

FILE COPY

**CIRCULATING COPY
TO BE RETURNED TO REPORTS DESK**

DOCUMENT OF INTERNATIONAL DEVELOPMENT ASSOCIATION

Not For Public Use

Report No. P-1355a-CD

REPORT AND RECOMMENDATION
OF THE
PRESIDENT
TO THE
EXECUTIVE DIRECTORS
ON
A PROPOSED CREDIT
TO
THE REPUBLIC OF CHAD
FOR A
RICE IRRIGATION PROJECT

March 14, 1974

This report was prepared for official use only by the Bank Group. It may not be published, quoted or cited without Bank Group authorization. The Bank Group does not accept responsibility for the accuracy or completeness of the report.

CURRENCY EQUIVALENTS

US \$1 = CFAF 260.00

CFAF 1 = US \$0.0038

CFAF 1,000 = US \$3.8

CFAF 1,000,000 = US \$380,000

Fiscal Year - January 1 - December 31

INTERNATIONAL DEVELOPMENT ASSOCIATION

REPORT AND RECOMMENDATION OF THE PRESIDENT
TO THE EXECUTIVE DIRECTORS ON A PROPOSED
CREDIT TO THE REPUBLIC OF CHAD
FOR A RICE IRRIGATION PROJECT

1. I submit the following report and recommendation on a proposed development credit to the Republic of Chad, for the equivalent of US\$7.5 million on standard IDA terms to help finance a rice irrigation project. The African Development Fund (ADF), the new-created soft-lending affiliate of the African Development Bank, would make a loan of 4 million ADF units of account (equivalent approximately to US\$3.9 million) ^{1/} on terms identical to those of IDA. The proceeds of the IDA credit and ADF loan would be made available to the Office de Mise en Valeur de Sategui-Deressia (OMVSD) and would be repaid in 50 years, including 6 years of grace, by annual installments of CFAF 90 million which would yield 1.4 percent per annum interest on the loan. The Government would bear the foreign exchange risk.

PART I - THE ECONOMY

2. The report, "Chad's Economic Development: Constraints and Potential" (75a-CD), of the economic mission which visited Chad in April/May 1972, was distributed to the Executive Directors on July 2, 1973 (R73-191). A special mission visited Chad in December 1973 to update our information on the Government's financial situation; the findings of the mission are reflected in this report. A country data sheet is attached as Annex I.

3. With extremely poor natural resources, a harsh climate, a limited infrastructure and a pervasive lack of skills, Chad faces unusually difficult handicaps in its economic development. An additional difficulty is the high cost of transport to the outside world; the main centers of activity of this large land-locked country are located at 1,000 to 1,500 km from the nearest sea port. With a per capita GNP of \$80 in 1971, Chad is classified by the United Nations as one of the 25 least developed countries in the world.

4. Most of the population -- at least 90 percent -- lives in rural areas, deriving their livelihood from agriculture and livestock. About half of the rural population lives in central Chad as semi-nomadic livestock herders who exploit the Sahelian grasslands. The other half lives in the relatively higher rainfall zone in the South, where they grow millet and sorghum as food crops and cotton as a cash crop. Cotton accounts for almost 70 percent of recorded exports. A recent and relatively successful diversification effort in the South is the introduction of rice growing on the flood plains of the Logone River.

^{1/} US\$ amounts in this report for ADF financing are indicative only as a rate of CFAF 260 = US\$1 has been used: for ADF loans CFAF amounts are converted at a fixed rate of one ADF unit of account = CFAF 256.

5. In the first decade since independence in 1960, GDP grew by about 5 percent annually in current prices, and 2 percent in constant prices. The most rapid growth took place in the market economy, mainly import substitution industries and services, while the growth of livestock and subsistence crops probably did not exceed the population growth rate of 1.5 percent annually. Accordingly, income disparities grew between the north and the south, as well as between the small modern sector in the towns and the mass of the people in the rural areas.

6. Since the late 1960's two events occurred which have affected Chad's growth and fiscal performance - the civil war and the drought.

7. The civil war broke out in 1968. It made wide areas of the country insecure and cut off traditional cattle trading routes. Wells were neglected and the supply of water for livestock dwindled. Earlier progress in animal disease control was lost. The effects of the civil war were compounded by droughts which occurred in three of the last five years. Enormous losses of cattle have been reported, cotton output dropped and shortages of basic food-stuffs occurred even in those areas which normally produce a surplus of food. Emergency food shipments from abroad have thus far been able to avert widespread starvation.

8. The civil war and the drought have made the financial situation of the Government precarious. Up to 1968, the Government's current budget had been in balance, and considering the country's development constraints, the overall fiscal performance appeared satisfactory. After 1968, however, expenditures started to grow much more rapidly than receipts. Military outlays alone rose from 18 to 31 percent of the total budget outlays. The drought further increased the demand for Government services while reducing revenues. The overall budget deficit rose from CFAF 1.6 billion in 1968 to 4.3 billion in 1972; it is expected to have declined to CFAF 4.0 billion during fiscal year 1973. Annual French budgetary subsidies have partly covered these deficits. However, a considerable financial gap remained, causing arrears on Government payments to rise to CFAF 6.1 billion by September 1973.

9. The fiscal situation constitutes a serious obstacle to development, as Chad can finance neither the required capital nor the recurrent expenditures of ongoing and new high priority projects. Even essential economic services have had to be curtailed. Chad's authorities agree with our assessment of the fiscal problem and with the need to rehabilitate their public finances, re-examine current spending priorities and eventually make a start on generating public savings. The conclusions and recommendations of the recent fiscal review mission have been transmitted to the Government. The IMF, with whom we are in close contact on the matter, plans to send a mission soon to review prospects for a stabilization program. The outlook is that even with the best performance, it will be years before Chad can hope to overcome the fiscal constraint and generate current budget surpluses.

10. Chad's development potential lies in its rural areas. Opportunities for productive employment in towns will remain small. Progress in the rural economy, however, will be slow. Even assuming political stability and normal rainfall, it will take many years and great efforts to restore the productive capacity destroyed by years of civil war and drought. The prospects for the agricultural sector are more fully described in Part III.

11. In view of Chad's very limited savings capacity, almost all of the country's investment has been financed by external sources. Foreign aid received during 1965-71 averaged \$13 million a year, almost \$4 per capita. Most of the aid -- 86 percent -- consisted of grants. France and FED provided the bulk of aid (about 40 and 30 percent respectively). Germany, Denmark, the European Investment Bank and United Nations agencies made smaller contributions. IDA credits during the period accounted for 4 percent of total aid.

12. External public debt outstanding and disbursed on December 31, 1971, amounted to US\$34.8 million; IDA credits represented a little over 5 percent of this amount. In 1971 debt service was estimated at 8 percent of the export earnings. To the best of our knowledge no major additions to the debt have been made since the end of 1971. Chad's traditional aid donors - France and the EEC - have made no new loans available during the past two years. Chad reportedly did receive in 1973 pledges of aid from the People's Republic of China and some Middle Eastern countries, but these pledges have not yet been followed by specific loan agreements.

13. In the light of Chad's poverty and low per capita income, its modest prospects for growth of GDP and exports of goods and non-factor services, external borrowing should be, to the extent possible, on concessionary terms. Furthermore, even with good fiscal performance, Chad will have neither the free budgetary resources through the end of the 1970's to enable it to pay its share of capital outlays, nor will it be able to afford substantial new outlays for recurrent costs associated with new projects. In the next few years, foreign aid agencies should therefore consider financing virtually the total cost of projects, including, in the early years of project operation, a high proportion of current operating cost.

PART II - BANK GROUP OPERATIONS IN CHAD

14. Since 1968, when the first credit was made, the Bank Group has extended five credits to Chad, totalling US\$13.2 million ^{2/} -- one for highway maintenance, two for education, one for livestock development and the fifth credit, approved on November 13, 1973, for drought relief.

15. With the exception of the highway maintenance credit (the Drought Relief Credit is not yet effective), disbursements and project implementation are behind schedule, principally as a result of the government's inability to

^{2/} Includes supplementary financing of US\$0.9 million approved in August 1973 for the two education projects.

finance its contribution. In recognition of the government's tight budgetary position, which has been aggravated by the current drought conditions, the Executive Directors last August approved supplementary financing for the two ongoing education projects to provide for 100 percent financing and also to offset the effects of the devaluation of the US dollar. Similarly, IDA financing of the livestock project was increased to 100 percent of total cost. Annex II contains a summary statement of IDA credits as of February 28, 1974, and notes on the execution of ongoing projects.

16. One major factor that has so far militated against a substantial expansion of Bank Group operations in Chad has been the scarcity of well-prepared projects. In these circumstances, the Bank has concentrated its efforts on assisting the Government (in many cases in cooperation with other aid agencies) in identifying and preparing new projects in key sectors, while at the same time trying to ensure successful implementation of ongoing projects. These efforts are gradually paying off in the form of a growing pipeline of suitable projects, mainly in transportation and agriculture.

17. In keeping with the Government's development priorities, the Bank Group's lending strategy to Chad continues to focus on agriculture (including livestock), transportation and education -- the most critical sectors of the economy. In the livestock sub-sector a second project has been identified by our Permanent Mission in West Africa, and a number of other aid agencies have expressed interest in participating in financing this project. Further, the Livestock Development Unit, established under the first project with UNDP financing, will provide an important framework for the identification and preparation of further projects in this highly important sub-sector of the economy. Another project, prepared with FAC financing, is the Lake Chad Polders project for smallholder cotton and wheat production; Government has requested IDA financing and other aid agencies (FAC, USAID and ADF) have expressed interest.

18. In transportation, priority is being given to the improvement of crop marketing roads. To this end, a two-phase improvement program for cotton roads is being prepared. The first phase, aimed at improving selected seasonal roads used for the transportation of seed cotton to ginneries was appraised in November 1973 and is scheduled to be presented to the Executive Directors before the end of this fiscal year; the second phase would cover the improvement of all-weather roads used for transporting cotton fiber from ginneries to export outlets. Preparation of the second phase will be financed under the first phase project. In the field of education, we are reviewing a report (financed under an existing IDA credit) on a possible project for the training of young farmers.

PART III - AGRICULTURE IN CHAD

19. The development of Chad's rural economy presents the best opportunity for producing the new resources, employment and incomes required to raise the standard of living of the bulk of its people.

20. Within the rural economy livestock production is one of the most important activities. It provides subsistence and cash income to some 1.9 million nomadic and semi-nomadic pastoralists in the sahelian and sudanian north and center of the country. Before the 1972/73 drought, Chad's livestock population was estimated at 4.5 million cattle, 1.5 million sheep, 2.8 million goats, 0.4 million camels and 0.4 million equines. The drought has reduced the cattle herd by at least 25 percent although other livestock has been less seriously affected.

21. Exports of chilled meat from N'Djamena to Zaire and Congo have developed favorably in recent years, and increasing Nigerian demand for Chadian cattle on the hoof have considerably improved the outlook for livestock production. However, Chad will have difficulty in responding to this opportunity because, although available pastures would support a larger herd, lack of watering facilities and poor animal health services are likely to hinder a substantial increase in meat production in the near future.

22. There are several opportunities for raising livestock production over the next decade. Ongoing and new well construction programs would have to be complemented by grazing control, efficient animal health services, construction of stock routes and improvement of marketing channels. An ongoing IDA-financed project (Credit 309-CD) and programs by other agencies, namely FED and FAC, are concentrating on these requirements. In addition, under Credit 309-CD IDA is financing a study on taxation of the livestock sub-sector and is providing equipment for veterinary and water development services under the Drought Relief Fund Project (Credit 445-CD).

23. An equally important potential lies in Chad's crop agriculture concentrated in the Logone-Chari River Basins, containing about 1.6 million people, where opportunities exist for raising cotton productivity and increasing food output of such crops as millet, sorghum and particularly irrigated rice.

24. Cotton is Chad's most important export crop. In order to expand production, FED, in 1965, began to subsidize half the cost of inputs (fertilizer and insecticides) with the balance being paid by the Government and the producers themselves. Seed cotton production rose from 98,000 in 1960/61 to 108,000 tons in 1971/72, after reaching a peak of 149,000 tons during the exceptionally favorable season of 1968/69. After 1968/69, the area under the productivity program declined, and in 1972 covered only 13 percent of the total land producing cotton.

25. The failure of the productivity program to meet its objectives is attributed to the droughts in 1969/70 and 1970/71, and the gradual dissipation of economic incentives. It is estimated that as a result of the droughts seed cotton production declined by about 5 percent in 1972 and a further decline is expected in 1973. It is also estimated that 15 percent of the farmers have given up cotton growing to concentrate on food crops. Furthermore, the quantity and quality of expatriate extension services have been inadequate to bring about improved cultivation. Because of staff shortages, technical assistance personnel have been mainly occupied with distributing fertilizer and insecticides.

26. A new five-year productivity program was scheduled to start in 1972/73 with the participation of FED, FAC, the Chadian Government and producers. As stated in Part II, the Bank has been asked to help finance the improvement of feeder and secondary roads for this program. The new program would be based on an integrated approach to cotton growing and would include food crops, livestock, the processing of cotton and production of cotton oil. The Government intends to make a thorough evaluation of the last program before starting a new one with the aim of creating a nonsubsidized cotton sector by the end of the decade.

27. Food and cash crop production are closely related as farmers wish to ensure adequate food supplies before responding to market incentives to produce. Millet and sorghum are grown mainly for subsistence and are produced throughout the sahelian zone as well as in the south. The market for these crops is fragmented and disorganized and wide variations in price occur throughout the year with the farmer receiving low prices at harvest time and merchants benefiting from scarcity during the dry season. Further, production zones are isolated by lack of transportation. Substantial benefits to producers and consumers could be obtained from an increase in local storage capacity and in average producer prices and trade margin and market price controls. Better food crop production incentives should make farmers more willing to grow cotton as a cash crop.

28. Rice consumption in Chad has been increasing rapidly as in other parts of Africa, partly due to rising local urban demand and some 55,000 ha in the Logone valley are used for traditional (rainfed or inundated) production. Last year, the Logone river failed to flood and this led to crop losses and inadequate food supplies. One of the best ways of stabilizing future rice supplies, reducing the high human and financial cost of drought, and raising farm incomes, is through irrigated rice projects. In this respect, the proposed project is designed to ensure adequate water, and to enable a substantial yield increase through the introduction of fertilizer and other inputs.

PART IV - THE PROJECT

Background

29. The project was identified in 1966-67 by an FAO/IBRD Cooperative Program mission: the feasibility study, which was completed in 1971, was carried out by the Italian firm of Carlo Lotti and Partners. It was appraised in November 1972 by a Bank mission. Negotiations for the proposed credit were held in Washington from January 21 to 24, 1974 with a Chadian delegation led by Mr. Abdoulaye Lamana, Minister of Economy, Plan, Commerce and International Cooperation. To expedite calling of bids, the United Nations Development Program is financing pre-investment engineering studies which include preparation of tender documents and additional hydrological studies. A report entitled "Chad: Appraisal of Sategui-Deressia Irrigation Project"

(No. 145a - CD), dated March 4, 1974, is being distributed separately, and a Credit and Project Summary is attached to this report as Annex III.

Project Components

30. Rice is already being grown extensively by peasant farmers in the Logone Valley where suitable soils and climatic conditions exist. It is estimated that at present about 1,900 families grow rice in the area to be covered by this project under traditional methods of cultivation. However, because of lack of control works to regulate floods, lack of fertilizer and other agricultural inputs, yields are very low. The main objective of the project is to improve conditions for rice growing by these farmers in an area of 11,000 ha of the Sategui-Deressia plain in southeast Chad in order to increase production to meet the rising demand for rice. The project would comprise the following main items:

- (a) construction of two polders irrigated by gravity and serving a net rice cultivated area of 4,000 ha;
- (b) construction of 102 km of feeder roads to serve the whole project area of 11,000 ha;
- (c) rehabilitation of an existing agricultural station to permit applied research and seed multiplication;
- (d) construction of a 4 ton/hour capacity rice mill, storage facilities, housing and offices; and
- (e) feasibility studies for a second-stage project.

31. The project would be completed in six years, construction works would be completed in the first three years and a further three years would be required for on-farm development. At the end of this period revenues generated by the project would be sufficient to make it self-sustaining, an important factor given Chad's difficult financial situation.

32. The main project works would consist of the construction of a 6.2 km canal with an intake on the Logone River which would carry water to a compensation basin to be used for regulating and controlling water supply to the polders. Irrigation water would be obtained during the high water period by gravity from the Logone River whose waters are of good quality. The elevation of the canal intake would be set to ensure that the project water supply would not be delayed due to low river levels by more than fifteen days in any year.

33. The use of the Logone River water for the project would not contravene the provisions of the Chad-Cameroon Logone Water Agreement. The Government of Chad has also obtained from Cameroon a statement to the effect that the latter would, during the life of the project, refrain from taking action which might to adversely affect the project.

34. A rice mill, with a capacity of 4 tons/hour, would be installed at Lai; eight field depots for paddy collection would be established in the project area, and staff housing, offices and a workshop would be constructed at project headquarters at Lai. **To facilitate** transportation in the project area, a network of all-weather roads, totalling approximately 102 km, would be constructed, and the existing road between Lai and Banga would be improved to all-weather standard.

35. Provision would also be made for the preparation of feasibility studies for a second-stage project. Topographic mapping would be available after the completion of the final designs of the project and hydrological observations would continue during project implementation.

Project Costs

36. The project is estimated to cost about US\$12.0 million, net of duties and taxes, with a foreign exchange component of US\$7.4 million (62 percent). The following table shows a breakdown of costs among the main project items:

SUMMARY OF COST ESTIMATES

<u>Item</u>	-----CFAF million-----			-----US\$'000-----		
	<u>Local</u>	<u>Foreign</u>	<u>Total</u>	<u>Local</u>	<u>Foreign</u>	<u>Total</u>
Civil works	382	815	1,197	1,470	3,134	4,604
Buildings	125	141	266	483	540	1,023
Equipment	13	164	177	50	631	681
Management	191	130	321	734	501	1,235
Engineering consultants	30	170	200	115	654	769
Second stage studies	11	46	57	44	175	219
Contingencies	281	456	737	1,081	1,753	2,834
Short- & medium-term credit & working capital	<u>152</u>	<u>8</u>	<u>160</u>	<u>584</u>	<u>31</u>	<u>615</u>
	<u>1,185</u>	<u>1,930</u>	<u>3,115</u>	<u>4,561</u>	<u>7,419</u>	<u>11,980</u>

Financing

37. The proposed IDA credit of US\$7.5 million would finance 63 percent of project costs, net of duties and taxes. Of the balance 32 percent would be covered by a loan of 4 million ADF units of account (approximately US\$3.9 million equivalent) from the African Development Fund. The IDA credit would cover total costs of civil works for construction of the irrigation and drainage system, roads and rehabilitation of the agricultural station (US\$6.5 million), management consultants (US\$0.8 million), and 50% of the second stage studies (US\$0.2 million). The ADF loan would cover total costs of buildings, equipment, engineering consultants and 50 percent of second-stage studies. Because of its precarious budgetary position, the Government would contribute only the equivalent of up to US\$600,000 through the state-owned Development Bank of Chad for short- and medium-term credit for project farmers for fertilizer and implements, and for OMVSD working capital. These credits would bear an interest of 5-1/2 percent per annum.

38. The financing arrangements are as follows:

	<u>Local</u>	<u>Foreign</u>	<u>Total</u>	<u>Foreign</u>	<u>Total</u>
	-----US\$ million-----			<u>Exchange</u>	<u>Cost</u>
				<u>%</u>	<u>%</u>
IDA credit	2.5	5.0	7.5	67	63
ADF loan	1.5	2.4	3.9	62	32
Government contribution	0.6	-	0.6	-	
	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
Total	<u>4.6</u>	<u>7.4</u>	<u>12.0</u>	<u>62</u>	<u>100</u>

The proceeds of the proposed IDA credit and ADF loan would be relent to OMVSD and would be repaid over a period of 50 years, including 6 years of grace, by annual installments of CFAF 90 million, thereby yielding a return of 1.4 percent per annum; the Government would bear the foreign exchange risks.

Project Revenues and Recovery of Costs

39. The capital and operating costs of the project would be recovered through the imposition of a levy on polder farmers equivalent to 10 percent of gross production (which corresponds to about 22% of incremental net income) and also through revenues derived from rice milling operations. The levy would be collected, together with credit repayments for seeds and other farm inputs, at harvest time through a cash deduction from farmers' proceeds from the sale of paddy to OMVSD. The short- and medium-term credits from OMVSD to project farmers for purchase of seeds, fertilizer and farm implements would bear interest at a rate of 5-1/2 percent per annum. The price at which the project authority would purchase paddy from project farmers would be sufficient to induce farmers to produce more rice and to sell it to the authority; while the selling price for milled rice would be raised

to enable the authority to cover its operations and to provide for capital repayments. Such prices would have to be acceptable to the Association and would take into account consumers' interests.

40. The CFAF 90 million annual payment by OMVSD to the Government would represent about 90 percent of OMVSD's annual net income after covering all its recurrent expenditure. The remaining 10 percent would be used to build up minimal working capital in OMVSD, including sufficient funds to meet farmers' seasonal credit requirements.

Organization and Execution

41. The project would be implemented by OMVSD, an autonomous authority created by Government under the surveillance of the Ministry of Public Works and Land Development. The OMVSD would have a full-time Director General who has already been appointed by the Government after consultation with IDA and ADF. In the absence of adequately qualified and experienced local personnel, the authority would engage a management consulting firm to provide key management personnel. Engineering consultants would be employed to prepare final designs and to supervise construction work. Qualified Chadians would be made available by the Government to understudy the expatriates. In addition, extension workers would be made available by the Ministry of Agriculture and further training would be provided for them at the agricultural station. IDA and ADF would coordinate their activities closely through a protocol agreement.

Benefits and Justification

42. As a result of improved water control and cultivation methods to be introduced under the project, rice production in the project area is expected to increase from the present average of 0.9 ton/ha to 2.5 ton in the polder areas and to 1.4 ton/ha outside the polders by 1982. The total area under paddy is also expected to increase by an estimated 2,000 ha as a result of the project. Total annual paddy production (including production outside the polder area) is expected to rise from the current 8,000 tons to 20,000 tons over the same period, all of which would be absorbed by domestic demand which is estimated to increase from 25,000 to 40,000 tons of rice. 2,400 farm families, or about 11,500 persons, would benefit from the project. Increased production and an increase in the price of paddy to be paid to project farmers recently approved by the Government would raise the per capita incomes in the area from US\$52 to US\$73 outside the polder area and to US\$108 inside the polder area.

43. In addition, the project would improve the general conditions of rural life by opening up all-weather roads in the flood plain area. Furthermore, the research to be carried out at the agricultural station would be of great use in future rice production development.

44. The internal economic rate of return, with project life assumed at 50 years, would be 13 percent. The second-phase project, which would benefit greatly from the infrastructure, experience and sound management of the first project, would have a substantially higher rate of return.

Procurement and Disbursement

45. All civil works to be financed by IDA and estimated at US\$6.5 million, would be subject to international competitive bidding. In view of the remoteness and inaccessibility of the construction site and the high cost of mobilizing materials and equipment, all civil works would be grouped in a single contract. In view of the limited capacity of the local contracting industry it is not expected that small local contractors will participate in tendering for civil works even though the Government has been advised of the new Bank policy regarding preference for local contractors. Small off-the-shelf items costing less than US\$5,000 each and in aggregate value not exceeding US\$50,000 would be purchased through normal Government procurement procedures. Farmers' agricultural inputs would be procured under Office National pour le Developpement Rural (ONDR) procedures. Items to be financed by ADF would be procured under ADF procedures which provide for international competition among ADF member states.

PART V - LEGAL INSTRUMENTS AND AUTHORITY

46. The draft Development Credit Agreement between the Republic of Chad and the Association, the Report of the Committee provided for in Article V, Section 1 (d) of the Articles of Agreement and the text of a resolution approving the proposed credit are being distributed to the Executive Directors separately. The draft agreement conforms to the normal pattern for irrigation projects.

47. The following would be additional conditions of effectiveness in terms of Section 10.01 (b) of the General Conditions:

- (a) establishment of OMVSD by the Government;
- (b) signing of the Subsidiary Loan Agreement between the Government and OMVSD;
- (c) employment of a firm of management consultants and the appointment of and actual commencement of his duties by the Director-General of OMVSD;
- (d) the employment of engineering consultants to assist OMVSD prepare final designs and bid documents for the rice mill, evaluate bids and supervise construction;
- (e) the exemption by the Government of goods and services to be imported, manufactured, procured or supplied for the project from taxes and duties;

- (f) signing of a loan agreement between the African Development Fund and the Government; and
- (g) fulfillment of conditions precedent to initial disbursement, if any, of the ADF loan.

48. I am satisfied that the proposed credit would comply with the Articles of Agreement of the Association.

PART VI - RECOMMENDATION

49. In formulating this proposal, it has not been possible to take full account of the consequences of recent increases in petroleum prices. However, available information indicates that the proposed credit remains fully justified.

50. I recommend that the Executive Directors approve the proposed credit.

Robert S. McNamara
President

Annexes

Map

Washington, D.C.

March 14, 1974

COUNTRY DATA - CHAD

<u>AREA</u> 1,284,000km ^{2/}	<u>POPULATION</u> 3.7 million (mid-1971) Rate of Growth: 2.1 (from 1960 to 1969)	<u>DENSITY</u> 2.9 per km ^{2/} per km ^{2/} of arable land
--	--	---

POPULATION CHARACTERISTICS (year)

Crude Birth Rate (per 1,000)	42.76
Crude Death Rate (per 1,000)	22.72
Infant Mortality (per 1,000 live births)	160

HEALTH (year)

Population per physician	62,000
Population per hospital bed	..

INCOME DISTRIBUTION (year)

% of national income, lowest quintile	..
highest quintile	..

DISTRIBUTION OF LAND OWNERSHIP (year)

% owned by top 10% of owners	..
% owned by smallest 10% of owners	..

ACCESS TO PIPED WATER (year)

% of population - urban	..
- rural	..

ACCESS TO ELECTRICITY (year)

% of population - urban	..
- rural	..

NUTRITION (year)

Calorie intake as % of requirements	..
Per capita protein intake	..

EDUCATION (year) 1971

Adult literacy rate %	7.0
Primary school enrollment %	32.6

GNP PER CAPITA in 1971 ^{1/} : US \$ 80.00

GROSS NATIONAL PRODUCT IN 1971

	US \$ Mln.	%
GNP at Market Prices	295.7	100.0
Gross Domestic Investment	21.6	7.3
Gross National Saving	4.7	1.6
Current Account Balance	16.9	5.7
Exports of Goods, NFS	79.1	26.8
Imports of Goods, NFS	104.7	35.4

ANNUAL RATE OF GROWTH (% , current prices)

	1960-65	1965-70	1968-1971
			10.5
			14.5
			13.0
			.
			9.6
			11.5

OUTPUT, LABOR FORCE AND PRODUCTIVITY IN 1971

	Value Added ^{a/}		Labor Force ^{b/}		V. A. Per Worker	
	US \$ Mln.	%	1,000	%	US \$	%
Agriculture	135.6	47.2	829.3	94.2	163.5	
Industry	35.6	12.4				
Services	115.8	40.4	51.1	5.8	296	
Unallocated	.	.				
Total/Average	287.0	100.0	880.4	100.0	325.9	100.0

GOVERNMENT FINANCE

	General Government			Central Government		
	(Mln.)	% of GDP		(CFAF Bln.)	% of GDP	
	1972	1971	1968-70	1972	1971	1968-70
Current Receipts	12.0	16.8	16.0
Current Expenditure	15.3	18.3	18.3
Current Surplus	- 3.3	-1.5	-2.2
Capital Expenditures	1.0	2.6	3.4
External Assistance (net) ^{c/}	1.5	2.6	1.2

1/ The Per Capita GNP estimate is at 1971 market prices, calculated by the same conversion technique as the 1973 World Atlas. All other conversions to dollars in this table are at the average exchange rate prevailing during the period covered.

2/ Total labor force; unemployed are allocated to sector of their normal occupation. "Unallocated" consists mainly of unemployed workers seeking their first job.

3/ Fiscal year

a/ In 1971 .. not available

b/ Estimate . not applicable

c/ French Budget subsidy (cash basis)

COUNTRY DATA - CHAD

MONEY, CREDIT and PRICES ^{a/}	1968	1969	1970	1971	1972	August 1973
		(Billion	CFAF	outstanding	end period)	
Money and Quasi Money	7.35	7.95	9.03	9.61	9.77	11.45
Bank Credit to Public Sector	-	0.07	1.23	1.24	2.25	..
Bank Credit to Private Sector	10.86	12.49	11.37	9.68	9.56	..

(Percentages or Index Numbers)

Money and Quasi Money as % of GDP	..	11.0	11.5	12.3
General Price Index (1963 = 100)	126.5	131.1	142.3	151.1	155.5	..
Annual percentage changes in:		3.6	8.5	6.2	2.9	..
General Price Index						
Bank credit to Public Sector (1970=100)	.	.	100.0	100.8	182.9	..
Bank credit to Private Sector (1970=100)	86.9	109.8	100.0	85.1	84.1	..

BALANCE OF PAYMENTS

MERCHANDISE EXPORTS (AVERAGE 1969-71) ^{d/}

	1969	1970	1971	1972		US \$ Mln	%
	(Millions US \$)						
Exports of Goods, NFS ^{f/}	62.6	75.9	79.1	84.1	Cotton	21.9	74.0
Imports of Goods, NFS	84.9	98.6	104.7	111.6	Beef	4.4	14.8
Resource Gap (deficit = -)	-22.3	-22.7	-25.6	-27.5	Cattle	1.0	3.4
Interest Payments (net)	- 2.3	- 1.8	-2.1	-2.1	All other commodities	2.3	7.8
Workers' Remittances	- 5.0	- 3.6	-5.7	-5.2	Total	29.6	100.0
Other Factor Payments (net)							
Net Transfers	10.8	14.4	16.5	18.1			
Balance on Current Account	-18.8	-13.7	-16.9	-16.7	EXTERNAL DEBT, DECEMBER 31, 1971 ^{1/}		
Direct Foreign Investment	2.7	1.1	0.4	0.5			US \$ Mln
Net MLT Borrowing	-	2.5	0.4	- 1.4	Public Debt, incl. guaranteed		..
Disbursements					Non-Guaranteed Private Debt		..
Amortization					Total outstanding & Disbursed		34.8
Subtotal							
Capital Grants	10.8	15.8	20.1	16.7	DEBT SERVICE RATIO for 1971 ^{2/}		
Unclassified	2.7	-	-	-			%
Other items (net)	4.1	2.9	4.3	-6.2	Public Debt, incl. guaranteed		8.0
Net Monetary Movements ^{b/}	1.5	8.6	8.3	7.1	Non-Guaranteed Private Debt		..
FOREIGN ASSETS ^{c/}					Total outstanding & Disbursed		8.0
Gross Foreign Assets	1.5	2.5	10.8	10.6			
Net Foreign Assets	-11.2	-5.4	4.3	1.8			

FUEL AND RELATED MATERIALS (Million US\$)

Import	7.6	8.6	9.9	8.8
of which petroleum	7.5	8.6	9.5	8.4
Export	-	-	-	-
of which petroleum	-	-	-	-

RATE OF EXCHANGE

IDA LENDING, February 28, 1971 (Million US \$):

Through - 1971	Through July, 1969	IDA
US \$ 1.00 = CFAF 277.71	US\$ 1.00 = CFAF 246.65	
CFAF 1.00 = US \$ 0.0036	CFAF 1.00 = US\$ 0.00405	Outstanding & Disbursed
		4.1
		Undisbursed
		9.1
		Outstanding incl. Undisbursed
		13.2
Since - Jan 1972	Since February 1973	
US \$ 1.00 = CFAF 255.8	US\$ 1.00 = CFAF 230.2	
CFAF 1.00 = US \$ 0.0039	CFAF 1.00 = US\$ 0.43	

- 1/ More recent public debt information not available
 2/ Ratio of Debt Service to Exports of Goods and Non-Factor Services.
 a/ IFS, various issues
 b/ Including postal service
 c/ Central, commercial and development banks only.
 d/ Recorded exports only
 e/ Consumer prices . . . not available
 . . . not applicable

THE STATUS OF BANK GROUP OPERATIONS IN CHAD

A. STATEMENT OF IDA CREDITS (as at February 28, 1974)

Credit number	Year	Borrower	Purpose	US\$ Million	
				(less cancellations)	Undisbursed
125	1968	Chad	Highway Maintenance	4.1	0.9
126	1969	Chad	Education	2.2 /1	1.5
251	1971	Chad	Education	2.7 /2	2.5
309	1972	Chad	Livestock	2.2	2.2
445	1973	Chad	Drought Relief	2.0	2.0
		TOTAL IDA	Credits	<u>13.2</u>	
		TOTAL	Undisbursed		<u>9.1</u>

/1 Includes supplementary credit of US\$0.4 million.

/2 Includes supplementary credit of US\$0.5 million.

B. STATEMENT OF IFC INVESTMENTS (as at February 28, 1974)

Nil.

C. PROJECTS IN EXECUTION 1/

Credit No. 125 Highway Maintenance Project: US\$4.1 million Credit of August 14, 1968: Closing Date: December 31, 1974.

The project consists of (a) a 5-year program for highway maintenance including technical assistance, the procurement of equipment and materials, repair shop extension, training of operators and mechanics, and establishment of traffic data collection system; and (b) studies for the improvement of the Djermaya-Djimtilo road. After an initial delay in procuring equipment, the maintenance program has progressed fairly satisfactorily. However, budgetary constraints, aggravated by the drought, required some reduction of the program.

Some training was carried out with the help of USAID on a smaller scale than originally envisaged. A comprehensive training program is included in a new road project just appraised. The feasibility study for improvement of the Djermaya-Djimtilo road has been completed; however, detailed engineering, found premature, has been deferred due to present low traffic volumes.

Credit No. 126 Education Project: US\$2.2 million Credit of August 29, 1968 (as amended); Closing Date: December 31, 1975.

The project consists of (a) the construction and equipping of a teacher training college at Moundou and (b) the construction and equipping of an agricultural technician training center at N'Djamena 2/ (transferred to Sarh 3/ under Credit 251).

Project implementation is about 30 months behind schedule due to (a) delay in reaching agreement on design which had to be revised because of cost overruns; (b) delay in reaching agreement on the location of the agricultural technician training center; and (c) delay caused by internal budget difficulties and cost overruns caused by underestimation and US dollar devaluation. The construction of the teacher training college was completed in December 1973 in spite of difficulties in the supply of materials. The construction of the agricultural technician training center is expected to start shortly.

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.

2/ Formerly called Fort Lamy.

3/ Formerly called Fort Archambault.

The Credit Agreement was amended in August 1973 to provide for (a) 100 percent IDA financing of the project, net of duties and taxes; (b) a supplementary credit of US\$400,000 equivalent to cover the effects of the US dollar devaluation and increased IDA financing; (c) reduction in enrollment, boarding capacity and staff housing for the teacher training college, and a reduction in boarding capacity for the agricultural technician training center.

Credit No. 251 Second Education Project; US\$2.7 million Credit of June 16, 1971; (as amended); Closing Date: June 30, 1976.

The project consists of (a) the construction and equipping of a secondary technical school at N'Djamena; (b) conversion of an existing technical school into a vocational training center at Sarh; (c) the transfer of the agricultural technician training center, financed under Credit 126, from N'Djamena to Sarh; and (d) a study of young farmers training schemes.

Project implementation is about 12 months behind schedule due to (a) delay on reaching agreement on the schedule of accommodation for the secondary technical school; (b) delay in reducing the cost overruns related to the agricultural technician training center; and (c) delay caused by internal budget difficulties and cost overruns arising from underestimation and the devaluation of the US dollar.

Architectural designs for the secondary technical school, drawn up by the consulting architects, have been approved by the Association and the bidding documents are expected to be finalized shortly. The study of young farmers training schemes has been completed and the report submitted to the Government. The Credit Agreement was amended in August 1973 to provide for (a) 100 percent IDA financing of the project, net of duties and taxes; (b) a supplementary credit of US\$500,000 to offset the effects of the devaluation of the US dollar and increased IDA financing; (c) reduction in boarding capacity and staff housing for the secondary technical school; (d) deletion of the vocational training center at Sarh; and (e) provision of additional equipment for an existing vocational training center at N'Djamena.

Credit No. 309 Livestock Development Project: US\$2.2 million Credit of May 31, 1972; Closing Date: June 30, 1975.

The project comprises: (a) the construction of 38 new stock wells and the repair and renovation of 102 existing wells in the Batha prefecture; (b) the establishment of two well maintenance units, including their operating costs for the first two years; (c) support for the Livestock Development Unit (LDU) established with UNDP assistance.

Project execution is behind schedule for several reasons, principally lack of counterpart funds and complex administrative procedures in Chad which have delayed the signing of the contract for well digging and repair. The well maintenance units are expected to start working in 1974. The LDU is only

now beginning to function because of the delay in reaching agreement on the terms of reference. Further delay resulted from the difficulty encountered in the recruitment of staff for the unit.

The Executive Directors have approved an increase in IDA financing to 100 percent of total project costs, net of duties and taxes, and the establishment of a revolving account.

Credit No. 445 Drought Relief Fund Project; US\$2.0 million Credit of
December 7, 1973: Closing Date: December 31, 1975.

The project is designed to help people in areas affected by the drought to re-establish their productive base; it comprises the following sub-projects: -equipment, workshops, technical assistance and operating costs for underground water development; equipment and operating costs for "genie rural", Water Development Department, and Land Development Department; equipment, buildings and operating costs for livestock development; construction of grain storage facilities; equipment and operating costs for a vegetable growing pilot scheme; and equipment and operating costs for the Planning Department. Tender documents have been approved for all the sub-projects except the vegetable growing pilot scheme.

CHAD

SATEGUI-DERESSIA IRRIGATION PROJECT

CREDIT AND PROJECT SUMMARY

Borrower: Republic of Chad.

Beneficiary: Office de Mise en Valeur de Sategui-Deressia

Amount: US\$7.5 million

Terms: Standard.

Relending Terms: To OMVSD for 50 years, including 6 years of grace, to be repaid in installments which would yield 1.4 percent per annum interest on the loan; the Government would bear the foreign exchange risks.

Co-Lender: African Development Fund: 4 million units of account loan (equivalent approximately to US\$3.9 million) on IDA terms.

Project Description: The development of 11,000 ha in the Sategui-Deressia plain in south west Chad for rice cultivation under irrigation, including the construction of a canal from the Logone river, polders, feeder roads, a rice mill, houses, offices and storage facilities; the carrying out of research and seed multiplication; the provision of extension services; and the in-service training of Chadian personnel for eventual management of the project.

Estimated Cost:

	<u>Local</u>	<u>Foreign Exchange</u>	<u>Total</u>
	-----US\$'000-----		
Civil works	1,470	3,134	4,604
Buildings	483	540	1,023
Equipment	50	631	681
Management	734	501	1,235
Engineering consultants	115	654	769
Second stage studies	44	175	219
Contingencies	1,081	1,753	2,834
Short- and medium-term credit and working capital	<u>584</u>	<u>31</u>	<u>615</u>
TOTAL	<u>4,561</u>	<u>7,419</u>	<u>11,980</u>
	=====	=====	=====

Financing Plan:

	<u>Local</u>	<u>Foreign</u>	<u>Total</u>	<u>Foreign</u>	<u>Total</u>
	-----US\$ million-----			<u>Exchange</u>	<u>Cost</u>
				-----%	
IDA credit	2.5	5.0	7.5	67	63
ADF loan	1.5	2.4	3.9	62	32
Government contribution	0.6	-	0.6	-	5
	<u>4.6</u>	<u>7.4</u>	<u>12.0</u>	<u>62</u>	<u>100</u>

<u>Estimated Disbursements:</u>	<u>Fiscal Year:</u>	74	75	76	77	78	79
	<u>Amount (US\$ million)</u>						
	Annual	-	3.8	3.0	0.3	0.3	0.1
	Cumulative	-	3.8	6.8	7.1	7.4	7.5

Procurement
Arrangements:

All civil works to be financed by IDA would be subject to international competitive bidding in accordance with IDA guidelines and would be grouped into a single contract. Small off-the-shelf items costing less than US\$5,000 each and not exceeding US\$50,000 in aggregate value would be purchased through normal Government procedures. Items financed by ADF would be procured in accordance with ADF procedures which provide for international competition among ADF member states.

Consultants:

Management consultants would be retained to provide expatriate personnel for five key positions in OMVSD; engineering consultants would be engaged to help prepare final designs and bidding documents and to provide technical supervision of construction works.

Rate of Return:

Internal economic rate of return estimated at 13 percent.

Appraisal Report:

Chad: Stategui-Deressia Irrigation Project, No. 145a-CD, dated March 4, 1974.

