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FINAL REPORT

Technical Assistance to Liberian  
Ministry of Planning & Economic  
Affairs (MPEA)

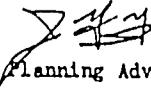
August 15, 1986

FINAL REPORT

B D G

To: Mrs. Estelle Liberty  
Director of Economic Planning  
Ministry of Planning and Economic Affairs

Mr. Thomas Eighmy  
USAID Program Officer  
USAID - Liberia

From: Joel G. Gochenour   
USAID Agricultural Planning Adviser

Subject: Final Report of the USAID Agricultural Planning Adviser to the  
Ministry of Planning and Economic Affairs - Covering the Period  
March 1985 - September 1986

Date: August 15, 1986

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The work of the Agricultural Planning Adviser in the Ministry of Planning and Economic Affairs of Liberia is described below, under each of the following five assigned tasks:

1. Assist in the formulation and review of agricultural development objectives, strategy and policy, and in the preparation of an agricultural development plan.
2. Assist in the review, appraisal and evaluation of agricultural development programs and projects.
3. Assist the Minister when requested, and prepare relevant analyses and reports for use by the Minister and the Ministry.
4. Develop and give training in agricultural development planning, and in project appraisal techniques, to the staff of the Agriculture Section of the Ministry.
5. Assist in developing procedures and guidelines to improve the operating efficiency of the Agriculture Section of the Ministry.

Anticipated Final Output:

National agricultural development policy and a national agricultural development plan for Liberia.

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Copies to: Mr. Paul Jeffy, Minister of Planning and Economic Affairs  
Mr. Elijah Taylor, Deputy Minister, MPEA  
Mr. Robert Neal, Assistant Minister, MPEA  
Mr. Vivion Diggs, Head of the Agriculture Section, MPEA  
Mr. Vincent Checchi, Jr., Checchi and Company  
Ms. Mary Kilgour, Director, USAID-Liberia  
Mr. Gerard Neptune, Senior Agricultural Officer, USAID-Liberia

WORK ACCOMPLISHED BY TASK

Task 1: Assist in the formulation and review of agricultural development objectives, strategy and policy, and in the preparation of an agricultural development plan for Liberia.

A. Economic Outlook to 1995 for Five Major Liberian Agricultural Commodities

In order to have a sound basis for preparing an agricultural development plan for Liberia, the economic outlook over the next decade for the country's five main agricultural commodities was explored. A composite rating was calculated for each of the commodities, giving equal weight to each of the following four factors:

1. Projected growth in the world export price, as reported by the World Bank in August 1985.
2. Projected growth in world export quantity, as reported by the World Bank in "The Outlook for Primary Commodities - 1984 to 1995", Ronald C. Duncan
3. Financial net returns to family labor, as calculated for Liberia by the World Bank in its "Liberia Agricultural Sector Review, Volume 1" of April 1984
4. Domestic resource cost coefficient (the estimated value of Liberian resources required to generate \$1 of exports), as calculated for Liberia by the World Bank in its "Liberia Agricultural Sector Review, Volume 1" of April 1984.

Taking rice as 100, each of the commodities received the following composite rating:

	<u>Four Factor Combined Index</u>
Rice	100
Coffee	181
Rubber	181
Cocoa	224
Palm Oil	317

(The higher the index number, the more promising the commodity is for Liberia)

B. Agricultural Development Plan To Be Incorporated into Liberia's Economic Recovery Program for 1986/87 and 1987/88

An agricultural development plan has been prepared by the Agriculture Section of the Ministry of Planning and Economic Affairs, as part of Liberia's new Economic Recovery Program. This agricultural development plan includes new objectives, new strategy and new policy. A Policy Subcommittee for the agricultural sector, chaired by the Ministry of Agriculture and including members from the Ministry of Planning and the National Investment Commission, is currently finalizing this Plan. The Agricultural Planning Adviser is serving as Secretary of this Subcommittee.

Inasmuch as the agricultural plan objectives, strategy and policy are of particular importance to the economic recovery of the country, they are set forth below:

Objectives

1. To put idle agricultural and forest land in Liberia to use, for the benefit of the nation.
2. To increase the value and quantity of agricultural production of Liberian farmers - per acre of cultivated land, and per man-hour of labor.
3. To improve the services which link Liberian farmers to domestic and foreign markets for their agricultural products.
4. To increase productive employment and income in the rural areas, and to reduce rural migration to the urban areas.
5. To increase the volume and value of all exports and to reduce the quantity of food imports, in order to earn and save more foreign exchange.

Strategy

1. Government policies for the sector will be reviewed and adjusted wherever required.
2. Private investment in the sector will be encouraged and public investment in it will be reoriented where needed to implement policies.
3. Price incentives for private farmers to produce for export and for domestic consumption will be strengthened and improved, and Government subsidization of prices and marketing services will be reasonably minimized.
4. Trade in agricultural products will be liberalized, by privatizing some of the Government services provided, in order to reduce costs and improve price incentives to farmers.
5. Special efforts will be made to increase rubber exports, inasmuch as rubber is by far the most important agricultural export, and it is the only one capable of being rapidly increased.
6. The spirit and direction of the Green Revolution will be supported by the agricultural development effort envisioned in the Economic Recovery Program.

Policy

(Only an outline of the Policy appears here, as this section is quite long)

1. Role of the Private Sector in Economic Recovery
2. Role of the Government
3. Encouraging the Rapid Growth of Agricultural, Forestry and Fishing Exports and the Domestic Food Supply:
  - a. Rubber Exports
  - b. Coffee and Cocoa Exports
  - c. Forestry Exports
  - d. Palm Oil for Export and for Domestic Consumption
  - e. Fish for Export and for Domestic Consumption
  - f. Rice for Domestic Consumption
4. Promoting the Use by Liberian Farmers of Food Crop Seeds and Cultivation Practices Tested and Selected by the Central Agricultural Research Institute
5. Consolidating the County Agricultural Development Projects
6. Encouraging Private Investment in Agricultural, Forestry and Fishing Projects
7. Mobilizing Rural Savings for Agricultural Loans
8. Criteria for Selection of Sectoral Program and Projects

C. Other Work Undertaken on the Economic Recovery Program for Liberia

In addition to working on the Agricultural Development Plan part of the Economic Recovery Program, the Agricultural Planning Adviser also:

1. Served as Chairman of the Economic Recovery Program Coordinating Committee during the time Minister Jeffy was traveling overseas.
2. Wrote the section of the Program on the outlook for exports and export earnings.
3. Contributed to the section of the Program on general objectives, strategy and policy.

Task 2: Assist in the review, appraisal and evaluation of agricultural development programs and projects

A. World Bank Review and Identification Mission Report on the Rubber Subsector in Liberia, January 1985

At the request of Assistant Minister Rober Neal, the Adviser reviewed this Mission report and made several recommendations regarding the World Bank's proposal for making an additional six man-month consulting firm review of the Liberian rubber subsector, for the purpose of developing a long range strategy for its future development. The Adviser strongly supported this proposed review, as rubber is expected to continue to be one of Liberia's most important exports over the next several decades.

B. SODECI Proposal and Feasibility Study of the Planting of 3500 Hectares of New Rubber Trees on the Sinoe Rubber Plantation at Greenville

This feasibility study submitted by SODECI consisted of four volumes totaling 285 pages, most of which were devoted to supporting data and analyses. The aim of the proposed project was basically sound: to plant 3500 hectares of the Sinoe Rubber Plantation in new high-yielding cloned rubber trees. Unfortunately, the internal rate of return on the new funds to be used for the project was very low, from 4% to 5% a year, and the total amount of new funds needed was very high, an \$18 million grant plus \$33 million in new Government loans. These characteristics of the project made it impossible to undertake, considering Liberia's current shortage of foreign exchange and its large foreign debt servicing requirements. Several alternative courses of action were suggested and analyzed and a summary was made of four possible alternative futures for the Sinoe Rubber Plantation. This summary was presented to Assistant Minister Robert Neal.

C. Review of the Current Operating Budget of the Sinoe Rubber Corporation and Recommendations for Substantially Reducing Its Operating Costs and Losses

The Sinoe Rubber Corporation's proposed budget for the period April-September 1985 was analyzed, and immediate and extensive actions were recommended to reduce the corporation's operating costs, as it is currently faced with net operating losses of \$1 million to \$2 million a year. In fact, to enable it to break even, at its present levels of expenditure, world export prices for natural rubber would have to more than double their present levels.

D. Firestone Proposal for a Government of Liberia-Firestone Plantations Joint Program To Assist Liberian Rubber Farmers

The President and the Manager of the Firestone Plantations Company of Liberia proposed to Minister Emmanuel Gardiner that the Government of Liberia join Firestone Plantations Company in a joint undertaking to assist Liberian rubber growers.

The Agricultural Planning Adviser and his counterpart, Mr. Vivion Diggs of the Agriculture Section of the Ministry, were requested by the Minister to visit Firestone Plantations at Harbel to hold preliminary discussion on this proposal. Upon returning from these discussions, the Adviser and Mr. Diggs submitted a brief report containing their observations and recommendations. One of the recommendations was that SEFO, the Small Enterprises Financing Organization, or a similar organization, be selected to make the needed Government loans to Liberian rubber farmers. Subsequently, Mr. James Keddie of SEFO prepared a detailed proposal on a Government of Liberia-Firestone Plantations joint program to assist Liberian rubber farmers, with the Government portion to be financed using unused EEC funds previously allocated to Liberia.

E. Review and Comment on the L.A.C. (Uniroyal) Proposal

The L.A.C. (Uniroyal) proposal to the Government of Liberia, to convert L.A.C. into a nucleus estate for Liberian rubber smallholders, using funding secured by the Government from the World Bank or other loan sources, was reviewed. It was recommended that the Government reject the proposal, owing to the present low world export price for natural rubber and the Government's critical shortage of funds for development.

F. Request for Public Law 480 Funding for the Decoris Oil Palm Project

At the request of Assistant Minister Rober Neal, a memo was prepared on the future financing needs of the Decoris Oil Palm Corporation and action to obtain private sector financing was recommended. Subsequently, on behalf of the Minister, a request was prepared to USAID-Liberia for assistance from PL-480 funds in the amount of \$2 million to help finance this on-going project. The Decoris project consists of an oil palm nucleus estate plantation surrounded by stands of Liberian smallholders' oil palms. The request briefly summarized the economic outlook to 1995 for palm oil exports, the main project benefits and its economic justification, the progress made to date on the implementation of the project, project management arrangements and performance, project financing to date, and the urgent need for this funding from Public Law 480 to support the project.

G. Request to the Japanese Government for a Grant To Build a Government Owned Rice Processing Mill at Zwedru

At the request of Assistant Minister Robert Neal, the Adviser re-wrote a request to the Government of Japan for a grant to establish a Government-owned rice processing mill at Zwedru.

Task 3: Assist the Minister when requested, and prepare relevant analyses and reports for use by the Minister and the Ministry.

A. Guidelines for Rice Production Over the Next Twenty Years

Initial "Guidelines for a Long Range Rice Development Program for the Green Revolution" were prepared. The report covered the following subjects:

1. Probable maximum rate of sustainable growth of rice production in Liberia
2. Rice production goals, if an average growth rate of 4% a year can be realized and sustained over the next 20 years
3. Self-sufficiency goals for rice production over the next 20 years
4. Passing on the added cost of producing and milling Liberian rice to the non-agricultural Liberian rice consumer

B. Estimated Real Value to Liberia of Its Major Export Commodities

Made an analysis of the true value to Liberia of its main export commodities, which indicated that their true value during the 1979-1983 period was as follows:

<u>Exports of</u>	<u>Average Annual True Value</u> <u>\$-Millions</u>
Iron Ore	48.1
Rubber	40.3
Coffee	16.9
Cocoa	7.8
Logs and Lumber	6.3
Total:	119.4

Thus, agricultural and forestry exports accounted for \$71.3 million a year, or 60% of the value of all major exports.

When measured by the reported 1979-1983 FOB Monrovia/Buchanan total export value, iron ore accounts for 65% of the total value of the five main exports, and rubber, coffee and cocoa for 25%. However, when measured by the estimated 1979-1983 total export value remaining in Liberia, iron ore accounts for only 40%, and rubber, coffee and cocoa for 55%. This sheds a new light on the relative importance to Liberia of its agricultural and mining exports.

C. The Growth of Liberian Coins in the Private Sector Money Supply - 1977-1986

This analysis shows a substantial growth in the proportion of the private sector money supply which is accounted for by Liberian coins. The percentage rose from 7% in 1977 to 12% in 1981, and it may well rise to 46% or more by the end of 1986. If the percentage rises much higher, Liberia will, in effect, have made the change from the U.S. dollar to its own currency.

D. Annual New Foreign Loan Commitments by the Government of Liberia - 1978-1983

This analysis shows that the World Bank, the IDA, and the IMF were the main suppliers for new loan funds to Liberia, accounting for almost 50% during the 1978-1983 period. More importantly, it indicates that total GOL foreign indebtedness through 1985 is probably well in excess of U.S.\$1 billion. This means that Liberia's indebtedness exceeds its annual monetary sector gross domestic product by a considerable amount. And, its indebtedness is from two to three times the total value of its exports. Indeed, now may be the time for the Government to declare a two to three year moratorium on signing new foreign loan commitments.

E. Recommended Action on Liberia Produce Marketing Corporation's Request for A \$2.34 Million Annual Rice Subsidy from the Government

An analysis was made, and a memo was prepared and sent to Mrs. Mary Dennis at her request, on recommended action to be taken on LPFC's request for a \$2.34 million rice subsidy for the year 1985/86. The memo set forth recommended action, compared LPFC's cost of producing Liberian milled rice with the current cost of importing milled rice from Texas and Thailand, and estimated the magnitude of the economic loss to Liberia which was being incurred at the 1985/86 LPFC rice milling levels, and the loss which would be incurred if sufficient Liberian rice could be produced and milled in Liberia to supply Liberia's entire cash market for milled rice in 1985/86 (essentially the non-agricultural population of Liberia). The latter economic loss ranged from \$42 million to \$54 million a year.

F. Initial Review of the Green Revolution Plan

At the request of the Minister, the Adviser reviewed a memorandum from the Centre for International Agricultural Development Corporation of Israel, which concerned the establishment of nuclear farm estates in Liberia (this appears to be the real core of the Green Revolution Plan). On the basis of the review, a memorandum was written setting forth the institutional and financial implications of establishing such farm estates in Liberia. A copy of this memorandum was sent to the Israeli Ambassador by the Ministry, for onward transmittal to the Centre for comment.

G. Summary of a World Bank Draft Paper on Desertification and Recommendations for Its Future Prevention in Liberia

At the request of the Minister, a summary was prepared of a World Bank draft paper on "Desertification in the Sahelian and Sudanian Zones of West Africa", and recommendations for suitable action to prevent possible future desertification in Liberia were made.

Task 4: Develop and give training in agricultural development planning and in project appraisal techniques, to the staff of the Agriculture Section of the Ministry.

I. Training in Planning and Policy Analysis

A. Economic Outlook

Presented the analysis of the economic outlook to 1995 for five major Liberian agricultural commodities, at a meeting of the senior staff of the Ministry, and later to the Agriculture Section staff. Made extensive use of large wall charts to illustrate the Outlook and the methods used to arrive at it.

B. Economic Recovery Plan - Agriculture Sector

The Head of the Agriculture Section and the Agricultural Planning Adviser made a joint presentation to the staff of the Agriculture Section on the methods which were used to prepare the Agriculture Sector Plan, for inclusion in the national Economic Recovery Program. Wall charts were used to illustrate the methods used and the sources used to obtain data and information on the past development of the sector (both monetary and subsistence). Where data were missing, as in the case of the subsistence GDP for the years 1981 through 1984, the methods used to estimate the missing data were presented, in detail.

The methods used in analyzing the data, and in drawing conclusions based upon it, were presented and plans for stimulating economic recovery within the sector were presented. Finally, the roles of the Section Head and the Section Planning Officers, in preparing such analyses, evaluations and plans were presented to the staff.

C. Currency Devaluation and Its Effect on the Distribution of Income Within the Country

This lecture highlighted those groups within the economy that would be most affected by a devaluation of Liberia's currency unit, if Liberia does eventually introduce its own currency and subsequently devalues it. An analysis, using actual reported Liberian economic data for 1983, indicated that the main gainers from a devaluation would be exporters, merchant-importers, new foreign aid grants, new foreign loans, and new foreign investment in Liberia. The main losers would be the Liberian consumer-users of imports, and the Government of Liberia. The methods used to make this analysis were presented in detail.

D. The 1985-1986 U.S. Dollar Devaluation and Its Probable Effect on the U.S. Dollar Cost of Liberian Imports and the Dollar Value of Liberian Exports

This lecture illustrated how to calculate the probable effect of the 1985-1986 U.S. dollar devaluation on Liberian importers and consumer-users of imports, and on Liberian exporters and export producers. Since the value of Liberian exports roughly equals the value of Liberian imports, the net future effect will be to increase the Liberian exporter's gross income by about 20% and to increase the cost of Liberian imports about 20%, assuming no change in world export demand or production. The effect on imports will probably be to increase their dollar price to the Liberian final consumer-user by about 30%. This, together with the continuing fall in the value of Liberian coins vis-a-vis the U.S. dollar, and the increasing proportion of coins in the money supply, may well set off structural inflation, with wages chasing prices.

II. Training in Making Projections Using Trendlines

- A. Why the Geometric Progression or Trendline Should Be Used in Making Economic Projections rather than the Arithmetic Progression or Trendline
- B. Selection of the Method To Use in Fitting Data to a Geometrical Progression Trendline
- C. How To Calculate the Average Annual Growth Rate of a Geometric Progression Trendline and How To Project Future Values of the Trendline for Use in Development Planning
- D. Practice in Calculating Trendlines Using Different Methods of Fitting Them to the Available Data
- E. How To Calculate and Project a Negative Growth Trendline

III. Training in Project Appraisal Techniques

- A. Cash Flow Analysis - Sources and Uses of Funds in Development Projects
- B. Break-even Point Analysis - Its Use in Appraising Development Projects
- C. Pay-back Period - Its Use in Appraising Development Projects
- D. Discounted Cash Flow Method of Calculating the Rate of Return on the Funds Used in a Development Project - Introduction
- E. Preparation of Cash Flow Tables for Use in Calculating the Discounted Cash Flow Rate of Return on Equity Funds, and on All of the Funds Used in a Project
- F. The Difference between Making a Financial Appraisal and Making an Economic Appraisal of a Project
- G. Practice in Altering Sources and Uses of Funds Cash Flow Tables To Obtain the Annual Net Cash Flows Needed To Calculate the Discounted Cash Flow Rate of Return on Equity Funds Used in Projects
- H. Practice in Altering Sources and Uses of Funds Cash Flow Tables To Obtain the Annual Net Cash Flows Needed To Calculate the Discounted Cash Flow Rate of Return on All Funds Used in Projects
- I. Practice in Calculating Net Present Values and Internal Rates of Return for Projects, Using the Discounted Cash Flow Method

Task 5: Assist in developing procedures and guidelines to improve the operating efficiency of the Agriculture Section of the Ministry

A. Definition of the Role of the Agricultural Planning Officer in the Ministry

The role of the Agricultural Planning Officer, in contributing to the Agriculture Section's capability to obtain data and information on each important tree crop, field crop, food crop, and on fishing and forestry, and to make development recommendations based upon analyses of this data and information, was defined, using rubber as an example. The role was explained to the Planning Officers, and a copy of a paper defining the role was given to each Officer.

B. Agriculture Section Files and Filing System

The extensive files of the Agriculture Section were reviewed, and a substantial amount of out-dated material was discarded. A new filing system and guidelines were developed for use in filing materials falling into each Agricultural Planning Officer's area of responsibility.

DETAILED REPORTS OF WORK ACCOMPLISHED

Details of the work described above are available in each one of the quarterly reports submitted by the Agricultural Planning Adviser. These reports have been submitted regularly to the Ministry of Planning and Economic Affairs and to USAID-Liberia. Each of the reports includes attachments or exhibits which are copies of actual reports, analyses, recommendations, lectures, and planning documents prepared by the Adviser.

ACTUAL FINAL OUTPUT

The planned final output of the Project has been accomplished, in that national agricultural objectives, strategy, policy and a development plan have been prepared for Liberia.

RECOMMENDATIONS

A. Upgrading the Agriculture Section to Division Status

It is recommended that the Agriculture Section of the Ministry of Planning and Economic Affairs be upgraded to Division level, as soon as possible.

B. Continuation of the Post of Agricultural Planning Adviser in the Agriculture Section

In order to assist the Agriculture Section during its transition to Division status, and to aid the Ministry in the finalization and implementation of the agricultural sector part of the Economic Recovery Program, it is recommended that the post of Agricultural Planning Adviser be extended through the end of 1988, and that a suitable candidate for the post be requested from the World Bank, the United Nations, or a bilateral aid donor.