	67 /o
Death rate 1-4 years /7	..	..	1.9	1.8 /p	0.9
EDUCATION					
Adjusted /8 primary school enrollment ratio	129 /q	100 /g	95	86 /r	99 /g
Adjusted /8 secondary school enrollment ratio	..	46 /g,s	49	43	80 /f
Years of schooling provided, first and second level	..	12 /t	14	12	14
Vocational enrollment as % of sec. school enrollment	14	5 /g	11	9 /p	12 /g
Adult literacy rate %	83 /u	..	90	86 /g	93
HOUSING					
Average No. of persons per room (urban)	1.7 /v	..	..	..	0.7 /h,w
Percent of occupied units without piped water	..	..	54 /g	..	10 /w
Access to electricity (as % of total population)	..	..	..	27.5	..
Percent of rural population connected to electricity	..	..	..	..	..
CONSUMPTION					
Radio receivers per 1000 population	65	105 /x	281	230 /g	742
Passenger cars per 1000 population	13 /y	25	66	35 /g	308
Electric power consumption (kwh p.c.)	230 /y	440	1,166	653 /g	8,959 /g
Newsprint consumption p.c. kg per year	1.9	0.9	5.9	3.6	22.2

Notes: Figures refer either to the latest periods or to the latest years. Latest periods refer in principle to the years 1956-60 or 1966-70; the latest years in principle to 1960 and 1970. Only significantly different periods or years are footnoted separately.

/1 The Per Capita GNP estimates for years other than 1960 is at market prices, calculated by the same conversion technique as the 1972 World Bank Atlas.

/2 Average number of daughters per woman of reproductive age.

/3 Population growth rates are for the decades ending in 1960 and 1970.

/4 Ratio of under 15 and 65 and over age brackets to those in labor force bracket of ages 15 through 64.

/5 FAO reference standards represent physiological requirements for normal activity and health, taking account of environmental temperature, body weights, and distribution by age and sex of national populations.

/6 Protein standards (requirements) for all countries as established by USDA Economic Research Service 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 somewhat 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.

/7 Some studies have suggested that crude death rates of children ages 1 through 4 may be used as a first approximation index of malnutrition.

/8 Percentage enrolled of corresponding population of school age as defined for each country.

/a Cultivated area; /b 1971, /c Computed by applying to the 1970 figure the growth rate of the GNP/cap. in real terms from 1960 to 1970; /d 1970 figures based on 1965-70 average exchange rate; /e 1961; /f 1968; /g 1969; /h 1967; /i 1961-66; /j Population under 15 and 65 and over to total labor force; /k Georgetown and suburbs, and New Amsterdam; /l 1966; /m Nurses and midwives; number on the register: not all working in the country; /n 1964-66; /o 1966-68; /p 1965; /q Including secondary classes attached to primary schools; /r Includes overage students; /s Government maintained and aided schools only; /t Including full secondary cycle (junior and senior level); /u Definitions unknown; /v UN estimate; /w Urban and rural; /x Estimate; /y 1963.

GUYANA - ECONOMIC DEVELOPMENT DATA
(Amounts in millions of U.S. dollars)

	Actual 1965	Actual 1970	Actual 1972	Estimated 1973	[illegible]	[illegible]	1960-1965	1965-1970	1970-1975	1974-1979	1960	1970	1979
	3-Year Averages at 1967-69 Prices & Exchange Rates						Average Annual Growth Rate				As Percent of Total		
NATIONAL ACCOUNTS													
Gross Domestic Product	212.1	263.9	271.0	277.5	292.6	382.7	3.1	4.5	3.2	5.5	102.7	100.4	106.6
Gains from Terms of Trade (+)	4.4	-1.1	-0.5	-1.5	-6.5	23.6	.	.	.	.	-2.7	-0.4	6.6
Gross Domestic Income	216.5	262.8	270.5	276.0	286.5	359.1	3.3	3.9	2.5	4.6	100.0	100.0	100.0
Imports (incl. NFS)	132.2	133.3	129.2	134.8	143.5	165.0	5.8	0.1	2.5	5.2	55.1	50.7	51.5
[illegible]	128.5	138.6	131.6	131.5	136.2	174.0	3.2	2.4	2.2	5.0	59.6	[illegible]	48.5
[illegible]	3.7	-5.3	-1.7	3.3	7.3	11.0	.	.	.	.	1.8	-	3.0
Consumption Expenditures	176.1	203.5	211.4	214.6	221.1	275.3	4.9	2.9	2.2	4.5	74.2	77.4	76.7
Investment " (incl. stocks)	44.1	54.0	57.4	54.7	72.1	94.7	3.2	4.1	7.2	5.5	24.1	20.5	26.4
Domestic Savings	40.4	59.3	59.1	61.4	65.1	83.7	-1.6	8.0	3.4	5.2	25.6	22.6	23.3
National Savings	27.1	43.2	42.5	42.9	56.1	70.4	-5.7	9.8	6.8	4.6	15.3	16.4	19.6
MERCHANDISE TRADE	Annual Data at Current Prices										As Percent of Total		
Imports													
Capital Goods	31.7	45.5	41.5	n.a.	n.a.	n.a.	0.7	8.8	.	.	35.6	30.4	.
Intermediate Goods (excl. fuels)	23.2	27.1	35.2	n.a.	n.a.	n.a.	7.4	3.2	.	.	18.9	20.3	.
Fuels and Related Materials	9.4	11.5	13.4	n.a.	n.a.	n.a.	7.6	4.1	.	.	7.5	8.6	.
of which: Petroleum	-	-	-	.	.	.	.	.	.	.	.	.	.
Consumption Goods	41.2	46.3	51.0	.	.	.	4.7	2.4	.	.	38.0	34.7	
Total Merch. Imports (cif)	105.5	133.4	141.1	.	.	.	4.1	4.8	.	.	100.0	100.0	.
Exports													
Primary Products (excl. fuels)	97.6	127.3	137.9	.	.	.	6.9	5.8	.	.	92.0	95.7	.
Fuels and Related Materials	-	-	-	.	.	.	.	.	.	.	.	.	.
of which: Petroleum	-	-	-	.	.	.	.	.	.	.	.	.	.
Manufactured Goods	7.1	5.7	8.9	.	.	.	3.4	-4.3	.	.	8.0	4.3	.
Total Merch. Exports (fob)	103.3	133.0	146.8	.	.	.	6.6	5.2	.	.	100.0	100.0	.
Tourism and Border Trade	1.1	3.4	3.3	3.5	n.a.	n.a.	.	25.0	n.a.	n.a.	1.1	2.6	n.a.
Merchandise Trade Indices		Average	[illegible]										
Export Price Index	92.8	107.1	132	[illegible]	137.6	153.4	3.7	2.9	5.6	2.2	-	-	-
Import Price Index	95.2	113.4	128.4	136.7	144.9	176.3	0.6	2.7	6.2	3.3	-	-	-
Terms of Trade [illegible]	93.5	94.4	[illegible]	98.7	95.0	87.0	3.1	0.2	-0.6	-1.5	-	-	-
Export Volume [illegible]	86.6	101.1	[illegible]	n.a.	n.a.	n.a.	2.4	4.0	.	.	-	-	-
VALUE ADDED BY SECTOR													
Agriculture	50.2	48.2	49.6	n.a.	n.a.	n.a.	1.0	-0.8	.	.	-	-	-
Industry and Mining	[illegible]	81.6	76.8	n.a.	n.a.	n.a.	9.6	5.6	.	.	-	-	-
Services	86.3	120.3	124.3	n.a.	n.a.	n.a.	0.2	4.5	.	.	-	-	-
Total	[illegible]	250.1	250.7	n.a.	n.a.	n.a.	2.7	4.7	.	.	-	-	-
PUBLIC FINANCE (Central Government)													
Current Receipts	49.6	72.7	75.6	82.9	94.3	134.0	4.9	7.9	7.0	6.0	-	-	-
Current Expenditures	[illegible]	63.6	70.3	84.4	89.5	119.6	7.1	5.0	8.3	4.9	-	-	-
Budgetary Savings	[illegible]	9.1	5.3	-1.5	4.8	14.4	.	.	-4.6	20.0	-	-	-
Other Public Sector	n.a.	n.a.	8.6	4.8	5.7	12.0	.	.	.	13.2	-	-	-
Public Sector Investment	10.5	18.4	35.4	45.4	49.3	67.5	-2.0	11.9	23.0	5.3	-	-	-

CURRENT EXPENDITURE DETAILS (As % Total Current Expend.)	Actual 1965	Actual 1970	Prelim. 1971	Est. 1972	Proj. 1973
Education	17.8	16.4	15.6	16.8	17.0
Other Social Services	15.2	14.0	12.2	11.8	11.2
Agriculture	5.3	5.6	5.4	5.8	5.1
Other Economic Services	5.3	3.1	3.6	3.0	2.6
Administration and Defense	30.0	33.3	31.8	33.4	33.5
Other	31.7	27.6	31.4	29.2	30.6
Total Current Expenditures	100.0	100.0	100.0	100.0	100.0

DETAIL ON PUBLIC SECTOR INVESTMENT PROGRAM	US $ million At end 1972 P and ER 1968-72	% of Total 1968-72
Social Sectors	16.3	11.6
Agriculture	30.4	21.6
Industry and Mining	n.a.	n.a.
Power	6.6	4.7
Transport and communications	35.0 5/	24.9
Other	52.5	37.2
Total Expenditures	140.8	100.0
FINANCING		
Public Sector Savings	26.2	18.6
Program aid counterpart	60.8	43.2
Foreign Project Aid	53.8	38.2
Total Financing	140.8	100.0

SELECTED INDICATORS (calculated from 3-year averaged data)	1960-1965	1965-1970	1970-1975	1974-1979
Average ICOR	6.12	5.08 3/	6.73	4.45
Import Elasticity	1.97	1.33 2/	0.81	0.92
Marginal Domestic Savings Rate	-0.12	0.41	0.28	0.26
Marginal National Savings Rate	-0.08	0.34	0.38	0.21

[illegible]	Total Labor Force: Thousands 1960	Thousands 1970	% of Total 1960	% of Total 1970	1960-70 Growth (Percent)	Value-Added per Worker (1972 Prices and Exchange Rates): US$ 1960	US$ 1970	% of Average 1960	% of Average 1970	1960-70 Growth (Percent)
Agriculture	59.8	57.4	37.1	32.2	-0.4	975.1	893.5	64.4	61.8	-0.9
Industry	32.4	33.9	20.1	19.1	0.5	2221.3	2482.6	146.6	171.7	1.1
Service	69.0	86.7	42.8	48.7	2.3	1651.0	1406.6	109.9	97.3	-1.6
Total or Average	161.2	178.0	100.0	100.0	1.0	1514.7	1446.2	100.0	100.0	-0.5

1/ Defense, Justice and police
2/ 1971 data
3/ Average of years 1965-67 and 1970 being an unrepresentative year.
4/ Average 1969 = 100
5/ Including US$19.3 million for sea and river defense.

Country Programs Department II
Latin America and Caribbean Regional Office

GUYANA--BALANCE OF PAYMENTS, EXTERNAL ASSISTANCE AND DEBT

(Amounts in millions of U.S. dollars at current prices)

	Actual				Est.	Projected						Proj.	Average Annual Growth Rate	
	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1989	1974-1979	1979-1989
SUMMARY BALANCE OF PAYMENTS														
Exports (incl. NFS)	147.2	151.9	163.7	168.4	173.8	197.5	222.1	243.1	262.7	283.7	306.4	670.6	9.9	8.1
Imports (incl. NFS)	137.7	152.9	154.8	160.8	183.8	206.9	230.2	255.1	278.4	300.9	323.7	660.4	10.4	7.4
Resource Balance (X-M)	9.5	-1.0	8.9	7.6	-10.0	-9.4	-8.1	-12.0	-15.7	-17.2	-17.3	10.2		
Interest (net)	-0.6	-1.8	-2.3	-4.2	-2.7	-4.1	-5.2	-5.5	-6.0	-7.1	-8.4	-23.0	21.0	10.6
Direct Investment Income (net)	-19.9	-19.4	-14.4	-8.6	-7.5	-9.0	-10.7	-11.4	-12.3	-13.2	-14.5	-21.9	11.6	4.2
Workers' Remittances	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-	-
Current Transfers (net)	0.3	0.2	0.2	-0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-	-
Balance on Current Accounts	-10.7	-22.0	-7.6	-5.4	-20.2	-22.5	-24.0	-28.9	-34.0	-37.5	-40.2	-36.7	12.2	8.5
Private Direct Investment (net)	9.2	4.3	-4.6	-2.6	-2.5	2.0	4.0	6.0	8.0	9.0	7.6	6.0	-	-2.3
Official Capital Grants	2.1	0.6	1.8	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-	-
Public M & LT Loans														
Disbursements	10.8	11.3	15.3	12.4	32.6	31.7	36.4	37.7	39.5	43.4	50.3	75.0	7.5	4.1
- Repayments	3.1	3.6	2.3	2.5	5.0	5.3	7.6	8.2	9.2	10.8	13.5	39.8	15.0	11.4
Net Disbursements	7.7	7.7	13.0	9.9	27.6	26.4	28.8	29.5	30.3	32.6	36.8	35.2	6.9	-0.4
Other M & LT Loans														
Disbursements	1.1	2.1	6.5	8.2	4.9	3.0	2.0	0.0	0.0	0.0	0.0	0.0	-	-
-Repayments	2.8	2.1	2.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-	-
Net Disbursements	-1.7	0.0	4.5	7.2	4.9	3.0	2.0	0.0	0.0	0.0	0.0	0.0	-	-
Capital Transactions n.e.i.	-11.3	7.8	-0.9	-4.8	0.0	0.0	0.0	2.5	2.5	2.5	2.5	2.5	-	-
Change in Net Reserves (-increase)	4.7	1.6	-6.2	-5.6	-9.8	-8.9	-10.7	-9.1	-6.8	-6.6	-6.7	-9.1	11.4	5.9

GRANT AND LOAN COMMITMENTS	1969	1970	1971	1972	1973	1974
Official Grants & Grant-like loans	2.0	2.0	1.0	1.0	0.0	0.0
Public M & LT Loans						
IBRD	2.9	-	5.4	-	6.5	24.0
IDA	2.9	2.2	-	4.4	-	3.0
Other						
Other Multilateral	-	-	-	-	-	-
Governments	25.6	3.2	11.2	9.0	19.7	17.6
Suppliers	-	-	-	-	2.3	6.0
Financial Institutions	7.3	-	-	-	12.5	0.0
Bonds	-	-	-	-	0.0	0.0
Public loans n.e.i.	-	-	53.8 2/	-	0.0	0.0
Total Public M & Lt Loans	38.7	5.4	70.4	13.4	41.0	52.1

	Actual Debt Outstanding on Dec. 31, 1972	
EXTERNAL DEBT	Disbursed Only	Percent
World Bank	4.0	2.6
IDA	0.8	0.5
Other Multilateral	-	-
Governments	81.9	53.6
Suppliers	-	-
Financial Institutions	6.9	4.5
Bonds	6.4	4.2
Public Debts n.e.i.	52.9 3/	34.6
Total Public M&LT Debt	152.9	100.0
Other M&LT Debts	-	-
Short-term Debt (disb.only)	-	-

	Actual				Estimated
DEBT AND DEBT SERVICE	1969	1970	1971	1972	1973
Public Debt Out.& Disb.	63.7	71.9	143.4	152.9	176.2
Interest on Public Debt	2.2	2.8	2.7	5.1	6.9
Repayments on Public Debt	3.1	3.6	2.3	2.5	5.0
Total Public Debt Service	-	-	-	-	-
Other Debt Service (net)	-	-	-	-	-
Total Debt Service (net)	-	-	-	-	-
Burden on Export Earnings(%)					
Public Debt Service	3.6	4.2	3.1	4.5	6.8
Total Debt Service	-	-	-	-	-
TDS 1/ +Direct Invest.Inc.	17.1	17.0	11.9	9.6	11.2
Average Terms of Public Debt					
Int. as % Prior Year DO&D	4.0	4.4	3.8	3.7	4.6
Amort. as % Prior Year DO&D	5.7	5.7	3.2	1.8	3.3
IBRD Debt Out. & Disbursed	0.1	0.3	2.0	4.0	7.1
" as % Public Debt O&D	0.2	0.4	1.4	2.7	4.0
" as % Public Debt Service	0.1	1.0	2.2	3.9	3.9
IDA Debt Out. & Disbursed	0.1	0.4	0.5	0.7	1.6
" as % Public Debt O&D	0.2	0.6	0.3	0.5	0.9
" as % Public Debt Service	-	-	0.1	0.1	0.1

1/ Public Debt Service only
2/ In lieu of DEMBA nationalization
3/ In respect of DEMBA nationalization

Country Programs Department II
Latin America and Caribbean Regional Office

STATUS OF BANK GROUP OPERATIONS IN GUYANA

A. Statement of Bank Loans and IDA Credits (as of February 28, 1974)

Loan or Credit No.	Year	Borrower	Purpose	(US$ million) Amount (less cancellation) Bank	IDA	Undis-bursed
559	1968	Guyana	Sea Defence I	5.0	-	0.3
583)	1969	Guyana	Education	2.9	-	2.8
139)				-	2.9	0.5
221	1970	Guyana	Livestock	-	2.2	2.1
765	1971	Guyana	Sea Defence II	5.4	-	4.1
301	1972	Guyana	Highway	-	4.4	4.4
875	1973	Guyana Electric Corporation	Power	6.0	-	4.8
		Total (net of cancellations)		19.3	9.5	19.0
		of which has been repaid		0.1	-	
		Total now outstanding		19.2	9.5	
		Amount sold	0.1			
		of which has been repaid	0.1			
		Total now held by Bank and IDA 1/		19.2	9.5	
		Total undisbursed		12.0	7.0	19.0

1/ Prior to exchange adjustments.

B. Statement of IFC Investments (as of February 28, 1974)

There have been no IFC investments in Guyana.

C. PROJECTS IN EXECUTION[1/]

Ln No. 583 / Cr. No. 139 — Education Project; US$2.9 Million Loan and US$2.9 Million Credit of January 31, 1969; Closing Date: December 31, 1974

Construction of all project schools is expected to be completed by April 1975, about 20 months behind the appraisal schedule. Slippage resulted principally from delays in appointing consultant architects and in awarding civil works' contracts following opening of bids. The delay has resulted in about a 21% increase in estimated project costs, which is borne by the borrower. Project implementation now is expected to proceed according to the revised schedule and should be completed about four months after the present closing date. Procurement of furniture and equipment is progressing satisfactorily and in accordance with the revised construction schedule.

Cr. No. 221 — Livestock Project; US$2.2 Million Credit of November 27, 1970; Closing Date: December 31, 1976

Progress on execution of this project has been slower than anticipated at appraisal, due largely to difficulties and delays in the formation and functioning of cattle owners' cooperatives as successful livestock enterprises. However, a sound start has been made with a number of loans already approved and others being processed. Other aspects of the project, including financing of private ranches in the inland and the conduct of pasture grazing trials, are now proceeding fairly well.

Ln. No. 765 — Second Sea Defense Project; US$5.4 Million Loan of June 24, 1971; Closing Date: December 31, 1974

The project costs are now estimated at 45% above the appraisal estimate. A number of factors have affected costs: devaluation, a lag of 1.5 years between appraisal and bid opening, construction difficulties with the cofferdam on the first sea defense project (ln. no. 599), and accelerated erosion of the foreshore. The lowest bid for the civil works was more than double the appraisal estimate. The government proposed to construct the sea wall by force account since it believed that consultants' assessment of the risks involved was an important cause of these high bids.

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

After a detailed examination of this proposal by consultants and Bank staff, the proposal was accepted. At the time of appraisal, the economic return on the project was estimated at 31%; even with a 45% increase in estimated costs, the project is still justified economically since its rate of return should still be above 20%. Although the project as a whole is now progressing satisfactorily, past delays in reaching agreement between the government and the consultants on the rehabilitation of sluice outfalls will necessitate an extension of the present closing date.

Cr. No. 301 Highway Project; US$4.4 Million Credit of April 26, 1972; Closing Date: December 31, 1976

The start of construction work was delayed until July 1973, and progress has since been slow due to adverse weather conditions and to the contractor's lack of experience. The original economic rate of return estimate of 15% may have to be lowered to (a still acceptable) 13%. This reduction results from a 15% cost overrun and delays in project completion.

Ln. No. 875 Power Project; US$6.0 Million Loan of January 12, 1973; Closing Date: June 30, 1977

Because of delays in project engineering, the execution of the project had a slow start. As the project is being built in several stages, however, the initial delay will not affect the final project completion date. Due to higher costs of many project items, the project is likely to cost considerably more than the appraisal estimate. A Bank mission is scheduled to visit Guyana in June to review the cost estimates.

GUYANA--TAPAKUMA IRRIGATION PROJECT

LOAN AND PROJECT SUMMARY

Borrower: Guyana

Amount: US$12.9 million equivalent in various currencies

Terms: Payable in 30 years, including 6 years of grace, at an interest rate of 7¼ percent per annum.

Project Description: The project would consist mainly of improving, rehabilitating and extending irrigation and drainage systems serving 41,750 acres (net) of rice land along the Essequibo Coast. The project would help Guyana to increase rice production and exports, and thereby increase farmer income. The main project works are summarized below:

a. construction, rehabilitation and expansion of irrigation systems and interceptor and facade drains;

b. construction of 6 drainage pumping stations;

c. construction of a flood protection dike along the Pomeroon River;

d. construction of 4 sea sluices and repair of an existing sluice in the Supenaam Extension Area;

e. construction of regulators, tail-gates, checks, irrigation inlets and drainage outlets for individual farms;

f. reinforcement and expansion of the conservancy dam and reservoir in the Johanna Cecilia Extension Area;

g. construction of 2 reservoir relief sluices and a discharge channel in the Johanna Cecilia Extension Area;

h. construction and rehabilitation of about 62 miles of all-weather access roads and related structures;

i. land leveling of about 20,000 acres presently under rice cultivation, and clearing and land leveling of about 7,000 acres of bush land; and

j. improvement and expansion of extension services in the project area.

Estimated Cost and Financing Plan:

Components	Local (US$ Million)	Foreign Exchange (US$ Million)	Total (US$ Million)	Percent Foreign Exchange
Project Works	1.76	3.28	5.04	65
On Farm Development	0.46	0.93	1.39	66
Buildings	0.09	0.03	0.12	25
Equipment	0.07	1.92	1.99	96
Administration and Engineering	0.40	-	0.40	-
Consultant Services	-	1.75	1.75	100
Extension and Research	0.24	-	0.24	-
Subtotal	3.02	7.91	10.93	
Contingencies:				
Physical	0.35	0.30	0.65	46
Price	2.22	3.00	5.22	57
Subtotal	2.57	3.30	5.87	
Interest during Construction	-	1.70	1.70	100
Total	5.59	12.91	18.50	70

The Bank would provide the foreign exchange requirements; the government of Guyana would meet the remainder of the costs.

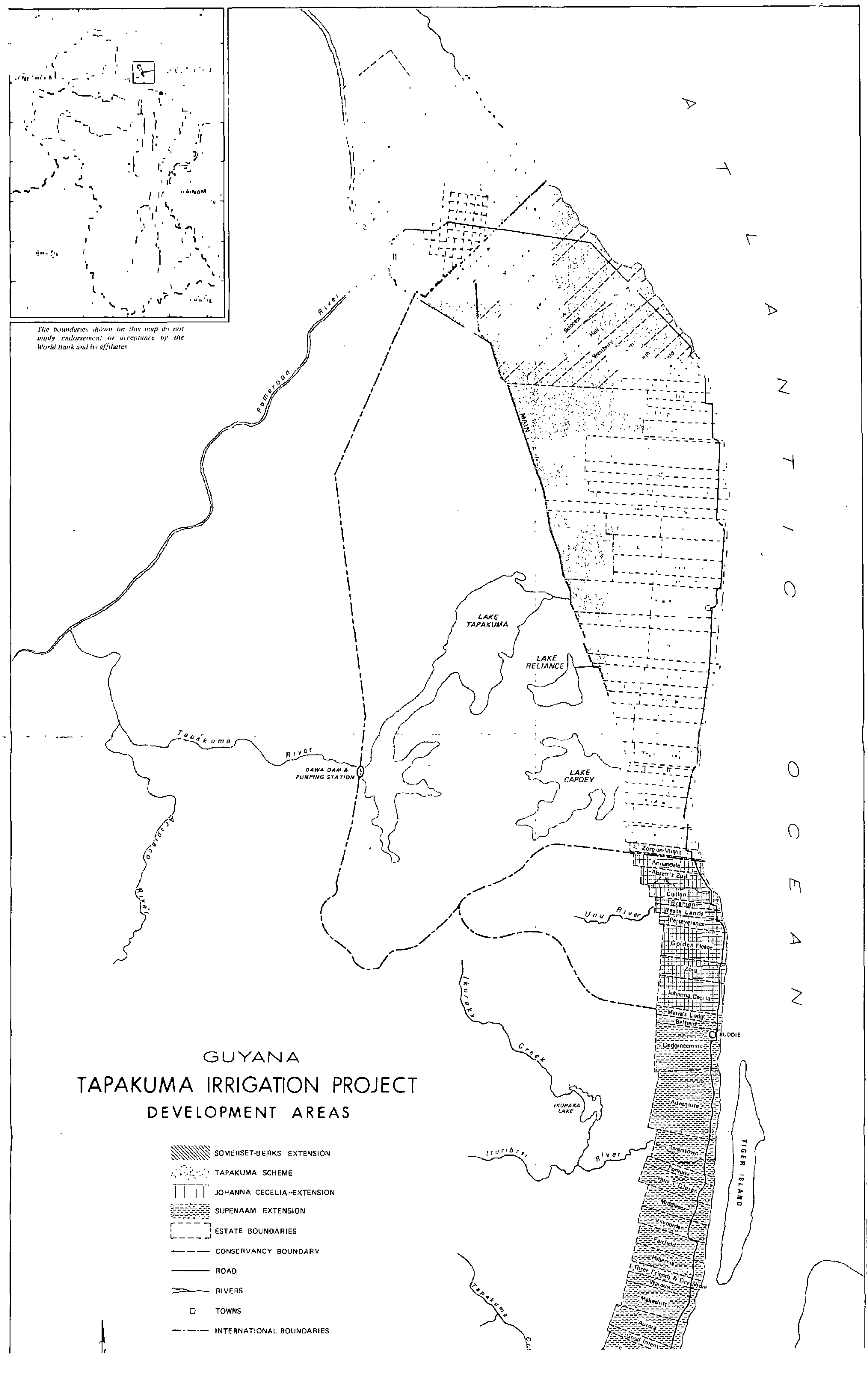
Estimated Disbursements:

FY	Annual	Cumulative (US$ million)
1974	0.11	0.11
1975	1.43	1.54
1976	3.01	4.55
1977	3.40	7.95
1978	2.51	10.46
1979	2.11	12.57
1980	0.34	12.91

Procurement Arrangements: All contracts would be let under international competitive bidding, except that contracts for buildings would be let on the basis of local procurement procedures and contracts for other civil works estimated to cost less than the equivalent of US$250,000 and contracts for equipment, materials and vehicles estimated to cost less than US$50,000 would be let on the basis of local procurement procedures after obtaining at least three price quotations.

Rate of Return: The overall economic rate of return of the projects is estimated to be 20 percent.

Appraisal Report: Report No. 388-GUA, dated May 31, 1974.



The boundaries shown on this map do not imply endorsement or acceptance by the World Bank and its affiliates
GUYANA
TAPAKUMA IRRIGATION PROJECT
DEVELOPMENT AREAS
SOMERSET-BERKS EXTENSION
TAPAKUMA SCHEME
JOHANNA CECELIA-EXTENSION
SUPENAAM EXTENSION
ESTATE BOUNDARIES
CONSERVANCY BOUNDARY
ROAD
RIVERS
TOWNS
INTERNATIONAL BOUNDARIES
ATLANTIC OCEAN
Pomeroon River
Tapakuma River
DAWA DAM & PUMPING STATION
LAKE TAPAKUMA
LAKE RELIANCE
LAKE CAPOEY
Unu River
Ikuraka Creek
IKURAKA LAKE
Ituribisi River
Tapakuma
MAIN
Success
Hall
Westbury
Zorg en-Vlught
Annandale
Abram's Zuil
Cullen
Bremen
Waste Lands
Perseverance
Golden Fleece
Zorg
Johanna Cecilia
Marra's Lodge
Belfield
SUDDIE
Onderneeming
Adventure
Riverstown
Pomona
Huis T'Dieren
Middlesex
Vilvoorden
Fairfield
Hibernia
Three Friends & Dry Shore
Warousi
Makeshift
Aurora
Good Intent
TIGER ISLAND