

Economic Impact of the Development Projects in the Juba Valley

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Introduction

It is clearly very much in the national interest to increase agricultural and livestock production in Somalia, not only to raise the living standards but also to improve the current serious balance of payments situation.

All of the crops identified for inclusion in Mogambo, Juba Sugar and Fanoole Projects are either import-substitutes or can be sold directly for export.

The Juba Valley is one of the few areas where significant increases in production are technically feasible, and the Mogambo, Juba Sugar and Fanoole sites are some of the most favoured in the valley.

The State farm organization proposed by the Government has the attraction that full development should be attainable reasonably quickly, as opposed to the slower build-up of a settlement or small-holder scheme, the experience of which is limited in Somalia and negligible to date in the Juba Valley. Seen from the national viewpoint, there is great urgency for increased food production.

The Juba river has considerable potential as a source of irrigation water for agricultural development projects. There are perhaps three main constraints to the development of this source: (a) The lack of a unifying «de facto» authority responsible for the development of water resources in the Juba Valley; (b) A shortage of water in the river during the months January-April; (c) A tendency of the river to flood, especially during the months of October and November.

The problems of water shortages and flooding can be virtually eliminated by the construction of the often quoted, but not realised, Bardhere Dam, and eventually the Ministry for Juba Valley Development will become the only «de facto» authority with the competence mentioned under (a) above.

Fanoole Irrigation Project

Generalities - This Project was the first stage of the Juba development scheme which was started in 1972-73. It includes:

(a) Construction of a diversion dam, (b) Generation of hydro-electricity (5,000 Kw), (c) Opening of a 52 km long canal, (d) Establishment of a State farm covering 8199 ha.

As a reliable source of water supply the Juba river could provide water for irrigation. Under normal conditions the river can irrigate 106,000 ha, with regulated supply. Its irrigation potential can command up to 150,000 ha.

The Project was aimed at growing crops such as cotton, sesame, groundnuts, maize and legumes. In addition, a small herd of 475 cows and 25 bulls was to be raised at the farm and fed with the Project's fodder crops to determine their growth in terms of dairy and beef yields.

The net total area to be commanded by the irrigation network was 8199 ha; its development was to be carried out in 7 years from the date of its inception.

Implementation of the Project - In the FYDP (1974-78) it was estimated that the cost of the Project would be Sh.So. 241.96 million. Only 2000 ha out of the total were developed and 20 km of canals were reported to be completed. Also building units and power transmission pylons were reported to have been erected.

However, the rate of implementation has been only 46%. The development of the command area has lagged behind schedule, although in 1979 it was reported that 900 ha were planted. In 1981 it was reported that only 60 ha were planted. The reason is stated to be a change in the lay-out of the irrigation network necessitating the scrapping of the old development scheme; this means that part of the earlier investment was wasted: thus the benefits accruing from the Project were disappointing.

From the date of Project initiation a huge investment amounting to Sh.So. 727 million has been allocated to the Project, with foreign financing amounting to 52% (estimated at the prevailing rate of exchange for each year).

The headworks, consisting of a barrage across the Juba and a hydropower station to produce 4,600 Kw, were completed in 1982 and 1983 respectively. The high tension and low tension transmission lines have been laid out, and the towns of Jilib and Kansuma are supplied with electricity. The main irrigation canal (52 km) and the first of the 5 branch canals have been completed as well as housing, workshops and stores. In 1983, 633 ha of new land were developed and 1100 ha were soil-surveyed. In the same year 15 km of non-metalled road were constructed. At the end of 1983 the Project employed 335 expatriates (mainly technical personnel) and 1515 domestic staff.

Despite these achievements the pace of development and of agricultural operations were at times retarded by the lack of equipment and frequent fuel shortage.

The planned public investment and technical assistance in 1983 was Sh.So. 94.5 million, of which Sh.So. 34.5 million and 60 million were paid by the Chinese and GOS respectively; the actual expenditure was Sh.So. 94.477 million.

In 1984 the planned investment was Sh.So. 51.75 million, of which the Chinese and GOS paid Sh.So. 7 million and 80 million respectively; the actual expenditure was Sh.So. 66.74 million, thus in excess of the planned expenditure.

In 1984 the land development target was: bush clearing, 300 ha; land levelling, 309 ha. The achieved was 206 ha (or 68.7%) and 75 ha (or 24.3%) respectively. The rate of implementation in the construction of irrigation and drainage works was 37.8%. These low rates of implementation are attributed to financial difficulties and shortage of fuel and other inputs.

Juba Sugar Project

Generalities - The Juba Project, established as an Autonomous Agency in 1977, is of great economic significance for the country. With production at Jowhar Sugar Factory having come to a standstill, the main objectives of this Project are: (i) to supply sugar for the country in substitution of the imported product, (ii) to create employment for Somalis, (iii) to create a sound infrastructure to benefit the neighbouring farming areas.

The capacity of the sugar estate was planned to be 67,000 tonnes/year. An irrigated sugar cane estate of 8,195 ha was planned to supply the sugar mill, which can crush 2,300 tonnes of cane per day.

The Project employs 5,000 persons; this number is expected to increase if the full development of the Project is achieved. The plant was built at a cost of US \$ 191.4 million, including both external and internal resources.

Implementation of the Project - The Project, which came into stream in 1980 produced about 25,600 tonnes of sugar in 1983 against the rated capacity of 67,000 tonnes/year. It was expected to reach full production in 1984, but — due to a number of impediments — it achieved only 26,954 tonnes or 38.5% of the planned target.

Production in the first years was 7,927 tonnes; in 1985 it reached 39,000 tonnes. Though short of the target, production has increased steadily and is expected to reach its rated capacity if the problems currently besetting the Project are removed.

A loss of Sh.So. 52 million was recorded in 1984 owing to the low ex-factory price of sugar (Sh.So. 12/Kg) and the high cost of production. Also, in 1984 the lower level of production, caused by shortage of fuel and lubricants, aggravated the situation. A loss was recorded also in 1982. The Government's decision to raise the ex-factory price (Sh.So. 34.1/Kg) minimized losses during 1983.

A comparison of the ex-factory price per tonne in US Dollars at the exchange rates prevailing from time to time shows that from June 1981 to December 1985 the local price of sugar had been increasing steadily; the decrease in the price per tonne in US Dollars is due to the continued devaluation of the Somali currency. Because of the instability of sugar price on the world market, the increasing price of Juba sugar can have a negative impact on its competitiveness. Therefore it is advisable to try and reduce production costs rather than increasing the price continuously.

In January 1985 the ex-factory price of sugar was Sh.So. 20/Kg. The average price to the consumer is roughly twice the ex-factory price. This shows that the marketing channels and intermediaries are making large profits at the expense of the consumer. This problem can be attributed to the lack of a marketing department at the Project, which would have played a major role in the distribution and marketing of sugar. This has also caused the indifference of the consumers to the consumption of imported versus locally produced sugar, because there is no great difference between their prices.

Mogambo Irrigation Project

Generalities - Two major factors affecting the design of the Project were the two basic soil types and the prospect of perennial water availability from the proposed Bardhere Dam. The Project's irrigable area comprises approx. 50% basin clays which can be surface-irrigated and 50% levee and other soils for which overhead irrigation is proposed.

The returns were too low for the Project to be recommended, so given alternatives were examined. These variously included: developing the basin soils only, delaying the Project until the Bardhere Dam is operational, and substituting the higher-valued crop of bananas after completion of the dam.

Restricting the Project to the basin soils caused little improvement, since higher per hectare returns were offset by the loss of economies of scale.

The most profitable alternative involved delaying the whole project until the Bardhere Dam is operational, then planting 1200 ha to banana on the levee soil instead of single-cropped maize. However, this solution was not favoured because it would have meant an estimated 8 years wait, whereas there is an urgent need, in the national context, to implement the Project as early as possible.

An important feature of the proposed Project is that foreign exchange earnings would considerably exceed foreign exchange costs, even when discounted to the present day.

Implementation - The first phase of the Project started in November 1982; its objective was to develop, by early 1986, 2,052 ha of paddy rice and 163 ha of sprinkler-irrigated cotton crop.

This phase contemplated the construction of offices, house, and other buildings; the second consisted of earth works, canals, irrigation and drainage.

Completion of the first phase was scheduled for August 1984, but was delayed up to mid-1985. The delay was attributed to financial difficulties, insufficient experience of the contractor, and little back-up from the German contractor to the local contractor for the joint execution of the works.

The second phase contemplated the development of 450 ha for surface irrigation by mid-1985, and of the remaining areas by March 1986. The development of 160 ha for surface irrigation and 126 ha for sprinkler irrigation has been accomplished.

The land development achievements in 1984 were too low. Only 900 ha out of the proposed 2052 ha (or 4.9%) were bush-cleared, while 200 ha (or 44.4%) out of the 450 ha target were levelled. The rate of implementation in the construction of irrigation and drainage works was good (about 60%) while that of bush clearing was too low. The low rates of implementation were attributed to funding difficulties and shortage of fuel.

Concluding Remarks and Recommendations for Further Study

The crop production sub-sector provides a livelihood for about one-fifth of the Somali population; it accounts for about 7-8% of the nation's GDP and constitutes approximately 8% of export earnings.

13% of the country's total area is suitable for crops, but only one-tenth of such land is exploited at present.

Apart from this, the current yields are considered low according to international standards. The Juba Valley Projects have great significance for the Somali economy and, if full, implemented, can play a major role in development.

Although these projects were ongoing for some time, their implementation has fallen back, as expected. The major constraints which continue to exert a depressing effect are:

1. Insufficient financial resources: the main sources of financing for these Projects are external ones; the postponements and delays in funding have had a severe effect on their progress. Therefore it is time for the Somali Government to try its best to secure adequate financial resources.

2. Inefficiency in water usage, due to poor management of water application and drainage at field level and failure to rehabilitate the irrigation networks. All the three Projects complain about water shortage, especially in the dry seasons. If the management of water application and drainage is improved, most of these problems can be tackled.

3. Another problem is that, while complaining about water shortage, all the Projects plan to extend the cultivated areas, whereas it is better to limit cultivation to the extent that can be accommodated by existing water resources.

4. Lack of coordination between Ministries, Departments and Agencies involved in these Projects: suitable administrative machinery to coordinate agricultural development activities in this area is needed.

5. Limited development of integrated crop cultivation and livestock rearing. The by-products of rice in Fanoole and molasses in the Juba Project can enhance animal production in this area. The allocation of resources to irrigated fodder production cannot be considered in isolation from the agricultural activities which are being undertaken or planned on adjacent projects. The Juba Sugar Project has a considerable output of molasses. Unfortunately, instead of utilising this by-product for animal production, it is exported: this policy needs to be revised. Also the diversion of cotton production to other crops in Mogambo has reduced the opportunity of producing oil cakes, which is an essential for livestock nutrition. The integration of crop and livestock production has great significance for the utilization of resources which would otherwise be wasted, and for the economy as a whole. Rather than strengthening the integration of these activities, these Projects have tried to avoid livestock presence in these zones. Therefore it is advisable to reconsider these policies in order to strengthen the integrated approach.

6. Poor maintenance of farm machinery and shortage of fuel and lubricants had a depressing effect on these Projects, as noted earlier in this paper. Therefore, incentivising the skilled labour and securing funds for spare parts, fuel and lubricants is of crucial importance for the development of these Projects.

7. There is ample evidence from the experience of the Juba Sugar Project, the Mogambo Irrigation Project and the Fanoole State Farm to show that attracting seasonal labour to the farms presents a serious problem also in the future.

The extent to which labour is actually (as opposed to theoretically) available is difficult to assess. While the labour officers maintain that labour is available (in the sense that there is a great deal of under-employment), the experience of the Juba Sugar Project, the Fanoole State Farm and the Mogambo Irrigation Project would seem to suggest that it is not sufficiently mobile to be drawn into

labour-intensive schemes at the present level of inducements, with low wages, seasonal employment and considerable distance to travel. Even when the Juba Sugar Project sends lorries into Jamama District to recruit labour for the sugar plantations, there are not sufficient people prepared to accept the inducement and offer themselves for hiring.

The following points are recommended, for further study:

1) Because of the serious problems concerning labour availability in the Juba Valley, it is necessary to make some research into the ways by which labour can be drawn within and outside the area.

2) Given the change in policy towards the Mogambo Project, which calls for population resettlement and tenant farming, it is suggested to conduct further research on the economic impact of the new policy.

3) Further research should also be conducted into the effects of these large scale projects on the economics of pastoralism in general, especially during dry seasons and long droughts.

4) Last but not least, further studies are suggested in the area of the Juba river water management system before and during the construction of the Bardhere Dam.