3195

Doc. 13 :
THE CONTRIBUTION OF BASIC EDUCATION TO FOOD SELF-SUFFICIENCY IN THE GAMBIA.
1982

THE CONTRIBUTION OF BASIC EDUCATION TO FOOD SELF-SUFFICIENCY IN THE GAMBIA

A CILSS - UNESCO STUDY

REVISED EDITION

The Contribution of Basic Education to Self-sufficiency in Food in The Gambia.

A CILSS — UNESCO Study

By

Sasi S. N'Dure

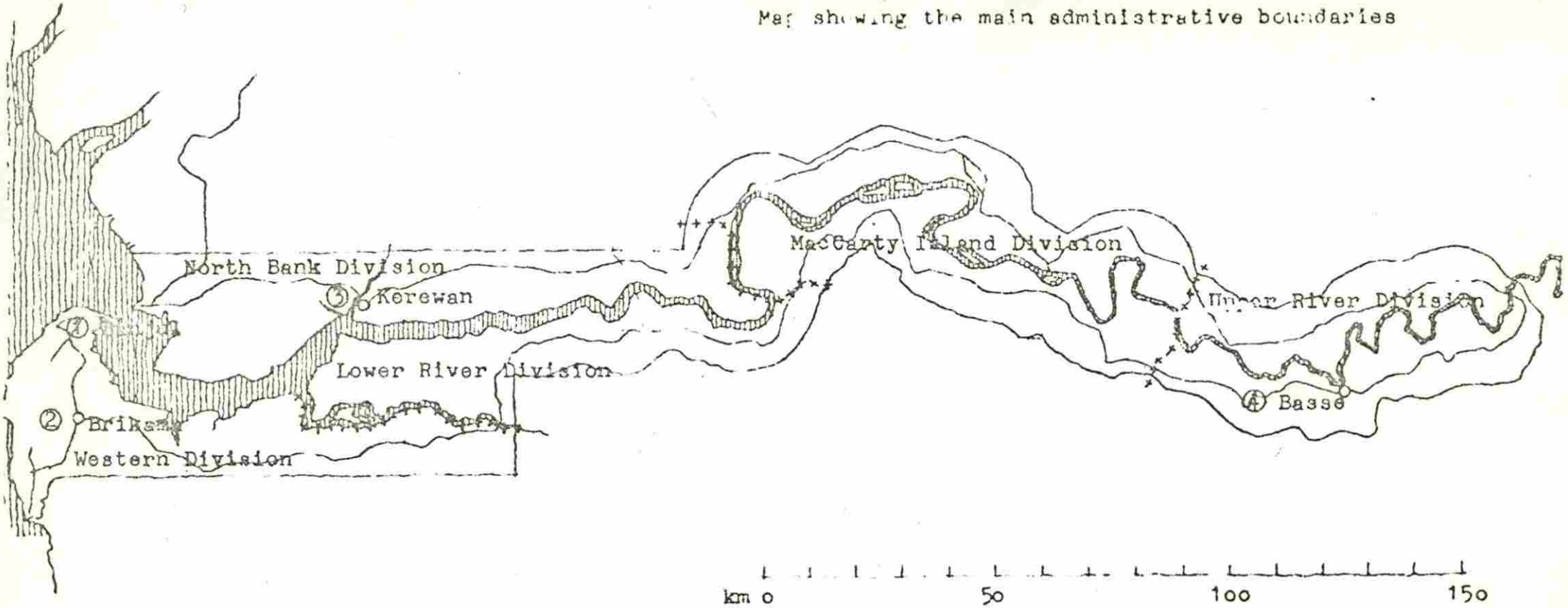
With

Amadou S. Taal, Sankung K. Janneh and Sheriff A.L. Ceesay.

S

THE GAMBIA

Map showing the main administrative boundaries



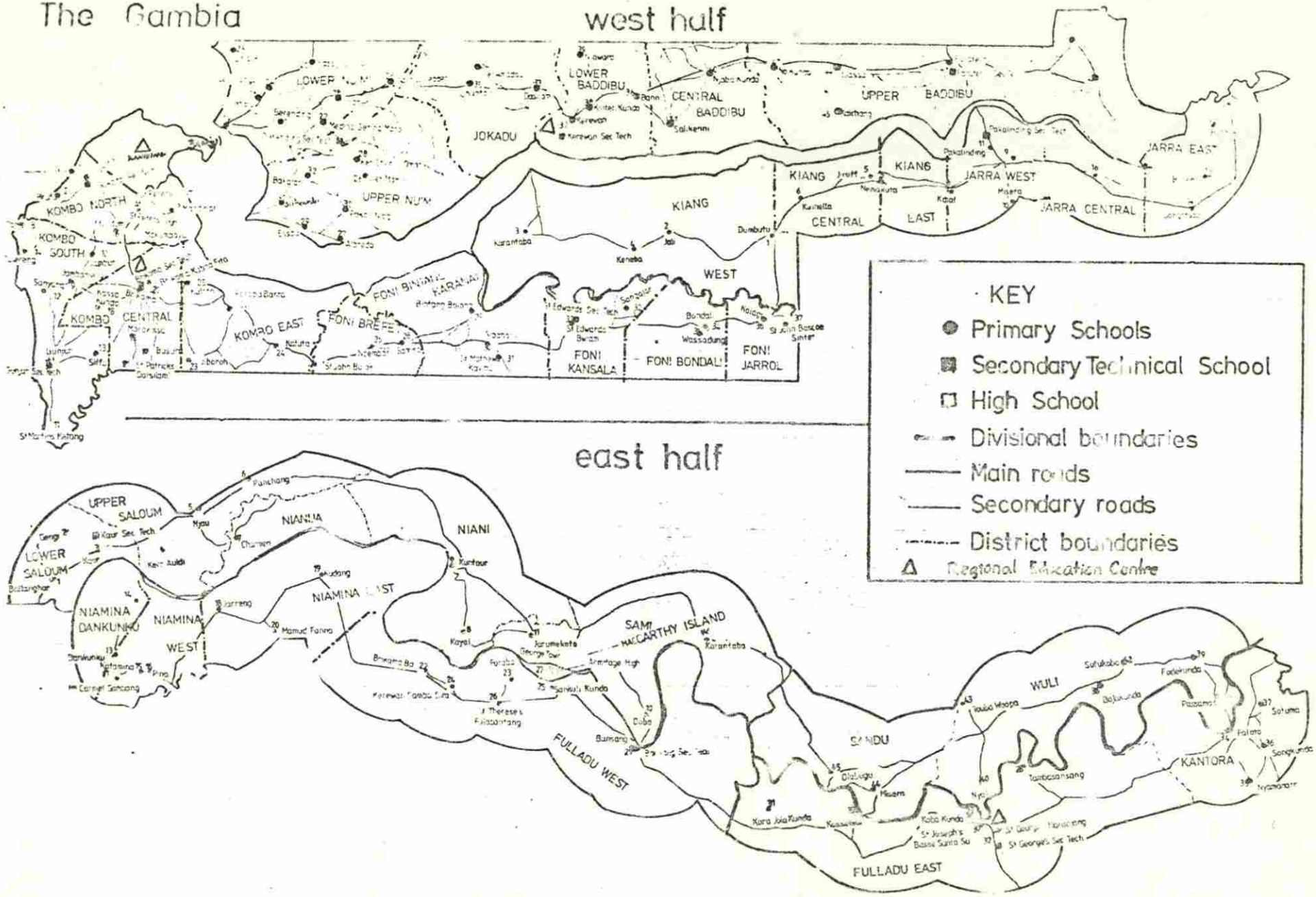

The Gambia
west half
east half
LOWER BADDIBU
CENTRAL BADDIBU
UPPER BADDIBU
JOKADU
UPPER NUM
KOMBO NORTH
KOMBO SOUTH
KOMBO CENTRAL
KOMBO EAST
FONI BINTANG KARAMAI
FONI BREFET
FONI KANSALA
FONI BONDALI
FONI JARROL
KIANG
KIANG CENTRAL
KIANG LAST
JARRA WEST
JARRA CENTRAL
JARRA EAST
KEY
Primary Schools
Secondary Technical School
High School
Divisional boundaries
Main roads
Secondary roads
District boundaries
Regional Education Centre
UPPER SALOUM
LOWER SALOUM
NIAMINA
NIAMINA DANKUNKU
NIAMINA WEST
NIAMINA EAST
NIANI
SAMI
MACCARTHY ISLAND
FULLADU WEST
FULLADU EAST
SANDU
WULI
KANTORA

TABLE OF CONTENTS

PAGE

Preface i

Glossary iii

Summary 1

Introduction 6

The Sahel, the Drought, and the Emergence of the Objectives of Self-sufficiency in Food 9

Education and Self-sufficiency in Food 26

Conclusions and Recommendations 46

Appendix I. (The Gambia Educational System) 51

Appendix II. (Economic Development Since 1973/74) 60

Appendix III. (Government) 76

Bibliography 78

PREFACE

The present study grew out of a national consultancy sponsored by UNESCO as part of its continuing bilateral effort to help the countries in the Sahel improve the condition of their people through economic and social development that has food self-sufficiency as its primary objective. The consultancy dates were from November 11, 1981 to February 28, 1982.

The terms of the Contract, under Article 1 (Duties), stipulated that :

"The Consultant, acting upon the instructions of the Director-General of UNESCO, shall:

Participate in the elaboration of a study on the topic 'The Contribution of Basic Education to Self-sufficiency in Food in the Sahel'. In this respect, he should:

1. - Assist BREDA in the selection of the consultants who will constitute the Gambian interdisciplinary team.

2. - Direct the national study in its conception and execution together with the international coordinator, the Permanent Interstate Committee for Drought Control in the Sahel (CILSS) and BREDA. He will distribute the work between the different members of the inter-disciplinary team and prepare the synthesis of the various contributions in the final draft of the national study;"

The members of the Gambian interdisciplinary team were:

Dr. S.S. N'Dure	-	Educationist
Mr. A. Taal	-	Economist
Mr. S.K. Janneh	-	Agriculturalist
Dr. S.A.L. Ceesay	-	F.R.C.S.

The study set out with the undermentioned objectives in view:-

1 - to take stock of various reforms in the educational system aimed at ruralizing education or activities involving self-sufficiency in food;

2 - beyond the stock-taking exercise, to catalyse future-oriented deliberations on the contribution of basic education to self-sufficiency in food; and

3 - to yield concrete suggestions.

Much hard work has been devoted in the preparation of this study, and I would wish to take this opportunity to express my sincere appreciation to all those who have in various ways, provided useful advice and contribution towards its successful completion.

My special thanks go, of course, to UNESCO, the prime sponsor of the study, and to the Gambia Ministry of Education, for allowing me to undertake the study. Special mention must be made of three people for their helpful intellectual collaboration: Madam M.A. Gnali, Programme Specialist at BREDA (Dakar, Republic of Sénégal); Mr. Alioune Sall, CILSS Representative on the projected study; and Dr. Mamadou Ibra NGom, International Co-ordinator of the study.

Last but not least, I wish to thank my wife, Mrs. Aminata S. N'Dure, for her invaluable secretarial services and assistance that went beyond the call of duty.

DR. SASI S. N'DURE
NATIONAL CO-ORDINATOR

BANJUL,
THE GAMBIA.
SEPTEMBER 1982

CLOSSARY

Acronym	Name
CDC	Curriculum Development Centre.
GCE 'O' and 'A' levels.	- General Certificate of Education, Ordinary and Advanced levels.
GDP	Gross Domestic Product.
GPMB	Gambia Produce Marketing Board.
MANR	Ministry of Agriculture and Natural Resources.
MEPID	Ministry of Economic Planning and Industrial Development.
MEYSC	Ministry of Education, Youth, Sports and Culture.
MHLSW	Ministry of Health, Labour and Social Welfare.
MRC	Medical Research Council.
PPMU	Project Planning and Monitoring Unit

International and Bi-lateral Organisations.

BREDA	UNESCO Regional Office for Education in Africa (Dakar, Senegal).
CILSS	Permanent Interstate Committee for Drought Control in the Sahel.
CRS	Catholic Relief Services.
EEC	European Economic Community.
FAO	Food and Agricultural Organisation
IFAD	International Fund for Agricultural Development.
ODA	Overseas Development Administration (British).
UNESCO	United Nations Educational, Scientific and Cultural Organisation.
UNICEF	United Nations Children's Fund.
USAID	United States Agency for International Development
WHO	World Health Organisation.

SUMMARY

Introduction

The most important constraint to agricultural development in The Gambia, and to improving nutritional standards of the population, has been the severe Sahelian drought and the unreliability of rainfall. The continued reliance on traditional methods of agriculture and the use of low quality agricultural inputs, particularly seeds, have also contributed to low agricultural productivity. The effects of these have been a 'vicious cycle' phenomenon, bringing about hunger, or reduced calorie intake, less energy for farm work and other productive activities, and consequently, a decline in agricultural production.

The Government of The Gambia is already taking significant measures which should substantially affect food self-sufficiency and nutritional status. The Second Five Year Plan (1980/81 - 1985/86) makes explicit statements on increasing food production and productivity.

Population and Educational Characteristics

According to the United Nations Medium Variant population projection of June, 1980, the total population of the Gambia was 602,900 in 1980 implying a population density of 59 people per square kilometre. The projection further shows a tremendous increase of the school age population (age 8 - 21) from 188,900 in 1980 to 328,000 by the year 2000, for which the nation is expected to provide education.

The number of eligible children actually attending school is projected to increase from 24.5% in 1980 to 30.7% by 1985.

Educational Philosophy, Aims and Objectives

As stated in the Education Policy (1976/86), these are concerned with the physical, intellectual and aptitudinal development of man, both as an individual and as a member of society.

It was realized as far back as 1965, when Gambia became independent, that the school curriculum at all levels was irrelevant to national needs and had to be reformed so that it would be appropriate for the children and youth for whom it is intended.

When the Curriculum Development Centre was established in 1975 its main task was to develop a reformed educational system relevant and responsive to the country's social, economic and cultural needs and its specific terms of reference were to effect a systematic, co-ordinated and integrated school curriculum reform.

A major objective of the curriculum is to create an interest in and the right attitude towards participation in agriculture as a vocation, so as to meet the learning needs of farmers and rural workers and to make children fit into the society, within which they grow.

Tied in with this objective is Government's commitment to invest more in the rural sector. Rural life in The Gambia is characterised by poverty, scarcity of arable land (or land tenure systems which preclude the optimal use of that land), and lack of the capital and transportation networks required to transform traditional agriculture into profitable farming. Government's aim is to equalize opportunity and generate the human skills and leadship needed for development in this sector.

The Rural Development Plan

Government conceives the goals of rural development as balanced social and economic development, with emphasis on the creation and equitable distribution of income. Among the goals are the generation of new employment; more equitable access to arable land; more equitable distribution of income; widespread improvements in health, nutrition and housing; greatly broadened opportunities for all individuals to realize their full potential through education; and a strong voice for all rural people in shaping the decisions and actions that affect their lives.

It follows from this that rural development calls for a massive and multipronged effort to create and spread employment and to root out the fundamental causes of poverty, disease, ignorance and injustice.

Education, both formal and non-formal, has an unprecedented opportunity to contribute to advancing rural development.

The Role of Formal Education

With regard to improving nutritional standards, the objectives and curriculum of formal schools relate specifically to the needs and production possibilities of our predominantly rural population. Primary schools seek to give basic education, i.e., literacy, numeracy, and an elementary understanding of science and one's environment, including health and nutrition, etc.

The Role of Non-Formal Education

Because of the relative underdevelopment of the formal education system at the primary level, non-formal education has to carry out the 'unfinished business' of the primary school. Thus, the non-formal education system has to cater for the large groups of youths and adults who have never been to school, or have dropped out before finishing or have completed primary school but could not proceed to secondary.

Non-formal education includes a vast assortment of activities related to development variables. Its greatest virtue is in its flexibility and potential for serving a variety of learning needs and situations. It can be low cost if it takes advantage of locally available resources. The demand function of the output of a non-formal education programme can be specified prior to its operation and hence the demand for certain types of trained people can be met. It then follows that one sure way to increase productivity in food is to train farmers through the non-formal education system, i.e. the Farmer Training Programme and other similar projects.

CONCLUSIONS

It is clear that education and the economy are closely interrelated. Economic development provides the resources to sustain educational growth and creates the opportunities for profitable work. Education

supplies the skills and specialized manpower that economic enterprises (such as farming) require, and develops abilities useful to the self-employed farmers in their occupations.

It has been observed that a major consideration in the implementation of the food sector development programme is the tight financial constraint within which Government is operating. Reccurrent costs of development projects are bound to increase and could further exacerbate the already existing financial and economic constraints. Perhaps donor agencies should now be thinking of financing recurrent costs of development projects in addition to financing capital costs of projects.

RECOMMENDATIONS

These include, inter alia:-

i) Nutrition education programme, both in the formal and non-formal educational systems. Emphasize link between better nutrition and food production.

ii) Involvement of more women in food preparation, using simpler and labour-saving techniques.

iii) Introduction of agricultural subjects in primary schools, particularly schools in the rural areas.

iv) Better producer prices as an incentive to farmers for higher production. More emphasis should be given to food crops.

v) Establish better marketing channels for locally grown food crops so that produce can reach the consumers.

vi) Encourage and demonstrate better storage and handling techniques to avoid or minimize food loss.

vii) Use of mass media programmes to educate people on food self- sufficiency - radio and films.

viii) To carry out a nutrition survey in order to determine per capita nutritional requirements of the population.

ix) To establish a co-ordinating and planning committee which would

advise government on food and nutrition matters. The Ministries of Agriculture, Health and Education should collaborate in their efforts to provide better food and nutrition education programmes. The existing Sectoral Planning Committee on Agriculture and Natural Resources could serve as the co-ordinating and planning committee.

THE CONTRIBUTION OF BASIC EDUCATION TO SELF-SUFFICIENCY IN FOOD IN THE GAMBIA

I. INTRODUCTION

1.1 The Country and Its People

The Gambia is a small country with an area of 10,360 square kilometers surrounded on three sides by the Republic of Senegal. The country is extremely flat with a maxium elevation above sea-level of 35 meters. Geographically, it can be divided into three regions; the mangrove belt, the swamps (banto faros) and the sandstone plateau. The mangrove belt borders the River Gambia from its mouth to over 240 kilometers inland. Behind the mangrove belt are the swamps which are flooded with fresh water in the upper part of the river. These swamps are suitable for rice cultivation. The sandstone plateau lies beyond the swamps. Most of the crops, groundnuts, millet, maize etc. are grown on the sandstone plateau.

The navigable River Gambia is potentially an important natural resource for agricultural development. Due to the tidal nature of the river and the flatness of the country, salt water from the sea goes far upstream. This phenomenon is particularly remarkable during the dry season when the reduced flow of fresh water permits salt intrusion as far as Kuntaur, about 240 kilometers from Banjul.

The climate in The Gambia is characteristic of the Sahelian zone climate. The dry season is long, from November to May, and rainfall during the rainy season, from May to October, is generally low (800mm to 1700mm). The short rainy season allows only one cropping season for groundnuts, millet and maize. Limited irrigation during the dry season is being done for rice cultivation.

Like other developing countries, the Gambian population is predominantly rural. About 85% of the country's 600,000 inhabitants are engaged in agriculture and livestock rearing where they derive their livelihood. Although urban or non-rural population is small, about 156,000, it is rapidly increasing (4.2 percent per year as compared to the national

average of 2.8 per cent). Overall population density is estimated at 59 persons per square kilometer.

1.2. Economic Structure

The Gambia's economic structure is based to a large extent on agriculture. Production and processing of groundnuts account for over 90 percent of total export value. The country's economic activities are determined by the size of this crop and the price it commands on the world market. Cotton is another export crop, but it still represents a small share of the total agricultural production. In addition to export crops, food crops are produced. The most important of these are millet, sorghum, rice and maize. Domestic food production, particularly rice, does not meet the country's food requirements. As a result, about 30,000 tonnes of rice are imported every year. Other related activities, chiefly livestock and fisheries, are important resources whose potential is relatively unexploited. Both livestock and fisheries contribute less than 6 percent to the formation of Gross Domestic Product (GDP)

Despite the predominance of the primary sector, the modern sector is relatively active. Trade and transport, which are important economic activities, reflect the role of the country as an entrepot for Senegal and other neighbouring countries. This transit trade, which results from the unique geographical position of the country and from low import tariffs, is an important source of revenue for the country in general and to the government budget in particular. Since the early seventies, tourism has become an important sector, contributing about 8 percent of GDP and employing about 2,700 people. Industrial activity is limited to groundnut processing at the oil mills, a soft drink factory and a shoe factory. Income per capita of the urban population, estimated at US $550, is about four times higher than that of the rural population.

1.3. Food Consumption and Nutrition

The Gambia is considered the biggest consumer per head (measured in production and imports) of rice in the sahel countries.* It is also the only Sahelian country that has available for consumption more rice than millet, sorghum and maize.[1] Table 1 (page 19) shows cereal production and availability in the Gambia from 1974/75 - 1980/81. Fruits and vegetables (accurate data are difficult to obtain) are consumed in significant amounts when they are seasonally available. These crops provide important nutrients of vitamins A, B, C and D.

Livestock and fish are important food sources, providing a significant portion of the protein requirement of the population. It was estimated that fish consumption in the Gambia in 1977 was 24 kg/cap/year, ranging between 45 kg in the urban area and 19 kg in the rural area.

In the recent past, a major constraint to increased food consumption has been the poor groundnut production. This has weakened the purchasing power of many farmers to buy other foods such as oils, meat and dried fish. The poor groundnut production may also have led to fewer groundnuts to consume which is an important source of protein.

---

* Estimates for rice consumption must be taken cautiously. It is possible that availability from imports and production would exceed consumption, the difference being re-exported to neighbouring countries.

(1) The Gambia Food Strategy Report, Part 1, March 1981, P. 17.

II. The Sahel, the Drought and the Emergence of the Objective of Nutrition Self - Sufficiency.

2.1 The Sahel and The Drought

2.1.1. The Gambia as a Sahelian Country

Geographically located in the tropics and lying between latitudes 13° 3' and 13° 49' and longitudes 13° 47' and 16° 48', along the north-west coast of Africa, The Gambia has a Sahelo-Sudanian type of climate characterized by two distinct seasons -- a long dry-season (November to May) and a short, intense wet-season (June to mid October) In a "normal" year the country experiences a rainfall gradient from 1000 mm in the south to 800 mm in the north, but this is subject to wide fluctuations. Only in July, August and September does mean rainfall exceed evaporation.

The natural vegetation in Sudano - Guinea savannah woodland which has been modified by fire, shifting cultivation, cutting-over for fuel (firewood and charcoal), fencing, etc. and, more recently, over-grazing.

Of the available soil types, some 40% marginal and 46% unsuitable, of which the major part, i.e. excluding mangrove and saline swamps, represents a reserve for grazing and forestry, only 150,000 has or 14% of the land, which is a small proportion of the total surface area, is classified as "suitable and irrigable". It, however, remains to be established as to how much of this area can be supplied with water and at what cost. Some quarters e.g. PPMU, suggest that only 78,000 ha is in fact suitable and irrigable, and this wide discrepancy underscores the need for clearer definition.

With regard to the availability of groundwater for local, small-scale irrigation, e.g. sprinkler irrigation to provide supplementary water for upland crop production, little is yet known. Groundwater is generally adequate for human consumption and for livestock.

2.1.2. The Drought (its effects)

The Scope of the Phonomenon Within the National Time-space Framework:

Along with other Sahelian countries or CILSS member states, The Gambia started experiencing drought in 1968, but it was not until 1972 and thereafter that the phenomenon reached alarming proportions. The cropping seasons of 1972, 1973, 1977, 1979 and 1980 were near-disasterous, with rainfall being far below normal/average and crop production falling by as much as a third of a normal year. The Gambia, however, did not experience the scale of disaster and hardship suffered by other Sahelian states like Chad, Niger, Upper Volta, Mali and Mauritania.

Environmental Effects: the Water Problem, Desertification:-

It is generally argued and widely accepted that the denudation of forest cover - the uncontrolled felling of trees for various domestic purposes and the clearing/stumping of the bush, under shifting cultivation practices, for use as farm land - has led to the drought situation that has developed in the Sahelian region over the past decade. Another important contributory factor to the gradual disappearance of our natural vegetation is the lighting of bush fires by farmers for the purposes of game hunting, collecting of firewood and other miscellaneous and obscure motives. The disappearance of our flora has naturally had adverse effects upon the population, the distribution and the specie make-up of our fauna. Certain species of wild animals e.g. elephants, lions, tigers etc. which once lived in our forests have now effectively disappeared and others are becoming increasingly scarce. The adverse interference with our flora and fauna has also meant a serious disturbance and an imbalance of the dynamic relationship that exists in the natural environment. This has somehow resulted in an upsurge in the number of intensity of crop pests, especially insect, because the natural predators on some of these insects have either disappeared or exist in very small numbers.

Another notable effect of the drought on the environment is the scarcity of grazing for livestock with the result that many farmers lost some of

their cattle, sheep and goats to the malady. Not only has grazing become scarce, but water for the animals was also hard to come by - many streams, pools and tributaries of rivers having dried up completely. But the water shortage problem afflicted the human population as well, especially in areas where surface water (rivers, streams, springs, pools and tributaries) provided the source. Shortage of water (rainfall) also means reduced crop yields and production or, in adverse cases, partial or total crop failure.

Desertification brings in its wake the following serious problems:-

- Reduced rainfall.
- Accelerated soil erosion by wind, water, etc.
- Shortage of grazing land for livestock.
- Degradation of suitable agricultural land.
- Disturbance of the dynamic equilibrium that exists in the natural environment.
- Less trees for fuel (firewood, charcoal) and for other domestic uses e.g. building, fencing, furniture etc.
- Increase in population of certain crop pests.

There is something of a 'vicious-cycle' type of relationship between desertification, deforestation and drought. It is a scientifically accepted fact that there is a definite correlation between trees and rainfall - trees contribute to improve rainfall and the latter in turn contributes to the growth of forest cover. Drought therefore leads to stunted tree growth and diminished forest cover, and this in turn adversely affects rainfall both in amount and distribution.

Basic education should help farmers understand this delicate balance and interrelationships in nature and make them better appreciate the need for preserving the forest cover.

General Effects on the Economy: Farm and Livestock Production Deficits and Losses

Agriculture is the mainstay of The Gambia's economy. It provides

employment and livelihood for about 80-85% of the population, accounts for about 95% of the country's total exports and therefore nearly all its foreign exchange earnings, and contributes around 50 - 60% of the gross domestic product (GDP). The country produces about 60,000 - 70,000 tonnes of food grains i.e. rice, millet, sorghum and maize annually representing about 60 - 70% of its food requirements, calculated at 100,000 tonnes. Since domestic production is insufficient to satisfy domestic consumption, the country has to import food (mainly rice which is the preferred staple) to the tune of around 28 - 30,000 tonnes annually to bridge the gap between production and consumption.

As The Gambia's economy is so clearly dependent on agriculture, it is patent that any phenomenon such as drought, floods, an epidemic of pests or diseases that can disrupt production is bound to affect adversely the performance of the economy in all its ramifications. A fall in the production of cash crops as a result of adverse weather conditions would mean a reduced volume of exports with the following implications for the economy.

- Reduced foreign exchange earnings
- Possibly reduced level of imports
- Balance of payment problems
- Restriction on imports of capital goods with serious implications for development programmes.
- Low Government revenues derived from export levies and import duties with possible repercussions for the recurrent budget as well as for development expenditure.

Any decline in food production would mean higher importation of food to feed the population with all the attendant implications for the country's foreign exchange reserves and balance of payments position, unless there is recourse to food aid from bilateral or multilateral sources.

As seen within the above context, the drought experienced in the Sahelian region over the past decade has not been without its adverse

impact upon agricultural production in The Gambia, particularly crop (export and food) production. Significant yield decreases and overall decline in the volume of both food and cash crop production have resulted from the drought. The years 1972, 1977, 1979 and 1980 were particularly bad for The Gambia - the worst drought years the country has experienced in the past thirty years or so. Not only has the volume of crop production significantly declined, but the quality of produce, in some instances, has also been affected, because crops could not attain their full maturation as a result of inadequate precipitation and/or poor distribution of rain over time and space.

Livestock production also suffered to an extent. Drought created severe grazing problems and shortage of drinking water for livestock with the consequence that farmers lost some of their cattle. Scarcity of food and good sources of drinking water rendered livestock weak and exposed them to easy attack by diseases and parasites, in addition to affecting their optimum milk yield and carcass weight and quality.

Effects on People and Society: the Problems of Hunger and nutrition

The drought has resulted in a fall in food production in the country. This, naturally, has meant hunger, deprivations and hardship, particularly for the rural population who have no secure income with which to buy food. Hunger, or a reduced calorie intake, means less energy for farm work and other production activities and, consequently, a decline in agricultural production. Since good food is one of the pillars of good health, it goes without argument that hunger and/or malnutrition undermine health and induce disease and unhappiness - people on a higher plane of nutrition are known to be more healthy, energetic and productive than malnourished or under-fed individuals. Hunger and malnutrition not only result in low production (manual work), but also depress mental and intellectual activity.

In a socio-psychological dimension the drought situation may well develop a feeling of despair, frustration and hopelessness in farmers - the

unequal struggle against a hostile environment. More than ever before, they would be looking up to Government for various kinds of assistance - free supply of food (food aid), subsistance and production credits, write-off of previous loans or their re-scheduling, increased subsidies on prices of staple food and production inputs (seeds, fertilizers, pesticides, implements etc) and higher produce prices for their farm produce. The arrival of food aid on the scene has further complicated the situation in the sense that it may have diluted farmers' resolve to grow more food - because they can have free food from Government. Governments on the other hand, has meanwhile adopted a policy of food self-reliance as a necessary medium and long-term strategy and has been urging farmers to produce more food to feed not only themselves but the rest of the population. The seasonal unreliability of rainfall, coupled with the unpredictability of climatic variations or conditions over the long-term, has made farming under our Sahelian type of conditions an even more hazardous occupation for our farmers. The disasterous impact of drought on crop and livestock production in the region and the consequent human suffering and misery have created fear and under-mined farmers' inherent determination to struggle.

Food aid has undoubtedly contributed a lot to alleviating the effects of hunger and suffering on the population, particularly in the wake of the severe drought years like 1977, 1979 and 1980.

Migration/Population Movements

One of the most serious and striking socio-economic consequences of the drought in The Gambia has been the apparent increase in rural - urban migration. Many farmers or country-dwellers (there are no estimates as to numbers), particularly able-bodied young men, abandoned their villages to come and settle in the urban areas in search of wage employment to earn a living. The succession of drought and its attendant ravages on crop production, and the resultant hunger, poverty, deprivation and misery conspired to create in farmers a feeling of despair and despondency about the future of farming as a dependable occupation. A better future, they imagine, might be found in the urban areas where they can become skilled artisans, mechanics, drivers, labourers, messengers, vendors, hawkers, watchmen and what else; some trade or occupation

which can earn them some form of secured income on which to make a living, rather than toiling on the land with uncertain and/or unrewarding results. Besides, there are other attractions in the urban areas such as improved medical and health facilities and services, electricity, pipe-borne water, social and recreational facilities which scarcely exist in the rural country.

Some rural young men have even pitched their hopes far beyond The Gambia, venturing, as they are doing, overseas to various countries in Europe and Africa in search of wealth.

The "strange farmers" who migrate to The Gambia seasonally from Guinea, Guinea-Bissau, Mali and other West African countries have also dwindled in numbers as a result of the drought. These migrant/tenant farmers provide a significant source of supplementary farm labour in the village and thus contribute a lot to our agricultural production.

The apparent decline in the rural labour force occasioned by drought no doubt has adverse implications for farm production.

2.2. Emergence of the Objective of Food Self-Sufficiency

The drought and its adverse impact on food and cash crop production - insufficient food for the population, poor rural incomes, falling Government revenues, unemployment, unhealthy balance of payments, meagre foreign exchange earnings, dwinding external reserves, rural-urban migration - has resulted in an economic, social and political climate of insecurity that needed redressing if a crisis were to be forestalled. It dawned upon the political leadership that something had to be done to arrest this sad and potentially explosive economic and social trend and to divert course in the interest of peace, stability and progress for the country and its people. This desire to combat the effects of the drought, to alleviate suffering and hardship for the people, to do something to restore and preserve the Sahelian environment (aerial and aquatic), and to create hope and a better future for the peoples of the region as a whole, gave birth to CILSS - the inter-governmental

organisation comprised of eight member states dedicated to the struggle against and control of drought in the Sahel.

Central to the policy of mitigating the effects of the drought in the region is the need and desire to achieve food self-sufficiency for the peoples of the Sahel as a whole. All CILSS member countries have pledged themselves to this noble, important but difficult objective, including The Gambia. Whereas hunger, suffering and hardship resulting from the drought have thus far been more or less successfully contained by massive injections of food to the region from the international community, it is considered both imprudent and unrelistic to reply on this sort of aid as a permanent solution to the problems of seasonal food shortages in the region. The only long-term, permanent and realistic solution to the problem was to be found in the region itself, i.e. developing the production potentials and tapping the latent capacity of the people to grow enough food to feed themselves.

Since the first severe episode of drought experienced in The Gambia in 1972, there has been talk in official circles about the need and desirability of national food self-sufficiency. This verbal expressions of intent were formally marshalled, crystallized, galvanized and formulated into a programme of action when the concept of food self-sufficiency was incorporated in the First Five Year Plan for Economic and Social Development formulated and launched in 1975/76. It was realised that given the rapid increase in the population growth rate (2.8% annually) the decline or stagnation in food production, the growing deficit in the food needs of the population and the increasing level of importation to bridge this gap, the objective of striving for food self-sufficiency as a long-term policy in our development planning is an inescapable reality.

Although food aid was being sought and obtained from the international community in generous proportions, common prudence dictated that it is by far better and more realistic to advocate a policy of food self-reliance and to commit and dedicate the nation to that ultimate objective. Food aid, in the long-term could not be depended upon, subject, as it is, to a whole host of climatic, economic and political variables in the countries of source.

Among the objectives outlined for the Agricultural Sector in the country's First Five-Year National Development Plan were:

1. To improve nutritional standards in the rural areas;
2. To eliminate bulk cereal imports, in particular rice, by 1980;
3. To achieve a 35% growth rate in domestically consumed foodstuffs; and
4. To increase development expenditure in Agriculture by 150% over the Plan period.

In enunciating these objectives, the Government had clearly committed itself to a policy of food self-sufficiency for the country. From then onwards, politicians and Government officials began the campaign to drive home to farmers and the general public the vital message of national food self-sufficiency as a necessary and desirable goal for the country.

Various food production projects and technological packages designed to increase the productivity and total output of cereal food grains were initiated and launched. Notable among such projects were the cereal package deal programme, the village-based farmer training scheme, the rural development project and the irrigated rice project. Apart from the natural setbacks imposed on production by the drought, administrative, organisational and management constraints also accounted for the paltry performance of some of the production initiatives.

2.2.1. The Country's Food and Nutritional Status:

Size of Food Deficit:

In 1973 The Gambia's population stood at 493,000 (according to the population census taken that year). Growing at the rate of 2.8% per annum, the population today is around 620,000 and by the end of this year it will have reached 635,000, and jump up to 1,012,000 by the turn of the Century.

In any discussion of food production vis-a-vis food consumption in the Sahel, it is important to distinguish between two types of food shortage i.e. 'structural' deficit and drought-induced deficit. Structural

deficit may be defined as the endemic inability of the population to feed itself; this phenomenon has been with us well before the advent of the drought episodes we know today. Drought-induced deficit of course refers to the type of food shortage occasioned by adverse weather conditions, poor rainfall in particular. This is a relatively recent phenomenon which has given rise to the current tide of concern over the falling food production in the Gambia and in the Sahel as a whole, and has led to the commitment to food self-sufficiency and food security at national and regional levels.

The following table gives the production of cereals, food imports, consumption, etc. for The Gambia over the past seven years i.e. 1974/75 - 1980/81:

Table 1: CEREAL PRODUCTION AND AVAILABILITY IN THE GAMBIA 1974/75 - 1980/81
(1000 metric tons)

	1974/75	1975/76	1976/77	1977/78	1978/79	1979/80	1980/81
Production							
Rice	28.0	35.2	32.3	27.8	36.0	29.7	40.3
Other cereals	55.9	49.2	38.0	44.0	69.4	29.9	41.4
Total	83.9	84.4	70.3	71.8	105.4	59.6	81.7
Less seeds and loss	4.7	4.6	3.9	4.1	5.4	3.7	4.4
Net production	79.2	79.8	66.4	67.7	100.0	55.9	77.3
Milled product	68.5	67.2	55.2	57.7	85.9	46.2	63.5
(Population '000)	(524.3	(539.1)	(554.0	(569.6)	(585.5)	(603)	(620)
kg/cap/year	130.6	124.7	99.6	101.3	146.7	76.6	102.4
cals/cap/year	1,252	1,196	955	971	1,407	735	982
% self sufficiency*	77	73	59	60	86	45	60
Availability							
Imports	14.9	29.5	34.3	48.3	47.4	38.5	34.2
Net availability	83.4	96.7	89.5	106.1	133.3	84.7	97.7
kg/cap/year	159.1	174.4	161.5	186.3	227.7	140.5	157.6
cals/cap/year	1,526	1,720	1,549	1,787	2,184	1,347	1,511

Source: Food Strategy Report, 1981

* based on 170 kg/cap/year

From the table, it will be seen that production (of cereal food grains) has fluctuated somewhat, tending towards stagnation and even decline. The fluctuations in levels of production for successive years are largely attributable to the effects of drought, e.g. the figures for 1976/77 and 1977/78 which were severe drought years, compared with those of 1974/75 and 1978/79 which were seasons of favourable rainfall.

During the period under review, the table also depicts varying levels of food self-sufficiency for the country, ranging from 59% and 60% in 1976/77 and 1977/78, respectively, to 77% and 86% for 1974/75 and 1978/79, respectively. Here again there is a definite correlation between the level of self-sufficiency and the presence or absence of drought in the country.

Food imports, mainly rice, rose steeply from 14,900 tonnes in 1974/75, to 48,400 tonnes in 1977/78 before they started declining to the present level of 34,200 tonnes. The import figures are exclusive of food aid.

Emergency food aid to The Gambia between 1977 and 1980 is shown in Table II below:

Food Aid to The Gambia - 1977/78 — 1980/81

('000 Metric Tonnes)

Commodity	Year			
	1977/78	1978/79	1979/80	1980/81
Rice	3.5	1.0	0.9	5.7
Sorghum	8.3	5.5	-	11.7
Bulgur wheat	1.5	1.0	3.7	-
Maize	-	-	-	2.6
Total Cereals	13.3	7.5	4.6	-
Milk powder	0.5	0.4	-	-
Semilina	1.5	-	-	-
Flour	0.7	0.7	0.7	2.7
Mixed Food (fish and meat)	0.2	-	-	-
Vegetable oil	0.2	-	-	-

Source: Data provided by Gambian authorities and World Food Programme Office in Banjul.

In the realm of supply and distribution of food aid as well as of surplus local production, the following problems are encountered:

- Food aid is often available in insufficient quantity relative to the needs of the population.
- Whatever quantity of food aid is provided invariably arrives late, so that it frequently does not fulfil its intended effect.
- Distribution bottlenecks, including inadequate transportation, storage and other logistics like determining needs at the family level.
- The distribution exercise is costly to the state.
- Inadequate milling and processing facilities for locally produced grains.
- Inadequate marketing arrangements, poor producer prices and generally unattractive production incentive for local grain produce and producers.

Nutritional Problems:

Available data on the state of nutrition in The Gambia indicate that energy intake is just adequate on a per capita basis, although some deficits do occur for all groups in the wet season, after a poor harvest, or in isolated pockets of the country. At other times pregnant and lactating women and infants do have deficient energy intake. Protein intake appears to be generally satisfactory, (primarily due to groundnuts augmenting the basic cereals), although young children and women do suffer deficiencies. Deficiency-induced anaemia (deficiencies of iron, folate and fiboflavin) is prevalent and is known to cause miscarriages and even maternal and infant mortality at childbirth. Poor nutritional status among children is seen, despite relatively favourable aggregate food availability and this appears to be caused by infection interacting with poor intake at certain times of the year.

2.2.2. Definition of the Objective of Food Self-sufficiency: Statements of Purpose

As outlined in the country's First Five-Year Development Plan, the objectives of food self-sufficiency were:

1. To improve nutritional standards in the rural areas.
2. To eliminate bulk cereal imports, in particular rice, by 1980.
3. To achieve a 35% rate of growth in domestically consumed foodstuffs.

From the above objectives, the definition of food self-sufficiency was self-explanatory - turning the country from a net importer into a net producer of food. Also implicit and explicit in the definition of the objective was a certain concern and desire to do something about the low nutritional status of the population i.e. to satisfy not only the level of food intake required (quantitative side), but also to improve the diet of the people (qualitative aspect) for better health, greater physical and mental output and general well-being.

Since the declaration of this national policy of food self-reliance, various high level statements have been made at national and international fora by politicians and technocrats emphasising Government's will and commitment to the objective. Prominent among such pronouncements were the following made by His Excellency the President, Sir Dawda Jawara:

> "The strategy for the development of our zone (the Sahel)which we have fairly elaborated with our principal partners in the international community is also of important benefit. The objectives of this strategy are well-known, the most important priority being FOOD SELF-SUFFICIENCY in the region." (Statement made to CILSS Heads of State Conference at Banjul, 1977).

> "The immediate task undertaken by the Club du Sahel in collaboration with CILSS was the working out of a long-term development strategy and action programmes. That strategy covers the period 1978 - 2000 and its principal objective is the achievement of food self-sufficiency in the region as a whole, however difficult the climatic conditions may be, and, subsequently, self-sustaining economic and social development of the region". (Speech delivered to the United Nations General Assembly, September 22, 1978).

"I must again point that my Government recognises that the major responsibility for the increase of food production in the final analysis rests on nobody but ourselves, and we will continue to devote our energies towards bringing about an immediate improvement in the food situation, and to lay the foundations for the attainment of self-sufficiency in cereals, livestock and fish. With this view, my Government's priority is being directed towards securing a substantial reduction in crop losses by controlling pest infestation and bringing about a significant and sustained increase in food production." (1981 New Year's Message to the Nation).

National Strategy for Achieving the Objectives of Food Self-sufficiency:

If by 'strategy' we mean the methods and means deployed in attaining our objective, it is fair to state that this was not sufficiently elaborated in our First Five-Year Development Plan (1975/76 - 1980/81). The policy of national food self-sufficiency was, however, adequately defined and production targets for various food crops, e.g. rice, sorghum, millets and maize, were clearly stated.

But the means to be deployed (strategy) in achieving these production projections were not properly spelt out - no specific production packages were identified. Broad areas of improvements were specified, including the strengthening of the extension services, the development of in-service training and programme management; numeracy programmes, input supply, produce storage and marketing facilities for farmers; strengthening of applied research, livestock breed improvement, and provision of crop extraction and feeder roads. Chapter 9.3 (page 60) of the Plan states: "The most important feature of the strategy (agriculture) will be the co-ordination, integration, and strengthening of the extension effort in agriculture, animal husbandry and cooperatives. First priority will be the development of in-service training and programme management.

Directed in particular towards the small farmer are the Plan's provisions for numeracy programmes, credit and input supply, produce storage and marketing, applied research, feeder road and river wharf development, and cattle stock improvement. Priority attention will be directed to soil conservation and to improving the critical problem of surface and ground-water supply." Beyond this statement of intent, the Plan did not say how the objectives were to be realised. This may have contributed to many of the agricultural production targets not being met.

Appropriate lessons have been learnt from the short-comings of the First Five-Year Plan and these have been taken into due account in the preparation of the Second Five-Year Plan (1981/82 — 1985/86) which has not yet been officially launched. High on the priority list of objectives in this new Plan is increased food production and reducing imports of food into the country in the short and medium term, and the attainment of self-sufficiency in food grains over the long-term. It is envisaged that this long range national goal of food self-sufficiency can be achieved by the 1990's. Specifically, the Plan aims to raise the production of cereals from the present level of 65,800 tonnes to 78,800 tonnes by the end of the Plan period, representing an annual growth rate of 4.6%. To bring about the realization of this objective, the Plan embodies a 'food strategy' component in which annual food crop production projections are outlined and the various means to be deployed in realising them identified. There is also a 'food strategy' component in the Plan which aims to create a national grain reserve stock of 8,500 tonnes. This buffer or emergency stock of food is designed to avert national disaster (mass famine or starvation) in the event of natural calamities, i.e. catastrophic drought, floods, pest or disease epidemics or war. The specific strategies outlined in the Plan with which to increase food production include:

1. Sufficient and efficient use of fertilizers to increase yields.
2. Provision of improved seed of good varieties in sufficient supply.
3. Minimisation of pre - and post - harvest losses.
4. Adequate provision of production credit and price incentives.

5. Provision of marketing, processing and storage facilities.
6. Development and introduction of appropriate technological packages including selective mechanization.

An integrated approach to rural development was emphasized in the First Plan and there has been some evidence of this happening, at least at the planning level. It is however, difficult to see this approach applied effectively at the implementation level. Increased food production and better nutritional standards for the population will call for more integrated development.

Contribution of Bilateral and Multilateral External Aid to the Achievement of the Objective of Nutritional Self-Sufficiency

Since the advent of the drought and its dire economic and social consequences, there has been a significant increase in bilateral and multilateral aid to the Gambia. These bilateral and multilateral donor agencies have helped fund many a rural development project aimed at increased food production and ultimate food self-sufficiency.

The Nation's Most Important Achievements in the Area of Nutritional Self-Sufficiency:

The introduction of drought power or animal traction in the farming system, the increased use of chemical fertilizers by farmers on food crops and the introduction of irrigated rice cultivation in the eastern region of the country certainly represent some of the most important developments in the area of food self-sufficiency in The Gambia.

Singly and in combination, these innovations have contributed substantially to overall food production by helping to expand the area under cultivation of food crops or in raising yields significantly above traditional levels, or both. The expanded and improved crop protection services have also had meaningful impact on the production scenario by helping to reduce or minimise pre-harvest and post-harvest crop losses through effective pest and disease control measures.

2.0 THE GAMBIAN EDUCATION SYSTEM 1981

2.1 ADMINISTRATIVE FRAMEWORK

The Ministry of Education, Youth, Sports and Culture is headed by a Cabinet Minister, assisted by a Parliamentary Secretary. The Permanent Secretary, responsible to the Minister, is the chief executive officer of the Ministry, while the Director of Education, responsible to the Permanent Secretary, is the chief professional officer and acts as adviser to the Ministry on all education matters, including the supervision of all professional staff, programmes and committee work. The Department of Youth, Sports and Culture is headed by another Director who is also responsible to the Permanent Secretary.

2.2.2 THE DEPARTMENT OF EDUCATION IS DIVIDED INTO TWO SECTIONS:

A) Administration headed by an Assistant Director of Education (Administrative) who is responsible for the National School System, exercising his responsibility through four Principal Education Officers corresponding to the decentralized four Education Administrative Regions. Region One comprises of Banjul and Kombo St Mary; Region Two: Western Division; Region Three: Lower River (Mansakonko) and North Bank (Kerewan) Divisions; and Region Four: MacCarthy Island (Georgetown and Kuntaur) and Upper River (Basse) Divisions. Regional Education officers are located in Banjul, Brikama, Kerewan and Basse respectively. Principal Education Officers are assisted by Education Officers responsible for groups of schools and integrated programmes, and assisted by Assistant Education Officers who are responsible for specific activities.

B) Services headed by another Assistant Director of Education (Services) who co-ordinates the professional support services and is assisted by three Education Officers in charge respectively of In-Service Teacher Training, Female Education and Non-Formal Education activities.

There are seven professional sections providing support services, established under the Ministry, working in close relationship and consultation with the Department of Education. These are:

A) THE EDUCATIONAL PLANNING UNIT responsible for educational planning, educational statistics, finance and budgeting. The Unit advises the Ministry on aspects of translating policy into practical projects.

III. Education and Self-sufficiency in Food.

3.1. General Information

In pre-independent Gambia, development efforts in education had followed a rather lopsided pattern. Early development in education was confined to Banjul (then Bathurst) where the first schools were established by the Christian Missions soon after 1820. Further schools were opened during the 19th Century but there was little development outside the capital. Throughout this century education was given at the primary level. The aim was to teach the local people in the three r's (i.e. reading, writing and arithmetic) and to train them in basic skills. It was not until the 20th Century that the first secondary school was established (1901 — Methodist Boys High School). The secondary system was aimed at training Gambian nationals to occupy clerical and middle-level "white collar" jobs in offices.

By the time the missionaries arrived at least 60% of the Gambian population had been converted to Islam so they faced much opposition and education could not spread beyond St. Mary's Island (Banjul) and MacCarthy Island (Georgetown) where the freed slaves were resettled. Education was criticized for alienating students from their cultural roots and religious beliefs and to have created, not appreciation of their background, but rather a tendency to look down upon it. One might add that education also produced a condition of under-utilization of labour in the rural areas by turning children away from farming, the land, and any occupation associated with "dirty hands".

The Government now places educational emphasis on the needs and production possibilities of the country's predominantly rural population, and it also pays heed to such related factors as health and nutrition. Development in education since independence has been guided by three main policy documents; i.e. (1) the Sleight Report, which covered the 10 year period July 1965 - June 1975, (2) the Five Year Plan, for July 1975 — June 1980 and extended to June 1981 and (3) the Education Policy, for the 10 year period July 1975 — June 1986. Development as it has actually taken place in response to these policies is indicated in section 3.3

B) THE CURRICULUM DEVELOPMENT CENTRE has the ultimate responsibility of managing an on-going curriculum reform programme. It operates on a committee system, with a curriculum co-ordinating committee established within the Centre. It has subject committees, or panels at all levels of Primary, Secondary Technical and High Schools. Appropriate materials based on the syllabus developed by the Curriculum Development Centre are in the process of being disseminated to all primary schools.

C) THE BOOK PRODUCTION AND MATERIAL RESOURCES UNIT provides a broad back-up service for education. Trial copies of curriculum materials, non-formal education literature and training materials, and the provision of large quantities of textbooks for dissemination in the Primary sector are produced by the Unit. Maintenance of equipment and support for teachers' centres are also among its activities. An expansion project is currently under consideration.

D) THE NATIONAL LIBRARY has two sections, namely the lending and reference sections. It operates a loan system within the library and has two mobile libraries that provide a service to schools in the provinces which have no library facilities. It also runs a book-box for 54 Primary and 10 Secondary Technical Schools, providing from 50 to 100 books per school.

E) A SCHOOLS' BROADCASTING SERVICE on a nation-wide basis. English and Social Studies lessons are broadcast for Primary One and Two.

F) A NON-FORMAL EDUCATION SERVICES UNIT has been established under the Ministry of Education, Youth, Sports and Culture. It is charged with the task of being responsible for the co-ordination of all Non-Formal Education Programmes including conducting research into the needs of training personnel to operate the programmes, preparation of literature materials and evaluations of the programmes. It operates under a Consultative Committee composed of representatives of the Ministries/Departments of Agriculture, Medical and Health, Community Development, Education, Information, Co-operatives and other non-governmental agencies.

G) THE SCHOOL BUILDING UNIT is charged with the task of repairing and maintenance of school buildings including construction of new classrooms. The Head of the Unit is assisted by one assistant based in Farafenni. The Unit is supposed to operate building construction teams on a rotational basis throughout the country. Arrangements are being made to augment its staff and technical capability to enable it to cope with its expected functions.

5.3 EDUCATIONAL INSTITUTIONS

A) Pre-Primary Education is a non-governmental venture with just a minimum of Government involvement. A few Nursery Schools and Kindergartens are found in Banjul and Kombo Saint Mary Region only.

B) Primary Schools are categorized as Government, Local Agreement and "Others" (Mission or Independent). Apart from the two "independent" primary schools namely, Marina International School and Senegalese School which attract no funds from Government, all primary schools in the country are financed in full directly by Government and the Mission Schools receive full Grants-in-aid. Admission age to primary school is eight years. There were a total of 149 Primary Schools by the 1980/81 school year, with a total enrolment of 43,487 pupils of whom 15,194 (34.9%) were girls. The total teaching staff was 1809 of whom 585 (32.3%) were qualified. This represents an overall pupil/teacher ratio of 1:24 (1:30 excluding Home Economics and Koranic Teachers). Pupils sit for the Common Entrance Examination in Primary 6; this examination is administered by the West African Examinations Council. Approximately 40% of the children who sit this examination are admitted to secondary schools (30% to Secondary Technical and 10% to Secondary High Schools). There are hardly any other Post-Primary training opportunities open to Primary School leavers who do not get a Secondary School place. Repetition in primary classes one through five is comparatively low (about13.4% overall) but due to intensive competition and demand for admission to Form One of High Schools, repetition at Primary 6 level is excessively high (about 41.3% overall). Due to the policy of automatic promotion from Primaries One to Six, drop-out rate is almost negligible(5%).

C) There are 16 Secondary Technical Schools offering a four-year course with an enrolment of 5786 students of whom 1796 (31%) are girls, as of the 1980/81 school year. Five of these are located in Banjul, four in the Western Division, four in Region Three and three in Region Four. There is a total teaching force of 325 implying a liberal student/teacher ratio of approximately 1:18. Entry to Secondary Technical Schools is determined by the number of places available and pupils who score the next highest marks after the cut-off mark for admission to High Schools, at the Common Entrance Examinations are admitted. About 30% of those who sit the examination gain admission. These schools were designed to provide students with 'skills' or 'trades' which would enable them to have at least a reasonable background both in education and training to enter the labour market or offer employers a skill which could be further developed during employment. This intention

has, however, not yet been achieved. At the end of four years, the students sit the Secondary Technical School Leaving Examinations, and assuming that those who score Grade A to E have passed, almost 50% may be considered successful. A certain proportion of the students who score very high marks in the relevant subjects may be admitted to Forms 3 or 4 in High Schools.

D) There are 7 High Schools, offering a five-year course leading to the West African Examinations Council's 'O' level examinations. Two of these schools namely, Gambia High School and St Augustine's High School, offer two years 'A' level education for Lower and Upper Sixth Forms; these had an enrolment of 105 students by 1980/81. Five of the High Schools are in Region One, one in Region Two and one in Region Four, with a total enrolment of 3171 of whom 926 (29%) were girls. There were 200 teachers by the 1980/81 school year implying on average a student/teacher ratio of 1:16. Entry to High Schools is determined by the number of places available and only those students passing with the highest marks at the Common Entrance Examination gain direct entry. About 10% of those who sit the examination are admitted to High Schools. Repeater and drop-out rates to both the Secondary Technical and High Schools are very low, hence a high internal efficiency at this level.

E) Gambia College is fully funded by Government and is administered through a Board of Governors. It is an inter-disciplinary college with a School of Education, training primary school teachers, and schools of Agriculture, Nursing and Public Health. Candidates for the School of Education must have completed Secondary School, have served for at least one year as an unqualified teacher and must obtain pass level in the College Entrance Examination. An up-grading course of 1 year's duration is also conducted for unqualified teachers. The College has a total enrolment of about 360 students (Education 190, Agriculture 70, Nursing 80 and Health 20).

F) The National Vocational Training Centre, which is contolled by the Directorate of National Vocational Training in the President's Office, offers training in the following trades: Auto Electric, Electrical Installation, Motor Vehicle Mechanic, Mechanical Engineering, Craft Practice, Welding and Fabrication, Masonry, Carpentry and Clerical. The present enrolment is rather low and it will be increased when the new Technical Training Institute is completed in 1982.

G) Higher Education and advanced training is not available in The Gambia and scholarships are awarded in deserving cases to pursue courses overseas that are accorded high priority for manpower development. Approximately 170 scholars are benefitting from this scheme and pursuing such courses as Science (22), Agriculture (21), Medicine(20), Engineering (12), Arts (76), etc.

3.2.4 SCHOOL CALENDAR

The Calendar has been brought into line with the farming season so that during the summer vacation the pupils/students can go back to their parents' farms and supplement the basic function of intellectual training with actual participation in practical and productive activities.

3.3 QUANTITATIVE DEVELOPMENT TRENDS

3.3.1 GROWTH OF THE SCHOOL POPULATION 1964/65 -- 1980/81

The evolution of the school population (students and teachers) since independence is summarised in Table 3 (P35), showing that the total number of students grew from 14,729 in 1964/65 to 46,367 in 1979/80, i.e. by 8.0% per annum. Growth rates in the first, second and third 5-year periods since 1964/65 were 7.8%, 6.0% and 10.0% per annum, respectively. Then, in the last year of the first plan, 1980/81, the total number of students increased steeply to 52,795, i.e. by as much as 13.9% in one year.

The number of primary students grew from 11,504 in 1964/65 to 37,644 at the end of the 15 year period in 1979/80, which makes an average of 8.2% p.a. by as much as 15.4%.

The entry rate to primary, i.e. the enrolment in Primary One as percentage of the corresponding school age population (now 8 years), increased from 21% in 1964/65 to 30% in 1974/75, and rapidly further to 61% in 1980/81.

The number of secondary students increased from 2.992 in 1964/65 to 8,214 fifteen years later. The growth rate was lower than for primary in all three 5-year periods, but it shows interesting fluctuations: while in secondary high schools it increased from 2.0% in 1969-74 to 13.8% p.a. in 1974 - 79, in secondary technical schools there was a decline from 7.8% to 4.7% p.a. Then, in the last year of the Plan, the position was again reversed, with a higher growth rate (9.7%) in the secondary technical schools than in the secondary high schools((4.0%).

Growth in post-secondary schools was much slower than in primary and secondary schools. The number of students rose from 233 in 1964/65 to 409 in 1979/80. The growth rate declined from 4.8% p.a. in 1964 - 69 to 3.1% p.a. in 1974 - 79.

3.3.2 Achievements Under the First Plan

There has since 1974/75 been a very rapid quantitative expansion of education services as reflected in the number of institutions, students and teachers. The overall annual growth rate of the student population increased above earlier post-independence years. Moreover, growth was faster than projected in the Plan.

By international comparison expansion has been particularly rapid at the primary level. This happened in spite of the government decision to increase the entry age from 6 to 8 years with effect from the school year 1976/77, which was expected to lead to a temporary decline in enrolment. The target set in the Education Policy of 40,000 primary students by 1985/86 was reached more than five years earlier than planned. Already in 1980/81 the number was 43,432.

The rapid increase in the primary enrolment was caused by a combination of stimulating factors. The introduction of tuition-free schooling as from 1977/78, expansion of the school feeding programme and increased employment of Koranic teachers have been perhaps the most important. More classrooms have been built than before, either by the new School Building Unit or by the villagers themselves often with assistance from the Community Development Department. All these factors responded to increased social demand for primary education..

Unfortunately, the increase in enrolment has not been accompanied by a corresponding increase in the supply of qualified teachers and physical facilities. The percentage of qualified teachers decreased drastically both in primary schools (from 56 to 34) and secondary technical schools (from 72 to 44). Very many unqualified teachers were recruited in the First Plan period. The staffing situation remained better in secondary high schools due to a large increase in the number of expatriate teachers.

As regards physical facilities, e.g. building, equipment and furniture, the overall per capita position has deteriorated in primary schools. It also remains very unsatisfactory in most secondary technical schools. Much more is required to make these schools "technical" not only in name but also in reality. In secondary high schools the physical environment seems to have improved slightly on a per capita basis.

In view of the above trends, one cannot expect the average quality of the outputs of the school system to have improved. The educational standard of the secondary technical school leavers continues to be low. Instead

of entering the work force some seek admission to secondary high schools. The examination performance and undesirable subject composition of the GCE 'A' level is of particular concern from a manpower point of view.

The most important institutional innovations took place in the fields of curriculum development, book production and non-formal education. Both the Curriculum Development Centre and the Book Production and Material Resources Unit were established in the first plan period and have made some progress. The National Literacy Advisory Committee has been conducting literacy classes on a voluntary basis since 1976, with the support of Government and Non-governmental Organizations (NGOs)

Present Growth Potential of the Student Population

The evolution of the student population is a dynamic process in which changes of the past determine to a large extent those of the future. The recent steep increase in entry to primary schools will be felt throughout the next 10 years. The number of students in Primary One, Two and Three are now very large and will in due course move through the primary, secondary and post-secondary levels. They represent a built-in growth factor: even if entry to primary schools were to remain constant at the 1980/81 level of about 10,000, the total primary school population would grow by almost 20,000 over the next five years merely as a consequence of the present primary class structure; i.e. the dynamics of the student population suggests a continuous rapid growth during most of the Second Plan period even without any special government effort to speed it up.

The rapidly increased intake to primary schools as from 1978/79 will exert extra pressure for admission to secondary schools six years later, i.e. as from 1984/85.

Table III. NUMBER OF INSTITUTIONS, STUDENTS AND TEACHERS SINCE INDEPENDENCE

	Number (end of calendar year)					Annual increase (%)				
	1964	1969	1974	1979	1980	1964	1969-74	1974-79	1964-79	1979-80
Primary										
Institutions	77	95	94	134	148					
Students	11504	16867	22629	37644	43432	7.9	6.0	10.7	8.2	15.4
Teachers	273(1)	631	864	1371	1888					
Secondary technical										
Institutions	9	15	17	16	16					
Students	1900	2867	4200	5274	5788	6.8	7.8	4.7	7.0	9.7
Teachers	..	133	214	265	325					
Secondary high										
Institutions	4	4	5	7	7					
Students	1092	1442	1591	3040	3171	5.7	2.0	13.8	7.1	4.0
Teachers	..	78	90	192	201					
Post-secondary (2)										
Institutions	2	2	3	3	3					
Students	233	295	353	409	404	4.8	3.7	3.1	3.8	1.0
Teachers	18	25	31	52	54					
All levels (total)										
Institutions	92	116	119	160	174					
Students	14729	21471	28773	46367	52795	7.8	6.0	10.0	8.0	13.9
Teachers	343(1)	867	1199	1880	2388					

(1) Excluding Koranic teachers

(2) Including only the VTC in Banjul, ATC at Lamin and the Yundum College

.. Figures not available

Source: MEPID Working papers for the preparation of the Second Plan.

3.4 QUALITATIVE DEVELOPMENT TRENDS AND EDUCATIONAL RENOVATION

3.4.1 PREAMBLE

"The main objective of Education in the first Cycle Institution is primarily to buttress the efforts initiated within the immediate family environment in providing the child with the essential foundations for the effective propagation of sound and acceptable social and moral standards and norms to be able to live and effectively communicate and co-operate with other members of society in a healthy social climate. In providing the appropriate learning environment for the child during this primary stage, the intention is to assist him also to develop fully both his mental, emotional and physical potentials through a balanced combination of usefully planned and programmed, individual and group work and play activities within which the requisite learning experiences can best be achieved. It is in the first cycle of education that the frame-work, of the individual and the social nature of man as a member of a family, a nation and of society at large is built." (Ten Year Education policy)

3.4.2 CURRICULUM REFORM

When Gambia became an Independent Sovereign State in 1965, the Sleight Report entitled, 'The Development Programme in Education for the Gambia 1965 - 1975' and adopted by the Government, pointed out that "The content of education called for an entirely fresh approach", so that the curriculum would be relevant to national needs and appropriate for the children and youth for whom it is intended. Ten years later, the First Five Year Plan for Economic and Social Development , 1975/76 - 1979/80, placed high priority on the role of a reformed curriculum in the overall socio-economic development of The Gambia.

The Plan emphasized the need to raise the quality of education at the primary level, and for the secondary and tertiary level to restructure and reorient the system through the rapid introduction of the revised curriculum to meet "the learining needs of children in their environment and to foster a spirit of self-reliance". The Ten Year Education Policy

1976 - 1986 further articulated the need for a comprehensive revision of the school curriculum at all levels so as "to make education more relevant and responsive to the needs of the country".

In The Gambia, because the span of primary education is terminal for the large percentage of its graduates, it is at present the single most important vehicle for bringing education to the rural population. In other words, the general orientation of the curriculum programmes at the first level is to make education more adapted to rural living. Thus it is envisaged that at the end of the primary school course the pupils would have developed a sense of community, a spirit of service to others and increased their awareness of self-improvement, self-sufficiency and a pride in forming and generally improving the quality of their lives. It is in this light that the primary school's syllabus focuses on the following subject-matters:

A. Development of basic pre-vocational skills in rural technology:

a) food/crop production
b) crop rotation and mixed farming
c) food storage techniques
d) insect and pest control
e) animal husbandry

B. Food and nutrition education and home management:

a) preparation and preservation of foods
b) principles of nutrition including nutritive value of actual and potential foods.
c) production and home consumption of food resources
d) practical information on malnutrition
e) local diseases, causes and prevention
f) sewing skills/home crafts
g) family/personal hygiene and child care practices

C. Social/Cultural Studies

a) Islamic/Arabic Studies
b) local history
c) cultural music and art.

D. Local Languages (Wollof, Mandinka and Fula)

E. Environment Sciences

a) local conservation practices (wildlife, forestry and fisheries)
b) environmental sanitation.

This strategy is a shift in focus in the content of primary education giving greater emphasis to skills and knowledge that are practical and applicable to the community situation plus a varied and broadly based vocational orientation.

All the subjects are considered as experiences and activities for the pupils rather than in terms of a list of academic subjects. Their intellectual training is supplemented with actual participation in practical and productive activities so as to develop mental and manual skills applicable to the community situation not so much to make them, for example, active farmers in the schools, but to make them familiar with their locality in a scientific manner that will prepare them for a more productive and lucrative life as farmers.

The present primary school syllabus for Home Economics, too, provides the primary school graduates a standard fitting them to run their home with adequate knowledge of basic food and nutrition and home management. They will be invaluable assets to the other members of their community in imparting some of the basic skills learned. In this manner primary schooling will contribute significantly to rural productivity. The Gambia Government is of course aware of the question: "Under what conditions can primary schooling contribute to productivity?" and in the Second Five Year Development Plan it is laying the right conditions that will foster the work that has been started in the Primary School.

3.4.3 Non-formal Education

As regards non-formal education, the objective is to create greater balance and equity in the national education system by providing access to basic education (especially adult literacy) at the village level through existing institutions and on a voluntary basis. The strategy for non-formal education is to:-

i) Increase the national literacy rate (at present about 10%) through a variety of programmes co-ordinated by the Non-formal Education Service Centre recently established (1981).

The attendance of literacy classes is expected to increase from about 2,500 to 8,000 by the end of the Second Plan period (1985/86).

ii) Emphasis will be on functional literacy and numeracy, i.e. the teaching should be closely related to practical application.

3.5 Specific Contribution of Education to Nutritional Self-sufficiency

Less field study literature exists on the relationship between school and adoption of agricultural innovations in The Gambia. But the general impression is that both education and literacy are positively related to innovativeness particularly with regard to nutritional self-sufficiency.

3.5.1 Innovative Projects

A number of innovative projects which are educational in character have been initiated by various Ministries and Departments since the advent of the drought. Some of the most prominent of these include:

a) The Village-Based Farmer Training Programme

This aims to train and educate farmers in the efficient use and maintenance of draught implements, and in improved crop husbandry practices e.g. proper tillage, seed selection, timely planting, correct seeding

rates/plant population densities, proper application of fertilizers (kind, rates and time of application), timely/effective weed control, pest/desease control methods (cultural, chemical and biological), timely harvesting, processing and storage of crops, etc. Such farmer training/education is essential, if not indispensible, to the process of change from traditional to improved or modern agriculture, in that it helps to mould the attitudes, increase the knowledge and improve the skills of farmers. Without such developments taking place, farming is bound to remain very much the same - primitive, backward and unattractive. The efficient and effective use of draught power enables producers to increase their productivity and total output by carrying out certain time-sensitive operations such as ploughing, planting and weeding on schedule, and by expansion of the area under cultivation. Soil erosion control measures are also taught.

b) The Cereal Package Deal Programme

The objective of this programme is to raise yields and production of the major cereal crops i.e. sorghum, millet, maize and rainfed/upland rice through the provision of a package of inputs involving

- Improved seed and seed-dressing
- Use of fertilizer
- Improved cultural practices
- Close technical supervision

This approach is designed to educate the farmer about the inter-related and inter-dependant nature of crop production factors i.e. that none of the components of the package used in isolation of the others will result in significant increase in yields or production; they must be used in combination to produce the desired sort of results. The inputs (seed, seed-dressing and fertilizer) are provided on seasonal credit basis to participating farmers, repayable after harvest. This programme has contributed significantly towards changing the attitude of farmers to the use of chemical fertilizers on their food crops. Hitherto, it was not the practice among farmers to apply fertilizer to food crops; they would only buy fertilizer for their cash crops. So seen from this light,

the cereal package programme has been something of an important break-through in food production in the country.

c) Irrigated Rice Project:

Initiated by the Taiwanese in 1966 , this project involves the growing of two crops of rice in the year by means of pump irrigation using the waters of River Gambia. The project relies on the participation of small farmers organised into Rice Growers Societies/Associations. The production approach emphasizes the training of farmers in the use of improved technology required for high yields, namely use of improved varieties, proper seedbed preparation, care of seedling nurseries, timely transplanting, efficient use of fertilizer, water control in the paddy fields, weeding, timely harvesting, etc. The project has brought 2,500 ha under rice but more important than its contribution to the overall rice production is the new knowledge and skills farmers have acquired from the innovation. Extension workers have also benefitted a lot from the training provided by the Project.

d) The Rural Development Project:

This project was an 'integrated' one in content, if not in function. Among other objectives, the Project aimed at providing a complete package of draught implements and production imputs to project farmers with the view to boosting up crop production phenomenally. Unfortunately, this Project failed to make the expected impact on production, not only because of the drought experienced during the life span of the Project, but also because of serious weaknesses in the training component; the production credit package was not effectively linked to any specific training programme to enable Project farmers to benefit optimally from the input package.

e) Mixed-Farming And Resource Management Project

This is a newly initiated project funded by the USAID. Among other objectives the Project is concerned with:

1. Detailed evaluation of the country's land resources, including aerial photography and the development of land use maps.
2. The development and management of controlled grazing areas and

the development of basic data necessary for grazing area management and land use policies.

3. Development of improved forage production and management system and improved technologies for maize production.

4. Introduction of improved rural technologies including the provision of modified farm carts, training of Department of Agriculture personnel in new technologies and on-farm demonstrations of improved crop production technologies.

The Project is primarily concerned with the increased production of maize (corn) both for human consumption and as livestock feed, and the production and conservation of other fodder and forage crops. In this regard, great emphasis is laid on the training and education of farmers who are the immediate beneficiaries of the Project. Intensive inservice training of extension supervisors and crop demonstrators is another important aspect of the Project's production packages. It is hoped that the new skills, knowledge and attitudes farmers will acquire from the training programmes will contribute significantly to the adoption of improved technology and lead to sustained high levels of crop and livestock production.

f) Soil and Water Management Unit.

Also USAID funded, this Unit is concerned with soil and water conservation problems of the country and their technical solutions. In more specific terms, the purpose of this Unit is to:

1. Establish a functional unit of government with responsibility for soil and water conservation problems and solutions to them.

2. Develop soil and water conservation technology and methodology within the country's capabilities and resources for improved agricultural and pastoral methods.

3. Provide technical services to land users for solving soil and water conservation problems at national and village levels.

In relation to its purpose, the goals of the unit are to:

1. Halt and/or reverse environmental deterioration due to inadequate or traditional agricultural/pastoral methods or practices.

2. Increase and /or stabilize agricultural production of food, forage, wood and cash crops, and reduce susceptibility of crop production to drought and other weather variations.

3. Improve Government's institutional capability to deliver educational, technical and material services to the rural population.

For the accomplishment of its goals and objecitves, the Unit is particularly concerned with the training of Gambian technicians in the various fields of conservation technology including soil and water engineering, woodland conservation, range management, soil chemistry/fertility, soil survey/classification, agronomy, etc. This core of trained and specialised officers will be subject matter specialists who will in turn train and provide technical back-stopping to village-level extension workers who are ultimately expected to educate and help to train farmers in the identification of, and providing solution to, their soil and water management/conservation problems.

g) Community Development Women's Programmes

These programmes are geared towards raising the standards of living of rural women by educating them to make better and wiser use of resources at their disposal in and around the home. Training in home life for these rural women tries to impart skills and knowledge:

1. To give better understanding of dietetics, to enable them to improve nutritional contents of family meals.

2. To enable them to have better understanding of family life and proper child care and health care. This is especially important because of the high infant mortality and morbidity rate which comes to about 50% of the 0 - 5 year olds.

3. To impart the art of clothes-making to enable them to make their own clothes and that of others.

4. To give instructions in the growing of better and more varied crops and vegetables.

5. To encourage them to use some of the products for home consumption instead of selling all.

h) The Dunn Nutrition Unit Project

The Medical Research Council Dunn Nutrition Unit's protein - energy malnutrition programme has been operative in The Gambia since April 1974.

The first aim has been to identify the dietary and associated disease factors which predispose young Gambian children to growth faltering, body wasting and, in more extreme cases, to marasmus, the ultimate aim being to identify factors which, if subjected to controlled intervention, should bring about a significant improvement in growth and child health.

In the preliminary phase (1974-75) environmental and development features in children under 3 years of age were monitored regularly, at monthly intervals and more frequently when clinically necessary. The growth patterns of children showed a degree and prevalence of malnutrition in the community. It was also established that the degree of malnutrition was not only dependent upon age but also upon time of the year. During the rains as many as 75% of children aged between 13 - 18 months may be under-weight and nearly 40% marasmic.

The annual farming calendar determines to a large extent the seasonal eating pattern in rural Gambia. The cereal crops are harvested between September and December so food supplies are particularly plentiful in November and December, while in July and August food shortages often occur; this time is know traditionally as the "hungry season". In addition, much of the farm work is undertaken by the women. This influences the time that is available for cooking, which further restricts the types of food that can be prepared during the farming season. Thus mothers are also frequently under-weight.

A major nutritional problem is particularly recognised among pregnant and lactating women. Typically, their intakes may be as little from 1400 kcals/day to 1600 kcals/day, even at the best time of the year (the dry season). This represents only 60% of the recommended requirements. When nutritional requirements are increased by the heavy farming activity required of women during the rains, nutritional status deteriorates if no extra food is eaten. As this is the hungry season and food supplies are often scarce, this is the season when weight gained during pregnancy is particularly poor and birth weights of babies at this time are lower. Their chances of dying are expecially high.

The health hazard arising from under-nutrition is increased by such conditions as poor sanitation, widespread infections, parasitic infestations and heavy work. Thus, the project's nutrition intervention programme not only supplements the dietary intake of mothers and their children, but also educates mothers on personal hygiene, on nutritional self-sufficiency, on how to choose the right kinds of foods and how to cook them. The introduction of day care centres to relieve the burden on women farmers and provide primary health care, and the creation of village level cereal banks to ensure a measure of food security have met with great success.

IV. CONCLUSIONS AND RECOMMENDATIONS

4.1. Conclusions

The Gambia, in common with other Sahelian countries, has suffered tremendous setback in its struggle for economic and social development over the past decade. Agricultural production, which provides the base for the country's economy, has been severely hit by drought and other adverse climatic conditions between 1972/73 and 1980/81, the worst seasons within this time bracket being 1972, 1973, 1977, 1979 and 1980. During this period the output of both food and export crops fell well below average and the performance of the economy was severely affected as a result. Emergency food aid had to be sought from the international community to prevent mass hunger and starvation in the country. The fragile ecosystem of the Sahel became even more precarious, with the drought affecting the delicate equilibrium of the natural environment and resulting in desertification, disappearance of natural grazing for livestock, soil deterioration and degradation arising from over-grazing and wind and water erosion; pest population build-up and general environmental degradation. Something had to be done to redress the harsh and cruel situation, to minimise or eliminate the sufferings of the people in the short term, and to counteract and ameliorate the long-term effects of drought by restoring, and conserving the natural environment/ecosystem. The common concern of countries within the Sahel region about the recurrence of drought and its terrible economic and social aftermath, and the need to act individually and collectively to confront the situation squarely, gave birth to the Permanent Inter-State Committee for the control of Drought in the Sahel - CILSS.

It was within the framework of CILSS that the Sahelian states came to adopt the objective of food self-sufficiency within the region as a necessary and desirable long-term development strategy.

As a member of CILSS The Gambia has committed itself to the goal of food self-sufficiency and has initiated various food production oriented projects in the context of its First Five-Year Plan for Economic and Social Development designed to bring this about. Achievement, however,

was minimal largely owing to the impact of the drought, but partly because the necessary allocation of financial and other investment resources for productive sector were not forthcoming. There was in effect a degree of difference between the declared intention on the one hand and actual commitment on the other.

4.2. Recommendations

For the Gambia to achieve its goal of food self-sufficiency in the medium or long-term, the following suggestions would seem germane:

4.2.1. Nutrition Unit

A) The setting up of a national nutrition unit (within the Ministry of Economic Planning and Industrial Development) functioning in an advisory capacity to the different Ministries.

B) The Unit should develop nutrition policies in association with the Ministries of Health, Education, Agriculture and Economic Planning.

C) It should be responsible for co-ordinating and advising on the nutritional impact of development projects of the above Ministries.

D) It should contribute to the design of nutritional surveillance strategies in order to answer nutritional questions of interest to the Ministries.

E) It should develop and co-ordinate specific nutrition projects in association with ministries (e.g. school feeding programmes, nutrition rehabilitation projects).

F) It should establish priorities for nutrition education for the various extension workers of the Ministries. This would involve assistance with the development of nutrition modules in training courses.

G) It should establish priorities for nutrition education of the public and co-ordinate and initiate education projects (e.g. in primary schools and mass media).

H) It should initiate research into nutritional questions.

I) It should promote dissemination of nutritional news and information.

4.2.2. Medical and Health

A) Improve management of children with weight faltering - by designing appropriate activities for health workers within the existing primary health care system (e.g. develop suitable out-patient feeding regimes, give guidance and resources to health worker involved in targeted nutritional education).

B) Improve nutritional knowledge of health workers (that is, once item A has been established), design training modules for nutrition projects).

C) Decrease the impact of infection on nutrition (ensure availability of drugs for treating serious infections, early oral rehydration.)

D) Decrease faeces contamination of environment by improvement of sanitation.

E) Encourage the development of improved water supplies throughout the Gambia.

F) Improve Public Health Education - develop appropriate messages for primary health care.

G) Establish nutrition serveillance network.

H) Integrate family planning services more effectively into primary health care and nutrition activities.

4.2.3. Education

A) Increase Nutrition Education in Primary Schools - by development of appropriate curricula and by training of all teachers especially men in the elements of nutrition, public health and hygiene.

B) Increase Nutrition Education aiming at Men - by development of suitable radio programmes (hopefully in association with the Nutrition Unit) and by development of nutrition modules in adult literacy classes.

C) Increase Nutrition Education among Women - through mass media and Day Care Centres etc.

D) Incorporate nutrition into curricula (discussions, lessons etc.) which focus on development in the Gambia.

E) Explore more appropriate methods of transmitting nutritional concepts by mass media, especially those which can cross the traditional cultural barriers of education standing, ethnic group etc.

F) Develop methods of evaluating whether education, especially of adults, results in changes in nutritional attitudes and practices.

4.2.4. Agriculture

A) Develop agricultural policies which will improve the status of the malnourished families.

B) Ensure the availability of adequate agricultural credit facilities for the neediest farmers, especially women.

C) Develop more efficient marketing systems and where necessary devise suitable import control measures inorder to encourage greater production and consumption of local produce (e.g. onions, etc.)

D) i) Decrease energy expenditure of agricultural activities (especially for pregnant and lactating women) by developing appropriate technology for reducing the energy cost of growing cereals (rice in particular), post-harvest work and preparation of food. For example, the introduction of grain processing equipment in the form of small mills and grinding machines to facilitate the processing of food grains for marketing, transportation and storage and their easy preparation into a dish. This is currently a major constraint to the increased production and consumption of the upland cereals - sorghum, millet and maize.

ii) Encourage the development of projects using animals for transport, develop further methods for reducing energy expenditure (e.g. cause-ways between rice fields).

E) Develop more efficient systems for distribution of agricultural technology (e.g. seeds, fertilizers, storage).

F) Intensify research into the breeding of short-duration and/or drought-tolerant, disease-resistant and high-yielding varieties of creals which will be able to thrive better in the Sahelian ecology and rainfall regime.

G) The adoption of improved soil and water management practices to help conserve these resources and encourage their efficient use.

H) Civic and political education of farmers and the general citizenry about the importance and desirability of food self-sufficiency and food security for the country and its economic and social benefits.

I) The strengthening and expansion of crop protection services so as to minimise pre-and post-harvest losses.

4.2.5. Community Development

A) Encourage the discussion of nutrition problems with community and encourage the development of decision making towards activities and mobilization of resources that can improve nutrition.

B) Assist in the design of nutrition projects in which the community decides on priorities, but the Community Development Worker acts as the catalyst.

C) Establish better means of communication at a local level between extension workers from different departments who are involved in nutrition related projects.

D) Stimulate communities into exploring which existing administrative structures (e.g. Day Care Centres) could be used to improve nutrition in children and pregnant or lactating women.

E) Identify problems that are encountered with current nutrition education programmes and design more effective means which will result in change at the village level.

4.2.6. Integration

Policies and programmes should be designed in ways through which the impact on nutrition will be the result of several departments working together. Specific integrated projects should be designed, implemented and evaluated in order to maximize improvement in the numbers of malnourished in the Gambia.

Appendix I.

THE GAMBIAN EDUCATIONAL SYSTEM

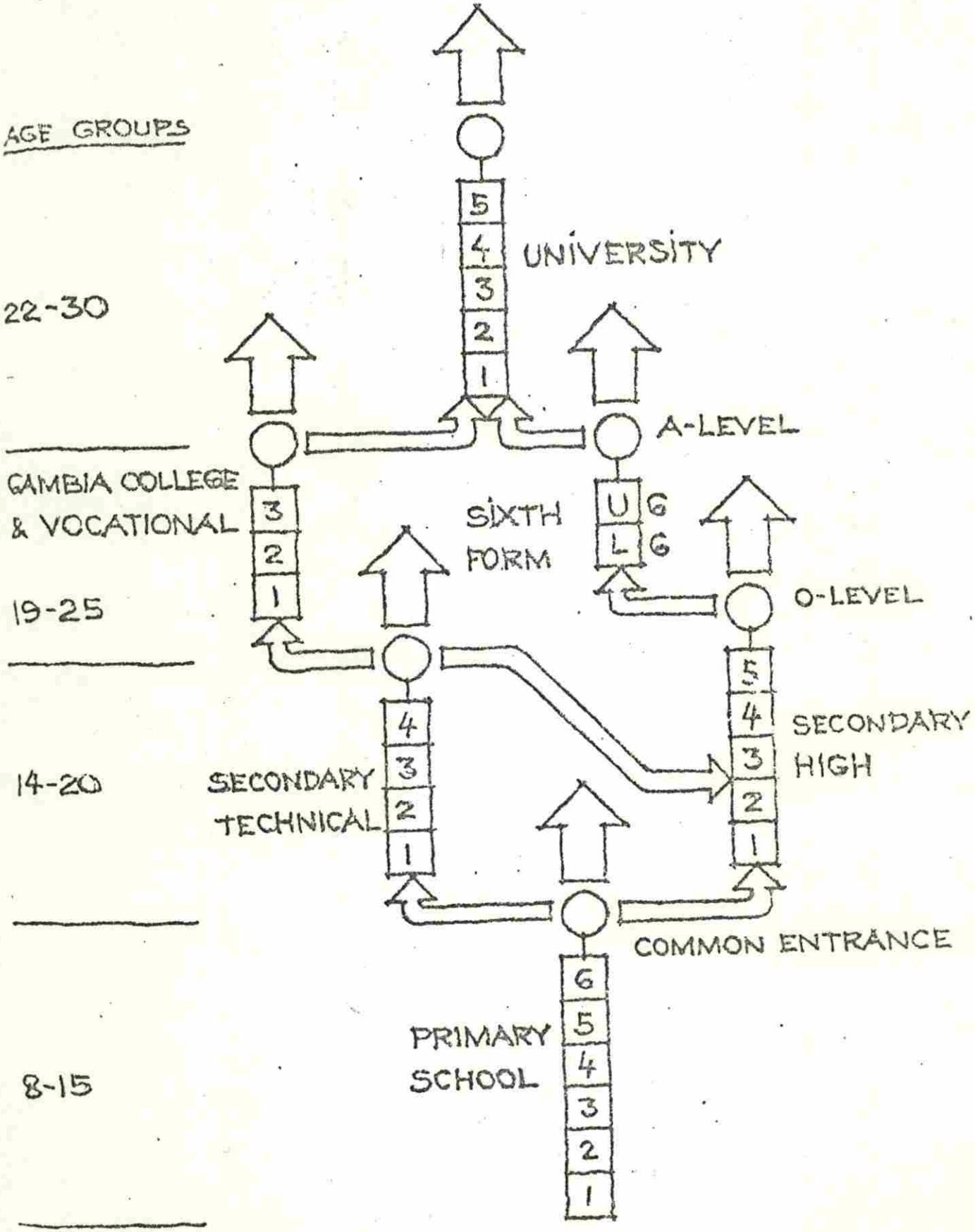


Table 1.1 NUMBER OF INSTITUTIONS, STUDENTS AND TEACHERS SINCE INDEPENDENCE

	Numbers (end of calendar years)					Annual Increase (%)				
	1964	1969	1974	1979	1980	1964-69	1969-74	1974-79	Total 1964-79	1979-80
Primary										
Institutions	77	95	94	134	148					
Students	11504	16867	22629	37644	43432	7.9	6.0	10.7	8.2	15.4
Teachers	273(1)	631	864	1371	1808					
Secondary technical										
Institutions	9	15	17	16	16					
Students	1900	2867	4200	5274	5788	6.8	7.8	4.7	7.0	9.7
Teachers	..	133	214	265	325					
Secondary high										
Institutions	4	4	5	7	7					
Students	1092	1442	1591	3040	3171	5.7	2.0	13.8	7.1	4.0
Teachers	..	78	90	192	201					
Post-secondary(2)										
Institutions	2	2	3	3	3					
Students	233	295	353	409	404	4.8	3.7	3.1	3.8	-1.0
Teachers	18	25	31	52	54					
Total										
Institutions	92	116	119	160	174					
Students	14729	21471	28773	46367	52795	7.8	6.0	10.0	8.0	13.9
Teachers	343(1)	867	1199	1880	2388					

(1) Excluding Koranic teachers

(2) Including only the VTC in Banjul, ATC at Lamin and the Yundum College

..Figures not available

Source: MEPID Working papers for the preparation of the Second Plan.

Table 1.3 STUDENTS [illegible] IN SECONDARY TECHNICAL SCHOOLS BY FORM AND SEX, 1978/79 - 1985/86

Retention rates

	Sex	Students (actual) 1978/79	1979/80	1980/81	Actual 1978/81	Projected 1981/86	Students (projected) 1981/82	1982/83	1983/84	1984/85	85/8
Form 1	M	1023	1059	1143							
	F	419	461	560							
	T	1442	1520	1703			1740	1780	1820	1860	1900
Form 2	M	808	1002	1055							
	F	342	454	474							
	T	1150	1456	1529	1.01	1.00	1700	1740	1780	1820	1860
Form 3	M	394	808	928							
	F	349	371	410							
	T	1143	1179	1338	0.97	1.00	1530	1700	1740	1780	1820
Form 4	M	799	789	866							
	F	300	330	352							
	T	1099	1119	1218	1.01	1.00	1340	1530	1700	1740	1780
Total	M	3424	3658	3992							
	F	1410	1616	1796							
	T	4834	5274	5788			6310	6750	7040	7200	736

BLE 1.2 *STUDENTS AND RETENTION RATES IN PRIMARY SCHOOLS BY GRADE AND SEX, 1978/79 - 1985/86*

	Sex	Students (actual) 1978/79	1979/80	1980/81	Retention rates Actual 1978/81	Projected 1981/86	Students (projected) 1981/82	1982/83	1983/84	1984/85	1985/86
mary 1	M	4823	5396	5899							
	F	2613	3269	4185							
	T	7436	8665	10084			11400	12000	12700	13400	1410
mary 2	M	3943	5138	5437							
	F	1953	2553	3029							
	T	5896	7691	8466	1.00	1.00	10100	11400	12000	12700	13400
mary 3	M	3417	3879	4928							
	F	1500	1836	2476							
	T	4917	5715	7404	0.97	0.98	8300	9900	11200	11800	12400
mary 4	M	3925	3382	3781							
	F	1498	1501	1821							
	T	5423	4883	5602	0.99	0.98	7300	8100	9700	10900	11500
mary 5	M	2871	3163	3702							
	F	1314	1531	1601							
	T	4185	4694	5303	0.97	0.98	5500	7100	8000	9500	10700
mary 6	M	3660	4169	4538							
	F	1603	1827	2035							
	T	5263	5996	6573	1.42	1.40-1.25(1)	7400	7400	9200	10.000	11900
al	M	21739	25127	28432							
	F	10481	12517	15147							
	T	32220	37644	43432			50000	55900	62800	68300	74000

Declining from 1.40 (1980/81-1981/82), 1.35 (1981/82-1982/83), 1.30 (1982/83-1983/84) to 1.25 (1983/84-1985/86)

TABLE 1.4 STUDENT AND RETENTION RATES IN SECONDARY HIGH SCHOOLS BY FORM AND SEX, 1978/79 – 1985/86

	Sex	Students (actual) 1978/79	1979/80	1980/81	RETENTION RATES Actual 1978/81	Projected 1981/86	Students (Projected) 1981/82	1982/83	1983/84	1984/85	1985/86
rm 1	M	370	411	426							
	F	170	183	182							
	T	540	594	608			640	670	700	730	760
Form 2	M	363	397	414							
	F	191	151	184							
	T	557	548	598	1.01	1.00	610	640	670	700	730
Form 3	M	384	413	427							
	F	211	207	177							
	T	595	620	604	1.11	1.06	630	650	680	710	740
Form 4	M	395	420	432							
	F	171	172	200							
	T	566	592	632	1.01	1.00	600	630	650	680	710
Form 5	M	230	441	462							
	F	91	154	162							
	T	321	595	624	1.05	1.00	630	600	630	650	680
Form 6	M	40	76	84							
	F	34	15	21							
	T	74	91	105	0.26	..	120	140	150	160	180
Total	M	1782	2158	2245							
	F	868	882	926							
	T	2650	3040	3171			3230	3330	3480	3630	3800

TABLE 1.5 STUDENTS AND PASSES AT YUNDUM/GAMBIA COLLEGE AT BRIKAMA BY COURSE AND YEAR OF STUDY, 1978/79 - 1985/86

Title of course	Actuals			Projections				
	1978/79	1979/80	1980/81	1981/82	1982/83	1983/84	1984/85	1985/86
Gambia Teachers' Certificate (three/two years)								
First Year	60	56	52	56	60	60	60	60
Second Year	56	54	54	50	54	58	58	58
Third Year	39	51	54	53	49	53	57	57
Students, subtotal	155	161	160	159	163	171	175	175
Passes	39	49	..	53	49	53	57	57
Programme for upgrading primary teachers (one year)								
Students	27	25(1)	30	30	30	-	-	-
Passes	27	30	..	30	30	-	-	-
Programme for secondary teachers (ATC-three years)								
First Year	-	-	-	-	-	20	20	20
Second Year	-	-	-	-	-	-	18	18
Third Year	-	-	-	-	-	-	-	17
Students, subtotal	-	-	-	-	-	20	38	55
Passes	-	-	-	-	-	-	-	17
Certificate in General Agriculture								
Preparatory Year/First Year	31	32	40	18	22	22	22	22
Second Year	18	37	32	38	16	20	20	20
Students, subtotal	49	69	72	56	38	42	42	42
Passes	15		..	38	16	20	20	20
All courses Yundum/Gambia College at Brikama								
Students, total	231	255(1)	262	245	231	233	255	272
Passes, total	81		..	121	95	73	77	94

(1) Reportedly there were 5 more trainees, specialising in home economics

Table 1.6 STOCK AND FLOW OF TEACHERS IN PRIMARY SCHOOLS, CALENDAR YEARS 1975-85

	Actuals/assumptions						Projections				
	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985
Stock of qualified teachers at the beginning of the year (1/1)	442	429	451	451	481	528	607	671	734	788	816
+ Inflow in the year (1/1-31/12) from the 3-year college programme	29	25	29	51	39	49	54	53	49	53	57
+ Inflow in the year from the 1-year college programme	-	-	-	-	27	30	30	30	30	-	-
+ Net inflow from abroad in the year	-	3	-	-	-	-	-	-	-	-	-
- Outflow to secondary technical schools	-	-	-	-	5	5	5	5	5	5	5
- Outflow by attrition in the year	42	6	29	21	14	-5	15	15	20	20	18
= Stock of qualified teachers at the end of the year (31/12)	429	451	451	481	528	607	671	734	788	816	850
Students at the end of the year (31/12)	24617	25513	27560	32220	37644	43432	50000	55900	62800	68300	74000
Student/teacher ratio (all teachers)	28	27	25	26	27	24	25	27	29	30	31
Stock of all teachers	878	956	1089	1241	1371	1808	2080	2160	2240	2320	2400
Stock of unqualified teachers (1)	449	505	638	760	843	1201	1409	1426	1452	1504	1550
Qualified teachers in % of all teachers	49	47	42	39	39	36	32	34	35	35	35

(1) Including Koranic teachers

TABLE 1.7 STOCK AND FLOW OF TEACHERS IN SECONDARY TECHNICAL SCHOOLS, CALENDAR YEARS 1975 - 85

	Actuals/assumptions						Projections				
	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985
Stock of qualified teachers at the beginning of the year (1/1)	144	128	122	115	112	119	143	182	188	194	201
+ Net inflow in the year (1/1-31/12) from primary schools	-	-	-	-.	5	5	5	5	5	5	5
+ Inflow from the Brikama secondary teacher (3-year) programme	-	-	-	-	-	-	-	-	-	-	-
+ Inflow from the (1-year) upgrading of programme for secondary technical teachers (IDA)	-	-	-	-	-	-	33	-	-	-	-
+ Net inflow from external fellowship programmes (Government-sponsored)	-	-	-	-	-	-	-	-	-	2	2
+ Net inflow from external training programmes (Government-sponsored)	-	4	4	4	5	8	8	8	8	8	8
+ Net inflow of independent Gambians from abroad	-	-	-	-	2	-	-	-	-	-	2
- Net outflow of expatriates	2	2	-	2	2	-2	-	-	-	-	-
- Outflow by attrition	14	8	11	5	3	-9	7	7	7	8	8
= Stock of qualified teachers at the end of the year (31/12)	128	122	115	112	119	143	182	188	194	201	210
Students at the end of the year (31/12)	4282	4635	4578	4834	5274	5788	6310	6750	7040	7200	7360
Student/teacher ratio (all teachers)	22	20	19	19	20	18	19	20	20	20	20
Stock of all teachers	195	228	241	261	265	325	332	339	346	353	360
Stock of unqualified teachers (1)	67	106	126	149	146	182	150	151	152	152	150
Qualified teachers in % of all teachers	66	54	48	43	45	44	55	55	56	57	58

(1) Including Koranic teachers

Table 1.8 STOCK AND FLOW OF TEACHERS IN SECONDARY HIGH SCHOOLS, CALENDAR YEARS 1975-85

	Actuals/assumptions						Projections				
	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985
Stock of qualified teachers at the beginning of the year (1/1)	81	92	111	122	136	180	183	188	193	197	201
+ Inflow in the year (1/1-31/12) from secondary technical schools	-	3	-	-	7	-	-	-	-	-	-
+ Inflow from external scholarship programmes (Government-sponsored)	-	-	-	1	3	2	4	4	4	4	4
+ Inflow from external fellowship programmes (Government-sponsored)	5	5	2	2	10	6	6	6	6	6	6
+ Net inflow of independence Gambians from abroad	-	-	-	-	2	2	2	2	2	2	2
- Net outflow of expatriates	-10	-13	-15	-15	-24	2	2	2	2	2	2
- Outflow by attrition	4	2	6	4	2	5	5	5	6	6	6
= Stock of qualified teachers at end of the year (31/12)	92	111	122	136	180	183	188	193	197	201	205
Students at the end of the year (31/12)	1896	2199	2416	2650	3040	3171	3230	3330	3480	3630	3800
Student/teacher ratio (all teachers)	18	17	17	17	16	16	16	16	16	17	17
Stock of all teachers	104	129	142	155	192	201	204	208	212	216	220
Stock of unqualified teachers (1)	12	18	20	19	12	18	16	15	15	15	15
Qualified teachers in % of all teachers	88	86	86	88	94	91	92	93	93	93	93

(1) Including Koranic teachers

Appendix II.

2. ECONOMIC DEVELOPMENT SINCE 1973/74

2.1. Overall Growth and the Use of Resources

Overall economic growth since 1973/74 has been low. The economy remained almost totally dependent on groundnut production and its derived activities in spite of Government efforts towards diversification. During the period 1973/74 — 1978/79 the Gambia economy has been characterized by:-

a) The dominance of agriculture and related activities (livestock, fisheries and forestry) which accounted for 45 percent of GDP. Groundnut production contributed 20 to 25 percent of GDP

b) An average economic growth of 1 percent per annum.

c) Large annual fluctuation in GDP, mainly due to variations in groundnut production.

d) A high growth in public administration and other services.

During the period under consideration, the economy remained vulnerable to factors entirely beyound Government's control. Among these factors were the vagaries of the weather which determined agricultural production; world demand for groundnuts which caused prices to fluctuate; and the economic conditions in northern Europe which affected tourist inflows. Variations in agricultural production also affected two other sectors of the economy: manufacturing, which mainly consists of groundnut oil milling, and commenrce in which GPMB trading operations play a large part.

Before 1975/76 the country made substantial domestic savings (about 12% of GDP) due to favourable groundnut production and low levels of public and private consumption. However, when implementation of the First Five Year Development Plan got underway, not only consumption, but also public investments increased rapidly while at the same time groundnut production was declining rapidly due to the severe Sahelian drought.

2.2. Government's Budget

The financial situation of the public sector is to a large extent determined by the level of groundnut production and the demand for imports from neighbouring countries. More than two thirds of budgetary revenues are derived from taxes on groundnut exports and import duties. Indirectly, groundnut exports influence most other sources of government revenues as well.

Financial policy has been rather conservative. Government's main objective is to keep current expenditure within the limits which would be sustained by current revenue and to finance development projects from budgetary savings and foreign aid obtained at concessionary terms.

2.3. Public Enterprises

Since 1973/74 the number of public enterprises has substantially increased. In 1974/75 there were 8 public enterprises, 10 in 1975/76 and by 1979/80 the number had reached 14. These enterprises, by reason of their institutional character and of the objectives assigned to them, play a crucial role in the economy.

Government's efforts to participate in directly productive activities can be seen as one of the factors which have led to the emergence and expansion of public enterprises. The objectives for government's involvement in these activities can be many; for example, the desire to regulate producers' markets, as in the case of groundnuts, or the need to supply, control and distribute essential goods and services such as electricity and water.

Since a detailed discussion of all the public enterprises is not envisaged in this study, only a few which are directly related to the agricultural sector (including livestock and fisheries) will be highlighted:

The Gambia Produce and Marketing Board (GPMB).

Is financially the most important institution in the Gambia. Its turnover of more than D150 million is twice as large as the government's current budget. Among public enterprises, GPMB is the largest saver and practically the only one to contribute to the government's current and development budget. It is also the main financial support for other public enterprises in difficulty.

Over the past few years, GPMB has acquired a more important role in the Gambian economy. It has extended its activities well beyond the marketing of groundnuts and other export crops by moving into the following fields:-

a) processing of groundnuts, rice, cotton and lime;
b) distribution of farm inputs (seeds and fertilizers);
c) river transportation by taking over the Gambia River Transport Co. (GRT) in 1976;
d) participation in the Gambia Commercial and Development Bank.

The Livestock Marketing Board (LMB).

Is mainly engaged in local trading of livestock. Its activities were hampered, however, by lack of sufficient working capital, by a price structure which prevented it from operating profitably on the domestic market. Recently LMB has been engaged in a programme of exports of live cattle supplied for breeding to Nigeria and Gabon.

The Fish Marketing Corporation (FMC)

(FMC) was established in 1977. However, after two and a half years of existence, this public corporation collapsed. Its operations were constrained by a weak capital structure, a poor management and marketing performance, and finally the breakdown of its cold storage plant.

2.4. Balance of Payments Developments

The Gambia's economy is heavily dependent on foreign trade. Groundnuts being the principle export of the country, suffered from the severe

droughts which consequently resulted in a decline in the total value of exports. In addition to the groundnut trade, foreign trade is stimulated by the role of Banjul as an important transit center for re-export of consumer goods to neighbouring countries. Particularly low import taxes, reinforced by a liberal trade system and the traditional ability of local import firms to find the most advantageous source of supply on the world markets, explain the Gambia's success in this trade.

The upsurge in imports since 1973/74 was due partly to expansion of the re-exports trade, but mainly to rapid increase in imports for domestic use of investment goods, consumer goods and intermediates such as petroleum products. The increase reflected both the direct effects of the large public and private investment, and the indirect effects resulting from increased consumption from incomes generated by the investment and the greatly increased needs for maintenance of the capital assets and operation of the services created by the investments. Because of the narrow production base, most of the needs for both investment and consumption goods have to be met by imports.

Continuous and rapid increase in the prices of imports and low prices of groundnuts resulted in a deterioration of the terms of trade. The balance of merchandise trade was in deficit throughout the period.

The excess of goods and services was financed mainly by external aid (grants and loans for development projects) and external financing of private investment.

3. EXECUTION OF FIRST FIVE YEAR DEVELOPMENT PLAN

3.1. Agriculture

Government's agricultural objectives during the First Plan period had focused on:-

(a) increasing the production of export crops (mainly groundnuts and cotton);

(b) diversifying the agricultural base;

(c) developing irrigated agriculture to lessen the impact of the sufficiency and irregularity of rainfall;

(d) achieving a 45 percent rate of growth in domestically consumed foodstuffs and a 35 percent rate of growth in marketed export crops at the end of the Plan period;

(e) improving nutritional standards in rural areas.

Total public sector investments in agriculture and related services amounted to D57.4 million. Agricultural output per annum for the major export crop, groundnut, averaged about 105 thousand tonnes for the period 1975/76 - 1980/81. Average cereal production per annum over cereal imports averaging 38.9 thousand tonnes over the same period.

3.2. Main Crops

Groundnuts

During the First Plan period the amount of land devoted to groundnut production was rather stable, about 110,000 hactares, but groundnut production dropped far below the target levels assumed in the Plan. With the exception of the poor harvests in 1977/78, 1979/80 and 1980/81, due mainly to the Sahelian drought, annual groundnut production averaged over 140,000 tonnes. The 60,000 tonnes produced in 1980/81 were considerably below the target of 180,000 tonnes set by the First Plan. The world market prices of groundnuts and groundnut products fell to a low level in 1979/80, which further accentuated the decline in export earnings caused by low production.

Cotton

In addition to groundnuts, cotton is the other principal export crop. Cotton production rose from 284 tonnes in 1975/76 to 1,175 tonnes in 1977/78 before taking a downward trend over the following two years and rising again to 1,389 tonnes in 1980/81. This production figure was far short of the 3,500 tonnes projected by 1979/80.

Cereals

For millet and sorghum, which are important subsistence crops, there was no noticeable increase in production, the level of production

fluctuating around 40,000 tonnes per annum.

Maize

Production has increased in recent years from 5,800 tonnes in 1975/76 to 13,000 tonnes in 1978/79.

Rice (Paddy)

Production figures over the Plan period have not been encouraging despite the emphasis placed on this crop. Output has been steadily falling. Output for 1975/76 was close to 40,000 tonnes but fell to 28,000 tonnes in 1980/81.

3.3. Rural Development Project I. (RDPI)

This has been the largest single development project embarked upon during the First Plan and represented the most comprehensive attempt to increase cereal and export crop production and improve the livestock husbandry of some 48,000 people living in 65 selected villages (2,200 compounds) together with expansion and improvement of rural infrastructure and services.

External financing covered 98 percent of total project costs of approximately D31.0 million. The main sources of external financing were the United Kingdom Development Loan, the International Development Association, The Arab Bank for Economic Development of Africa and the European Fund.

Notable achievements were made in infrastructural development, as buildings and civil works comprised a large component of RDPI. Some progress was also achieved with regard to the seed multiplication programme. A wide range of crops were covered including both food and export crops. In the area of research, much has been done on field trials to identify new varieties of rice, sorghum, groundnuts, millet, maize and cotton. The project also contributed to the promotion of fertilizer use, which more than doubled during the Plan period. Despite some of its achievements, RDPI has not been without

problems. There is much to learn from the experience of its implementation; faults in basic data and overall concept, failure to institute, test and refine planning, management, monitoring and evaluatinn procedures in advance, overcentralization, inadequate relation to other programmes and projects, etc. Unfavourable natural factors, such as climate, has had negative effects on result.

3.4. Major Constraints

Perhaps the most important constraint to agricultural development during the First Plan period has been the unreliability of rainfall plus three years of consecutive drought. The continued reliance on traditional methods of agriculture limits the potential increase in yields. There is some evidence that the timing of the saving of seeds could be significantly improved. The low quality of agricultural inputs, especially seeds, has been identified as a serious problem. The quantity of fertilizers used needs to be increased significantly if yields and total production are to be increased. Fertilizer use rose from about 4,000 tonnes in 1974/75 to over 10,000 tonnes in 1979/80. There is need for a more flexible cost-effective and efficient fertilizer distribution system to satisfy the rapidly growing demand. Similarly, agricultural extension and agricultural credit support services are to be made more efficient.

The limited land of high potential for agriculture is also an import- and physical constraint. The human population, with a few material assets, including education, subject to high infant mortality, high morbidity and a low life expectancy, is another major constraint, at least in the medium term. There is also some evidence that the large-scale migration of young people to the urban areas has reduced considerably total crop production.

3.5. Livestock

The full potential of this important sector has not yet been exploited. The development and exploitation of livestock will bring about an improvement in nutritional standards of the population and an increase in GDP, incomes of farmers, and net foreign exchange earnings. The cattle population is estimated at around 300,000 heads, sheep and

goats at 146,000 and 158,000 respectively.

The principal objectives of livestock development in the First Plan were to increase domestic supply of beef, to promote exports of live cattle and to stabilize the cattle population to around 270,000 heads.

Some of the infrastructural projects under the First Plan have been completed, but the high priority aim of promoting cattle sales by investing in the livestock Marketing Board was not successful. LMB was inadequately financed and the price schedules in existence did not allow the Board to make a gross profit. In addition, the Board has suffered from weak management. However, it has carried out a successful export business in hides and skins, and in 1980 it began to export breeding heifers to Nigeria.

Little progress has been achieved in the development of sheep and goats. The commercial poultry industry is still very small in terms of the numbers of producers and of birds, but is growing.

The major constraints in the livestock sector are:-

a) The off-take rate for the cattle herd is still quite low, around 8 percent;

b) beef production is not sufficient to satisfy the needs of the country;

c) overgrazing of available land and soil degradation are becoming a steadily increasing problem;

d) Cattle watering points are insufficient;

e) Prices of poultry feed are too high for poultry farmers. Marketing arrangements for commercial poultry need to be improved.

3.6. Fisheries

Fisheries constitute a significant natural resource of the Gambia whose potential remains to be realized. In a country where nutrition remains a problem for a significant proportion of the population, it is important that full exploitation is realized as soon as possible.

Fisheries objectives in the First Plan were set as follows:-

a) a 10 percent annual growth in production;

b) improving nutritional standards;

c) effecting a rational long-term utilization of coastal and inland fisheries resources;

d) increasing employment and net foreign earnings.

It is difficult to say to what extent sectoral objectives were met due to variations in production and export figures for fisheries. Estimated production from 1975/76 to 1977/78 increased from 30,000 tonnes to 38,000 tonnes. From 1978/79 to 1980/81 annual production declined to an average of 26,000 tonnes.

It is also estimated that a large proportion of fish production during the First Plan period went to local consumption. Fish consumption in the country in 1977 was estimated at about 24 kgs. per capita per annum (45 kgs for the urban and 18 kgs. for rural).[1] If this estimate is realistic, per capita fish consumption in the Gambia is higher than average fish consumption in Africa (17.0 kgs per capita per year).

Fish exports during the Plan period have shown an increase from D2.6 million in 1975/76 to D8.0 million in 1979/80. Producer prices of different species of fish have also been increasing during the same period. Similarly, the number of artisanal fishermen increased from about 1500 in 1975/76 to a total of 2,579 in 1980/81. Out of a total of 2,579 fishermen, 1,067 were Gambians and the rest were from neighbouring countries.

Considerable efforts have been made to increase the artisanal fisherman's productivity. A fisheries training programme was started in Gunjur under the Artisanal Fisheries Project. Fishermen were trained in the use of more efficient fishing techniques and better ways of smoking fish. This training programme was quite satisfactory and it is expected that it will be replicated in other fishing centers of the country.

---

1. FAO Report on Fisheries in The Gambia. (The Campleman Report) Rome, 1977.

3.7. Education

Government's development strategy in the education sector has been to upgrade the quality of education, improve the access of the rural youth to education, and establish a closer link between training and manpower needs. To achieve these, the First Plan envisaged to:-

a) double primary school enrollment and introduce a new primary school curriculum;

b) increase primary teacher training and reduce the number of unqualified teachers;

c) restrict the expansion of secondary schools;

d) establish an adult functional literacy campaign and an educational programme for youths without formal education.

Primary school enrollments jumped from 22,600 in 1974/75 to 37,600 in 1979/80. However, enrollments in technical schools lagged behind the Plan's projections, while those in high schools increased at a high rate of 14 percent per annum despite government's attempt to restrict their expansion. It is difficult to determine to what extent these quantitative developments have been accompanied by major qualitative improvements. A Curriculum Development Centre was established to develop for the first time an official curriculum for the primary classes. Many school buildings in rural areas remained in poor conditions, although more than 100 classes were built between 1976/77 and 1979/80. The secondary technical schools in Banjul are in suitable buildings and reasonably well equipped, but those located in rural areas still lack of adequate facilities and equipment for teaching science and practical subjects such as agriculture.

3.8. Health

The public health system has been characterized by an overwhelming preponderance of costly curative medical services, accounting for over 70 percent of total health expenditures. Emphasis has been on hospital and institution based services to the neglect of prevention measures such as provision of clean water supply, widespread immunization, environmental sanitation and nutritional education.

During the First Plan period there have been certain improvements or major expansions of physical facilities in the health sector. Some of these are the completion of a new maternity wing at the Royal Victoria Hospital, the expansion of the children's wing at the Bansang hospital; the completion of health centres at Yorobawal and Fatoto; increase in the number of sub-dispensaries from 36 to 58.

With regard to health services, considerable efforts were made to expand curative and preventive services to increase coverage of the rural population. Under the immunization programme, quite a lot of progress was made.

Some of the major constraints in the health sector can be summarized as follows:-

a) The rates of morbidity and disability still remain high;

b) While there is a declining mortality rate, the fertility rate remains stable, causing rapid increase in population growth;

c) the majority of the rural population still has little access to health services;

d) Co-ordination of activities with other government departments is still lacking and there is little involvement of local communities in health and related activities.

4. MACROECONOMIC OUTLOOK AND DEVELOPMENT STRATEGY FOR THE SECOND PLAN (1981/82 — 1985/86)

4.1. Basic Development Issues

The review of past development in the previous sections of this year shows that change has come about very slowly in the Gambia. Despite substantial diversification efforts undertaken in the 1979s, production and exports of groundnuts continue to be the main determinant of economic growth.

It has been observed that a major development bottleneck is the Sahelian ecology in which The Gambia is located. During the last decade, drought occured several times, making necessary large emer-

gency imports of food. In some years, rainfall was sufficient, but came late, destroying the early planted crops. The solution to this problem in the long-run would be the development of large-scale irrigation scheme.

Another constraint to the development of the rural sector is the limited availability of fertile land and the progressive degradation of agricultural land due to high land-use intensity. Efforts made uptill now are not sufficient to tackle this problem. The large areas of cultivable land along the Gambia River cannot be exploited without controlling salt water intrusion. Hence, the need for the proposed bridge/barrage project , which would regulate the river and halt the dry season salt intrusion in order to permit year-round irrigation of about 24,000 hectares of land.

A third development issue is the problem of satisfying the basic needs of the population. The country is faced with a tight financial situation and the rural population is much worse off than urban dwellers. The former suffer from poor health and undernutrition. Both health and nutritional standards of the rural population must improve in order to increase the labour productivity.

4.2. Development Strategy for the Second Plan.

The Second Plan calls for the development of directly productive sectors; agriculture (particularly crops, livestock and fisheries), manufacturing and tourism.

For agriculture and natural resources, the Plan will continue to give emphasis to increasing good production and strengthening food security programmes. Increased productivity in cereal, fisheries and livestock production will be an important strategy for this sector.

The Plan recognizes that only development of large - scale irrigation schemes could provide the needed insurance against drought. In the short and medium-term, already existing irrigation schemes will be consolidated while additional 400 hectares will be irrigated under the Jahally and Pacharr Rice Project. This project will also include 1,000

hectares of improved rain-fed rice cultivation. The incremental production of rice due to the project will be about 5,000 tonnes of paddy by the end of the Second Plan period. In the long-run, the proposed bridge/barrage project, which is expected to start towards the end of the Plan period, will permit a year-round irrigation of about 24,000 hectares. At full development (by the year 2005) the project would produce 185,000 tonnes of paddy and would thus enable the Gambia to reach self-sufficiency in rice while reducing its dependence on groundnuts.

5. Food strategy and Food Security

In the past food strategy and food security schemes were implicit, but the improvement of the population's nutritional standards has always been considered a major development objective. The First Plan aimed at increasing agricultural, livestock and fisheries production in order to increase the nutritional standards of the population.

Following the CILSS call for a food sector strategy and acting upon the Lagos Plan of Action and the World Food Council for greater emphasis on food and nutrition plan, two separate studies on food strategy and food security were carried out in the Gambia in 1981. The findings of these studies were to be incorporated into the agricultural development strategy of the Second Five Year Plan.

The Gambia food strategy is an integral part of agricultural development strategy which emphasizes food production and consumption to improve nutritional standards. The development objectives and strategy for the agricultural sector in the Second Plan[1] are stated as follows:-

Objectives:

a) To increase export crop production and productivity in order to increase rural cash incomes and net foreign earnings. Groundnut and cereal production is expected to increase from 110,000 tonnes and 65,800 tonnes at the beginning of the Plan period to 135,000 tonnes and 78,800 tonnes respectively by the end of the Plan period.

b) To increase food production and productivity in order to raise the

---

[1] Five Year Plan for Economic and Social Development, 1981/82 — 1985/86 (in draft form).

nutritional status and better meet the food requirements of the population.

c) To encourage efficient use of the land and water resources in order to reduce soil degradation and enhance its productivity.

d) To continue to encourage diversification and endeavour to make farming more attractive to the farmer.

strategy

a) Sufficient and efficient use of fertilizers and other inputs.

b) Improved and sufficient seeds.

c) More appropriate technological packages.

d) Sufficient and better distribution of agricultural credit.

e) Transportation, storage and processing of agricultural produce.

f) minimization of pre-and post-harvest losses.

g) proper soil and water management techniques.

Of considerable importance to food strategy and security are the single short rain season and limited land area of high potential for agriculture. Financial and economic constraint will also have some adverse effects on development strategy. Taking the overall economic situation of the country into account, recurrent revenues to the development fund will be somewhat limited during the Second Plan. Nevertheless, even in the context of the ongoing economic stabilization programme, Government plans to allocate a larger share of the recurrent and development budget to the agricultural sector.

Food grain requirements in The Gambia are expected to rise from the present 104,000 tonnes a year to approximately 175,000 tonnes a year by the year 2000.[1] By the end of the Second Plan (i.e. 1985/86) food grain needs are expected to be about 119,000 tonnes a year. Assuming that the major agricultural projects outlined in the Second Plan are implemented and achieve production expectations, cereal production in

---

[1]FAO, Food Security Report for The Gambia, 1981

the Gambia will reach about 92,000 tonnes by 1985/86. Self-sufficiency in cereals is therefore expected to be achieved between 1991 and 1996. Until that time importation of cereals will continue, but at a decreasing quantity.

In order to compliment its food strategy, the government of the Gambia plans to establish a food security scheme. This scheme will operate a reserve stock of food grains to be used to prevent national disasters in times of a food crisis resulting from drought or other climatic factors, destruction of crops by pests etc.

Table 2.1

Current Revenues and Expenditure — 1974/75 - 1980/81 (Million Dalasis)

	ACTUAL					Provisional	Budget Estimate
	1974/75	1975/76	1976/77	1977/78	1978/79	1979/80	1980/81
Current Revenue	32.4	46.2	65.5	65.9	79.8	89.7	87.6
Direct Taxes	3.9	4.3	8.4	10.1	12.9	11.3	11.8
Import Duties and Taxes	16.1	27.1	38.5	37.4	45.8	51.3	46.7
Export Duties	4.5	4.6	4.6	5.7	4.3	6.9	4.4
Other Taxes	0.8	1.4.	2.4	3.0	5.5	5.1	6.0
Non-Tax and Other Revenue	7.1	8.8	11.7	9.7	11.4	15.1	18.8
Current Expenditure	33.1	44.1	58.6	66.5	73.3	82.4	82.0
General Administration 1/	9.0	9.6	13.3	15.7	15.8	21.6	18.8
Education, Youth and Sports	3.4	5.2	7.3	8.4	9.3	11.3	12.0
Health, Labour and Social Welfare	-	3.6	6.7	7.5	8.3	9.2	9.4
Agriculture	3.2	4.8	8.0	9.6	11.6	13.2	13.1
Public Works and Communications	4.5	7.1	14.3	14.2	14.6	11.2	12.4
Information and Tourism	0.1	0.6	0.8	1.1	1.4	1.5	1.8
Public Debt	0.6	1.4	1.9	1.4	3.3	3.4	5.0
Other Expenditure 2/	12.3	11.8	6.3	8.6	9.0	11.0	9.5
Current Balance	-0.7	2.1	6.9	-0.6	6.5	7.3	5.6

1/ Heads 1 to 10, with the exception of head 7: Information and Tourism.

2/ Excluding transfers to Development Fund.

Source: Data provided by the Gambian authorities.

APPENDIX III.

GOVERNMENT

The first Legislative Council of The Gambia was established in 1843, in which year the settlement was detached from the Administration of Sierra Leone. The continuous history of the present House of Representatives, however, dates from 1888 when a new legislative council was set up. Since that date constitutional progress towards Independence was gradually made, more particularly since the war. Constitutional changes took place in 1947, 1954 and 1960 and a new constitution with universal suffrage, upon which the present institutions are based, was introduced in May, 1962. At the general elections of 1962, the P.P.P. (Peoples Progressive Party) was successful and its leader, Mr. D.K. Jawara, took office. Full internal self-government was attained in October 1963 and the country became independent in February, 1965. Since then, the country has gone to the polls five times (1965, 1966, 1970, 1972 and 1977 in freely contested elections. In three of the elections, 1966, 1972, and 1977, the P.P.P. was returned to power under its leader, now Alhaji Sir Dawda Jawara, with over-whelming majorities. In 1970, a successful referendum changed the country into a republic. A similar referendum in 1965 had failed to gain the required majority by a very small margin.

Parliament

The House of Representatives consists of a Speaker, elected by the House; the Attorney-General and Minister of Justice, who is a nominated Member of Parliament, thirty-five elected members, four Head Chiefs elected by a college of chiefs and two nominated members appointed by the President. The nominated members have no vote. A Deputy Speaker is elected by the House from among its members.

Executive

The Presidency has executive powers, but in the exercise of his functions he is required to act in accordance with the advice of the Cabinet.

BIBLIOGRAPHY

1. CAMPLEMAN, G. "Marine Fisheries Development in The Gambia," Rome, 1977
2. COMBS, P.H. and Ahmed, M. "Attacking Rural Poverty: How Non-formal Education can Help", A World Bank Publication, 1974.
3. F.A.O. - "Pre-Feasibility Study on National and Regional Emergency Security Stocks in the Sahel," 1979.
4. F.A.O. - "International Meat Development Scheme: A Mission Report on The Gambia", 1981.
5. F.A.O. - "Food Security Scheme For The Gambia", Rome, 1981
6. Gambia Family Planning Association, "Report on Breast Feeding, Nutrition and Maternal Child Health Seminar", November, 1981.
7. Gambia Government, "Education Policy, 1976 - 1986"
8. Gambia Government, "Five Year Plan For Economic and Social Development 1975/76 — 1979/80", 1st July, 1975.
9. Gambia Information Services, "The Gambia in Brief", 1979
10. Hanson, J.W. "Is the School the Enemy of the Farm? The African Experience", African Rural Economy Paper NO. 22
11. IFAD, "Jahahly and Pacharr Rice Project: Preparation Report", Rome, 1981.
12. Land Resource Division -"The Agricultural Development of The Gambia", England, 1976.
13. McCrae, J.E. and Paul, A.A. "Foods of Rural Gambia", 1979.
14. Ministry of Economic Planning and Industrial Development -"Working Papers for Second Five Year Plan", July, 1981.
15. Ministry of Education, Youth, Sports and Culture — "Education and The Development of Human Resources in The Gambia", August, 1980.
16. O.D.A. - "The Gambia Food Strategy Report", March, 1981.
17. Rowland, M.G.M. and Whitehead, R.G. "The Epidemiology of Protein - Energy Malnutrition in Children in a West African Village Community", (1974 - 1978).
18. World Bank - "Basic Needs in The Gambia", August, 1979.

BIBLIOGRAPHY

1. CAMPLEMAN, G. "Marine Fisheries Development in The Gambia," Rome, 1977
2. COMBS, P.H. and Ahmed, M. "Attacking Rural Poverty: How Non-formal Education can Help", A World Bank Publication, 1974.
3. F.A.O. - "Pre-Feasibility Study on National and Regional Emergency Security Stocks in the Sahel," 1979.
4. F.A.O. - "International Meat Development Scheme: A Mission Report on The Gambia", 1981.
5. F.A.O. - "Food Security Scheme For The Gambia", Rome, 1981
6. Gambia Family Planning Association, "Report on Breast Feeding, Nutrition and Maternal Child Health Seminar", November, 1981.
7. Gambia Government, "Education Policy, 1976 - 1986"
8. Gambia Government, "Five Year Plan For Economic and Social Development 1975/76 — 1979/80", 1st July, 1975.
9. Gambia Information Services, "The Gambia in Brief", 1979
10. Hanson, J.W. "Is the School the Enemy of the Farm? The African Experience", African Rural Economy Paper NO. 22
11. IFAD, "Jahahly and Pacharr Rice Project: Preparation Report", Rome, 1981.
12. Land Resource Division -"The Agricultural Development of The Gambia", England, 1976.
13. McCrae, J.E. and Paul, A.A. "Foods of Rural Gambia", 1979.
14. Ministry of Economic Planning and Industrial Development -"Working Papers for Second Five Year Plan", July, 1981.
15. Ministry of Education, Youth, Sports and Culture — "Education and The Development of Human Resources in The Gambia", August, 1980.
16. O.D.A. - "The Gambia Food Strategy Report", March, 1981.
17. Rowland, M.G.M. and Whitehead, R.G. "The Epidemiology of Protein - Energy Malnutrition in Children in a West African Village Community", (1974 - 1978).
18. Sentongo, C. "A School Map of The Gambia, 1980/81", December, 1981
19. World Bank - "Basic Needs in The Gambia", August, 1979.