

AGENCY FOR INTERNATIONAL DEVELOPMENT  
WASHINGTON, D. C. 20523  
BIBLIOGRAPHIC INPUT SHEET

FOR AID USE ONLY  
*Batch 67*

1. SUBJECT CLASSIFICATION	A. PRIMARY	TEMPORARY
	B. SECONDARY	

2. TITLE AND SUBTITLE  
Programming U.S. assistance; a case study, Liberia, 1964-1968

3. AUTHOR(S)  
Huber, P.B.

4. DOCUMENT DATE 1964	5. NUMBER OF PAGES 127p.	6. ARC NUMBER ARC
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7. REFERENCE ORGANIZATION NAME AND ADDRESS  
NPA

8. SUPPLEMENTARY NOTES (*Sponsoring Organization, Publishers, Availability*)  
(In Working paper M-8130)

9. ABSTRACT  
(DEVELOPMENT ASSISTANCE R&D)

10. CONTROL NUMBER <i>PAE-AE-213</i>	11. PRICE OF DOCUMENT
	12. DESCRIPTORS
	13. PROJECT NUMBER
	14. CONTRACT NUMBER <i>Repas-9 Res.</i>
	15. TYPE OF DOCUMENT

Report No  
NPA PN-AAE-213

CENTER FOR DEVELOPMENT PLANNING  
NATIONAL PLANNING ASSOCIATION  
1525 Eighteenth Street, N.W.  
Washington 36, D.C.

PROGRAMMING U.S. ASSISTANCE:  
A Case Study, Liberia 1964 - 1968

by

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M-8130  
Dev. Plan. 64-7  
November, 1964

## 1. INTRODUCTION

The purpose of this study is to examine the prospective impact of United States economic assistance on the development of Liberia over the next five years. Concurrent with this examination, suggestions will be presented for planning and programming United States assistance activities in order to achieve a greater positive result through this vehicle of our foreign policy. It is believed that the method used to determine the economic impact on Liberia of U.S. economic assistance would have general applicability to other recipient countries, and the information generated is likely to be useful in other cases of policy making and program formulation by the U.S. Government.

The Liberian assistance program has been chosen for study because of the author's familiarity with the economic situation in that country <sup>1/</sup> and because the U.S. involvement there is so large relative to the size of the economy and relative to the programs of other donors. <sup>2/</sup> The latter gives the U.S. assistance program great leverage in Liberia and makes aggregative analysis of this program particularly critical.

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<sup>1/</sup> Although the author was recently employed by the Office of National Planning, Republic of Liberia under a contract financed by USAID, and he is grateful for the opportunities he has had to exchange views with Liberians and USAID officials, he wishes to stress that he assumes full responsibility for the opinions, findings, recommendations and general content of this study and no attributions should be made to USAID or the Office of National Planning.

<sup>2/</sup> Liberia will receive some \$70 million of U.S. assistance expenditures between 1964 and 1968. Currently such assistance is equal to \$19 per capita or one fifth of national income.

The paper is in three sections. The first deals with the Liberian economy and presents an analysis of problems which must be overcome in order for development to continue. The second section discusses the U.S. involvement in Liberia and presents a detailed analysis of the expected U.S. assistance program and its impact on the Liberian economy for the years 1964-1968. The final section incorporates some suggestions of ways in which the U.S. assistance program could be improved. While these are developed in connection with the specific assistance program being carried out in Liberia, it is believed that they have in some cases a much broader applicability.

The statistical material in this study is based mainly on official publications of USAID, in particular, the unclassified portions of its most recent "Program Book". Other information which has been included comes from official published reports of the Office of National Planning and other publicly available information such as the 1964 GOL budget. In no cases has material been included which could not have been gathered by any analyst who visited Monrovia and Washington, D.C., and made use of the sources of information available in those two locations.

## 11. THE ECONOMY OF LIBERIA

### A. General Background

Liberia is a tropical West African country of about 1,100,000 people covering 43,000 square miles. It was founded in 1822 by returning Negroes from America who were encouraged and supported by the American Colonization Society, a private organization of U.S. citizens devoted to the resettlement of freed Negroes in Africa. Liberia has been independent since 1847.

Most of the immigration into Liberia took place in the period up to 1867. As other African areas came increasingly under colonial domination, the energies of these immigrant Liberians were mainly devoted to maintaining themselves and their independence. The repatriated settlers had to struggle against encroaching foreign powers and hostile tribal people, as well as disease and discomfort.

Although Liberia has never been a colony of the United States, many of its institutions are patterned on those of this country, with which it has had close ties. This association with the United States stems from the circumstances of the founding of Liberia and the continued interest of the United States in Liberia, as well as extensive U.S. religious, commercial, and business involvement in Liberia.

Liberia's freedom from foreign domination has largely prevented her from receiving the "benefits of colonialism" - the schools, hospitals, highways, and other social overhead capital which England, France and Belgium constructed in their colonies. In addition, the problem of nation-building was rendered more difficult

by the lack of a common colonialist opponent to help solder the split between the descendants of the American Negro settlers and those of tribal origin. In general, the former still make up the majority of the social, economic, educational and political elites, but this situation is gradually improving under the impact of President Tubman's "National Unification" policy.

Liberia is relatively richly endowed - the ratio of population to land and resources being particularly favorable. The high rainfall makes Liberia well suited to the cultivation of rubber, coffee, cocoa, rice, pineapple, citrus fruits, sugar cane, oil palms, and other tropical crops. Much of the country is covered by rain forest which contains commercially exploitable tropical woods.

Aside from its crops and broad forests, Liberia has valuable mineral resources. Although no exhaustive geological survey has ever been made, commercially exploitable iron ore is known to exist in at least five locations. Some of this ore is extremely high grade. The mining companies currently in operation probably have sufficient ore reserves to produce for 30-50 years at normal rates of output. Diamonds are also mined, but are of relatively minor importance.

#### B. Past Economic Progress

Prior to the first World War, Liberia consisted of a few settler enclaves along the coast and an unexplored and primitive interior inhabited by different tribes. Contact with the outside world were few, and within Liberia communications were extremely difficult except coastwise by sea. Little foreign trade was carried on because very limited quantities of exportable products were produced.

In the half century prior to 1920, the stagnation of the economic life of Liberia can be contrasted with the vitality and energy with which its political independence was maintained.

Rubber production, first started in 1910 and abandoned in the post World-War I depression, was undertaken on a large scale commencing in 1926 by Firestone.<sup>1/</sup> The disastrous fall in rubber prices engendered by the great depression of the 1930's delayed production and slowed planting operations at the Harbel plantation. The second World War, however, brought a sharply increased demand for rubber while cutting off the major sources of supply of natural rubber in Indonesia and Malaya. In response, output more than trebled in physical terms from 1939 to 1945, and prices also shot up. From that time until 1958, Firestone output continued to expand and independent producers as well as other concessionaires have taken up the cultivation of rubber. An indication of the importance of Firestone and rubber for Liberia is that the former is the largest employer in Liberia hiring 20,000-25,000 workers or about one quarter of the labor force in the money sector. Rubber accounted for almost the entire foreign exchange earnings of Liberia from World War II until the commencement of iron ore exportation in the mid-1950's.

The second World War found Liberia in a strategically important location, which was of substantial benefit to the allied war effort and which brought an influx of U.S. assistance.<sup>2/</sup> The war years

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<sup>1/</sup> One of the National Planning Association's series of publications on United States Business Performance Abroad, devoted to an account of Firestone's activities in Liberia, also contains a summary of Liberian history; Taylor, W.C. The Firestone Operations in Liberia (NPA: Washington, D.C., 1956)

<sup>2/</sup> This will be detailed in the next section.

thus mark a sharp turn in Liberian fortunes and the beginnings of an economic advance which continued through the 1950's.

By any measure of material progress, the growth of Liberia in the last decade has been rapid. Road mileage, power consumption, trade, number of students, money income and other similar indicators have all multiplied by at least a factor of two, and in some cases even more rapidly. No statistics of national income or product have been compiled on a continuing basis and correct estimates of these parameters are subject to a substantial margin of error. However, as a rough estimate, a doubling of real gross domestic product appears to have occurred during the period 1952 to 1962.<sup>1/</sup>

GNP in constant prices would have increased somewhat less rapidly because the share of domestic output which accrued to foreign factors of production rose substantially during the period. Gross domestic product, it may be noted, is roughly \$70-\$75 million larger than gross national product, the difference representing the payments for expatriate non-resident skilled labor, and interest and profit payments outside Liberia by the concessions and other business firms operating there. This extraordinarily large proportion (40%) of domestic income which accrues to non-nationals

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<sup>1/</sup> This implies a growth rate of 7% per annum.

<sup>2/</sup> Since 1943 the U.S. dollar has been used in Liberia as the basis of its monetary system. It circulates freely, and provides the entire currency supply except for part of the coinage which is Liberian.

is probably unequaled elsewhere in the world and it gives an indication of the extent of foreign involvement in and control of the economy.<sup>1/</sup>

This rapid growth is largely attributable to the activities of the foreign concessions in Liberia. Rapidly rising receipts from rubber production were coupled with very large investments in iron ore mining, which were mainly concentrated in the period 1959 - 1963. The combination of these two activities greatly increased government revenues, and the expectation of large profits in ore extraction and continued high natural rubber prices brought the prospect of continuing rapid revenue increases. The result was a very rapid increase in the rate of government expenditure and an extremely rapid accumulation of government debt, much of which was subject to high interest charges.

The growth in the postwar period has provided perhaps ten thousand additional permanent jobs for Liberians, mainly in the mining concessions. Otherwise, the impact on Liberia and Liberians of this economic expansion has been mainly through increased incomes in the construction sector and through indirectly induced effects. The increase in government revenues has led to government investments and additional government employment, and the increased expenditures by expatriates have had extensive multiplier effects. Incomes in distribution and the services have risen, and more government services are being provided than in the past. It remains to be seen, however, whether the boom of the 50's has provided the necessary stimulus to the Liberian economy to enable it to continue to progress with

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<sup>1/</sup> The distinction between national and domestic income and production must be ever borne in mind when dealing with Liberia. Development which increases the flow of repatriated profits and interest

a much reduced amount of foreign investment.

### C. The Present Situation

The culmination of the rapid expansion of the past two decades is the current depression. A fall in world rubber prices since 1960 has cut incomes in that sector, at the same time that Firestone has been in the middle of a major replanting program. The increasing competitiveness of synthetics is likely to prevent high incomes being earned by all except the most efficient natural rubber producers in the coming years. This implies difficulties for the small independent rubber producers of Liberia, though probably not for Firestone. Most important, construction activity has decreased by roughly two-thirds from levels of 1961-1962.

Multiplier effects emanating from these two sectors have resulted in decreases of income in wholesale and retail trade and the services. A drop of GNP of the order of 10%<sup>1/</sup> has occurred since 1962. Thus, GNP at market prices has dropped from a high of about \$124 million in 1962 to an estimated \$111 million annual equivalent in the first half of 1964. Because of the importance of custom revenues, this implies a decrease of GNP at factor cost of roughly 15% from \$109

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footnote continued: and raises the salary requirements of expatriate technicians serves to raise GDP but, ceteris paribus, has no effect on GNP. This is an important consideration in a number of other countries also (e.g. Chile). A second distinction of importance is that between measurements of income and production at market prices and at factor costs. Indirect taxes and customs duties, which are very important in most underdeveloped countries, are included in the former but not in the latter. National income or production at factor cost is the concept used in most of this paper.  
<sup>1/</sup> GDP has probably dropped somewhat less because income in the iron mining sector which has been increasing, has a larger component of foreign factor payments than income in construction sector which has accounted for most of the decrease.

million in 1962 to \$92 million in 1964.<sup>1/</sup>

The sharp drop in construction activity may be attributed to two causes. In the first place, the bulk of the initial investments of the iron ore companies (Lamco, National Iron Ore Co., and Bong Mines) was completed, or near completion, by 1964 and the demands of these concessions for operating inputs was far less than for investment. Other investments currently taking place are minor in comparison to those made by the iron ore companies.

Secondly, government expenditures -- particularly for public investments -- have sharply decreased. Since 1962, various advisors to GOL have been pointing out the excessive optimism of the revenue forecasts. This revenue shortfall is only part of the story, however. Debt-financed expenditure has largely ceased because the burden of debt service became excessive. With the interim help of the IMF, the terms of much of the outstanding debt have been lengthened through renegotiation. However, the payments of roughly \$10 million per annum for debt service are a charge against the current budget for the expenditures of the years just past. Representing as they do one fourth of the GOL budget and about 10% of national income, they impose a serious strain on the government and the nation.<sup>2/</sup>

At the same time, the will of Liberia to avoid default is clear. The debt service plus roughly \$2 million budgeted currently for capital contributions to development projects are about one eighth of

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<sup>1/</sup> The author is indebted for these estimates to Mr. Forrest Cookson, his predecessor in Liberia and colleague at the Center for Development Planning.

<sup>2/</sup> Debt service runs slightly over \$10 million per annum through 1968, but increases sharply in 1969 to \$16 million.

national income. In view of the poverty of the country, this is a very sizable savings effort and it compares favorably with those of many other underdeveloped countries. Not all of the investments with which the debt service is associated may have been wise or were obtained at the least cost, but that a very determined savings effort is presently being made is a fact which must be stressed.

D. Prospects and Problems

Virtually all underdeveloped countries have a wide variety of problems which interact with one another in complex ways and hinder development. Liberia is no exception. Some of its problems reflect the similarities underlying most of the West African economies and many of the other poorer nations. Others are more specifically related to the particular circumstances of the country. The likely development of Liberia will be determined by the clarity with which its problems are perceived and analyzed by those concerned with the country and by the efforts made to overcome the hurdles blocking its progress.

The fundamental aspect of underdevelopment is the low level of productivity of labor throughout the economy. This must be dealt with by increasing the cooperating factors of production and combining them more effectively, yet at the same time improving the incentives, skills, and potential of the producers themselves. The great majority of Liberians engage in the traditional type of tribal subsistence agriculture, but even in the money sector more than half the population is engaged in various agriculture pursuits.

Raising productivity requires improved technology, extensive social change, improved skills through better education, better health, increased urbanization, better communications, efficient marketing and distributive facilities, and effective government administration. In most of these respects, Liberia requires assistance in order to acquire the capital and skills needed for higher productivity. Its attempts to secure infrastructure capital are being partly frustrated by the inability to provide inputs for the operation and maintenance of the heavy investments which took place in the recent past. At the same time, a question could be raised as to whether it has devoted sufficient effort to fostering the necessary institutional and social changes required to raise incentives and improve skills.

Three particularly important development problems appear relevant in the context of U.S. assistance policy for Liberia. All may be characterized in terms of Singer's "interlocking vicious circles".<sup>1/</sup>

The present budget resources are inadequate to support a large enough development effort to raise incomes sufficiently to generate additional budgetary resources. Furthermore, additional revenues expected in the next few years from increased iron ore and rubber production are likely to be largely absorbed by additional debt service charges. This problem might be termed the budgetary vicious circle.

Over one third of gross national product at market prices (over one fifth of GDP at market prices) is devoted to central government

<sup>2/</sup>revenues. This is high in comparison with most countries. Of <sup>1/</sup>H.W. Singer, "Economic Progress in Underdeveloped Countries", Social Research, XVI (March 1949) p. 5.

<sup>2/</sup> This does not include the operation of government enterprises nor does it include the operation of district and local governments insofar as the latter have independent fiscal arrangements. Although no figures regarding these decentralized finances are available, it appears that the resources of the districts and localities are of significant size, although far smaller than those of the central government.

this large amount, one fourth goes for debt service and another 10% goes to support the various foreign aided development projects, as noted earlier. The remainder of over \$20 million is spent in a variety of ways, some of which are of low priority in terms of development needs while many others are necessary for the operation of the government.<sup>1/</sup> However, while tighter control over expenditures would lessen the amounts wasted, the additional amounts which could in this manner be generated for development would be strictly limited. Moreover, the difficulty is exacerbated by the inability of GOL to meet the costs of operation and maintenance of the past investments it has made. This means that the benefits which these investments are yielding will be sharply curtailed. The increase in recurrent cost required for efficient operation and maintenance of the government facilities would certainly amount to several million dollars.

Most of Liberian government revenues come from taxes and profit sharing with respect to concessions,<sup>2/</sup> and customs duties and other taxes on external trade. Better tax administration and an improved tax structure would certainly result in additional revenue, but limitations are imposed on GOL by the concession agreements and the volume of imports. Perhaps an additional \$2 to \$5 million annually could be secured from these sources, but this would be a small amount relative to what is needed. Revenues from the concessions are substantially autonomous with regard to changes in national income. Revenues from customs and other sources appear to grow in response to changes in national income at about one third the rate of national income.<sup>3/</sup>

<sup>1/</sup> E.G., salaries account for roughly \$15 million.

<sup>2/</sup> Mainly iron ore and rubber.

<sup>3/</sup> Thus a growth of 6% in national income would imply a growth of about 2% in revenues.

A second problem is the educational vicious circle. Liberia schools only a fraction of its population, and those who do not have the opportunity to study abroad receive low quality training, because the teachers in the Liberian educational system are insufficiently trained and inadequately paid. The poorly trained students of today are, however, the ill-prepared teachers of tomorrow with the result that standards remain low and the contribution of the educational system to improving the economic skills of the society remains inadequate.

The educational problem may be divided into quantity and quality considerations. At present about 6% of a given age group of children graduate from elementary school in Liberia, and only about 1 to 2% graduate from secondary school. The percentage receiving college or university training is, of course, even less. These numbers would be hardly adequate to provide qualified replacements for the existing teaching staff -- were all secondary school graduates to become teachers. However, most educated Liberians prefer government positions to teaching, because the monetary rewards are higher and the chances for advancement better.

Liberia's educational problem is not unique in Africa. Determined steps have been taken by GOL to increase educational opportunity. However, this problem interlocks with the budgetary problem. It has proven impossible to raise teachers' salaries sufficiently to provide incentives adequate to hold the better qualified in teaching. In part, this is because excessive amounts of the education budget have been allotted to construction.

Quality is much more difficult to assess. However, it is relevant to note that poor teachers, low standards, excessive number of holidays, and long vacations result in secondary school graduates who are two to four years behind their counterparts in the United States.

The educational vicious circle has a pervasive deleterious effect on the Liberian development efforts because poor education implies poor government administration, ineffective communication among Liberians and between foreigners and Liberians, a less attractive investment climate because of the lack of a literate and skilled labor force, and generally lower levels of productivity than otherwise might be attained. These in turn perpetuate low incomes and inadequate budgetary support to improve the educational system.

Two other long-term problems which have implications for short-run policy decisions concern the elaboration of the development strategy which will be followed and the control of the economy. Because there are some undesirable feedback effects associated with these two problem areas, they might be termed the political vicious circle. This is probably the most intractable problem in the context of foreign aid potentialities.

Liberia has implicitly followed a development strategy in which foreign capital is to provide the motive force under a regime of laissez faire. The "open door" policy has encouraged investment and a large volume of foreign capital has come in to develop mineral and agricultural resources. There can be little doubt that this capital flow has provided the impetus for the growth of Liberia over the last decade. There is also little doubt that the present depression and unemployment is in large part traceable directly and indirectly to the phasing of this investment.

The prospects for new foreign investment on the scale that has taken place in the past decade are very slim, although Liberia does have a chance in the next few years of getting an investment in an iron and steel complex, and in an oil refinery, as well as in a number of other industrial enterprises. Most of the effect of the concessions (except Firestone) has been on incomes in the construction sector. While the operation of the concessions also raises Liberian income, the direct employment effects are relatively small because the mining concessions particularly are capital intensive, and both they and the plantation operations tend to be self-sufficient and do not generate secondary activities to serve them. The "open door" strategy provides the government with the major portion of its revenues and foreign exchange resources and, therefore, indirectly makes an important contribution to development. But the existence of the foreign concessions is not a sufficient condition for guaranteeing Liberia's future economic growth.

Because of their economic importance in the economy of the country, as well as their international financial and commercial connections, these foreign enterprises tend to be unequal bargaining partners relative to GOL. Moreover, a number of wealthy and politically powerful Liberians have financial interests in the concessions and receive dividends and other income from them. As a result of these considerations, it is difficult for Liberia to pursue tax policies or labor policies which in the short run might adversely affect the concessions. <sup>1/</sup>

<sup>1/</sup> E.G., requiring the concessions to train Liberians to fill all upper management posts would be highly desirable. Some concessions have taken limited steps in this direction (LAMCO is an example) but much more could be done.

Another aspect of the problem is that economic development tends to be equated with personal or family advancement by some officials. This point of view sometimes tends to turn a potential positive sum game into a zero sum game or negative sum game.<sup>1/</sup> While to some extent this is inevitable in any government, establishing the institutions and procedures which inhibit such biased decision-making is very difficult.

#### E. Summary

The Liberian economy is in a depression which follows a rapid and extended expansion. A similar boom, stimulated mainly by large mining investments, high rubber prices, and external government borrowing, is unlikely to occur again in the near future. The next phase of Liberian development is likely to be more difficult; it should and hopefully will, involve the increased Liberianization of the economy and the gradual expansion and improvement of productive capabilities in agriculture and industry. There are a number of attractive opportunities available for long run expansion: farming of timber, coffee or oil palms; iron smelting; cement making; etc. None of these is likely to produce an enormous expansion of activity, and nearly all impose demands on the Liberian government which at present it is ill-prepared to fulfill.

In order for development outside the foreign enclaves to take place, productivity must be sharply improved in agriculture, which

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<sup>1/</sup> Such "games" are, respectively, those in which total gains outweigh total losses, gains equal losses, losses exceed gains. Development consists of sequential decision-making in such a way that a permanent positive sum game (i.e. growth) is established. The policy problem is to establish institutions and incentives such that decisions are avoided which might change the positive sum game into a non-positive sum game.

occupies the majority of the population, and at least a limited industrialization must be undertaken. These considerations should be at the heart of any Liberian development plan. Although considerable progress can be made by a direct approach, in the long run the propagation and spread of such activities and the increased Liberianization of the managerial and technical levels of the concessions require a vastly improved educational background for most Liberians, basic infrastructure in the form of good communications and efficient distributive facilities, and a government which effectively and honestly fulfills its necessary administrative functions.

To begin to make progress in these directions, a new development strategy must be determined, and decisions must be made on the priorities of various sectors and regional areas,<sup>1/</sup> and of specific projects. With the termination of iron ore investment, much of the burden of Liberian development has devolved directly on the GOL. The present situation of great budget stringency implies an urgent need for making these decisions in as rational a manner as possible, devoting scarce resources to the most important activities. The machinery for national economic planning, set up only a little over two years ago, is designed to facilitate efficient decision-making. If the present depression is to be overcome and growth resumed, this

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<sup>1/</sup> There are reasons to believe that an expansion of the population of Monrovia beyond 150,000 (presently 90,000 and growing 15% per year) will rapidly increase the costs of additional economic activity there. Consequently, regional location of development activities will become a critical consideration within three or four years.

planning machinery must be harnessed and made to work. This is a prerequisite to attacking the problem of development strategy and guiding the growth of Liberia so that it will be accompanied by social progress. It is in this context that foreign assistance has a vital role to play in Liberia and it is in this context that the overall impact of U. S. assistance in contributing to Liberian development must be judged.

### III. UNITED STATES ASSISTANCE TO LIBERIA

#### A. Background and Rationale

The reasons for aid-giving have been explored by many authors.<sup>1/</sup> Although the emphases vary from enlightened self-interest to generosity, most analysts agree that U. S. assistance is genuinely devoted to attempting to provide the necessary stimulus to help countries achieve self-sustaining economic growth and social development. However, this assistance is given in such ways as to confer certain direct benefits on United States domestic interests, and in general these domestic interests impose various limits on the programs of assistance pursued. Thus, whether development of the under-developed is sought because of a belief that development will mean a more secure world of independent nations; whether humanitarian generosity is the keystone of the program; or whether the propagation of the American "image" is the goal, as is partly true of the Peace Corps program -- the relevant fact is that the primary goal is economic development, and this goal is subject to certain constraints.

These constraints appear to be roughly as follows: Aid which results in increased U. S. exports is preferred over that which does not. This explains the popularity of the Food for Peace program,

<sup>1/</sup> Most recently Mason, E. S., Foreign Aid and Foreign Policy, Harper & Row, N. Y., 1964, pp. 26-51.

Asher, R. E., Grants Loan and Local Currencies, Their Role in Foreign Aid, The Brookings Institution, 1961, Washington, D. C., p. 3 et passim.

Higgins, B., U. N. and U. S. Foreign Economic Policy, Richard D. Irwin, Inc., Homewood, Ill., 1962, pp. 1-12.

Millikan, M. F., Rostow, W. W. A Proposal, Key to an Effective Foreign Policy, Harper & Bros., N. Y., 1957. Other views of this problem may be found in Kindleberger, C. P., Economic Development, McGraw Hill, N. Y., 1958, pp. 292-299, Wolf, C., Jr., "Economic Aid Reconsidered", Yale Review, pp. 518-532 (1961).

the tying of aid and a general tendency to favor projects which ceteris paribus have a more favorable impact on U. S. exports. Countries associated politically, militarily or commercially with the U. S. have generally been favored in terms of aid per capita.<sup>1/</sup> The reasons for this preference are fairly obvious, but it probably is true that these countries on the whole make better use of U. S. aid because there are fewer political difficulties to overcome in receiving the aid. The United States has announced a policy of favoring those countries which help themselves toward development. Unfortunately, this "self-help" criterion has yet to be formulated in a completely satisfactory way.<sup>2/</sup> In practice, it has tended to be interpreted in terms of the adoption of formal development planning and with respect to the average or marginal savings ratio of the economy.

Although the overriding consideration behind U. S. involvement in Liberia is the long history of association between the two countries, it is important to note that Liberia satisfies the other constraints as well. Most of Liberia's trade is with the United States. This results in part from Liberia's use of U. S. currency, but in part also from the established commercial relationships and concessions between the two countries. Even if the great bulk of U. S. aid to Liberia were not tied, its effect on U. S. exports of goods and services would be substantial.

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<sup>1/</sup> C. F., Strout, A. M. "Factors Affecting the Allocation of Foreign Aid", mimeographed, Office of Program Coordination, AID, April 1964.

<sup>2/</sup> The most sophisticated treatment may be found in Paauw, D. S., and Fei, J. C. H., "Foreign Assistance and Self-Help", Center for Development Planning, Paper M-7720, December 1963.

Liberia has had development planning machinery since 1962. This machinery was set up with the advice and assistance of USAID. The fledgling Office of National Planning is currently preparing the country's first five year plan. As noted earlier, public savings in Liberia amounts to over one eighth of national income. Private national savings probably accounts for an additional two or three per cent of national income at least. This would seem to be a quite satisfactory savings performance.<sup>1/</sup>

The long association between Liberia and the United States has by no means been one-sided -- the U. S. and its citizens have benefited greatly. The military value to the Allies of Robertsfield (which was opened in 1942), for example, cannot be measured, but it must have been enormous. Similarly, the espousal of a moderate Pan-African Weltanschauung by Liberia has been of considerable diplomatic assistance. The Liberian "open door" policy has permitted extensive foreign investment which has been profitable to the investors as well as to Liberia. The major investors have been American corporations: Firestone, Republic Steel, Bethlehem Steel, Goodrich Rubber Co., and a number of other smaller companies.

In world opinion, the association of Liberia with the United States is such, that regardless of the extent of current U. S. assistance to Liberia, the success or failure of Liberia in "taking off" into self-sustained growth will in large part be attributed to the United States. This relationship was recognized several years

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<sup>1/</sup> If "self-help" is extended to include the undertaking of institutional reform, the record of Liberia is somewhat less favorable. Liberia has a long history of dilatory reaction to outside demands for reform.

ago by the U. S. policy decision to assist Liberia to become a "showcase" of economic development. Unfortunately, the present stagnation in Liberia has discouraged and frustrated some U. S. officials and has resulted in an indecisive aid posture toward Liberia at the time that the "showcase" projects are beginning to be implemented.

B. U. S. Assistance 1940-1963

Economic aid to Liberia by the United States began with the construction of Robertsfield, the international airport at Harbel, during 1940 and 1941. This was undertaken for military reasons. In the immediate postwar years, the Freeport of Monrovia was constructed under a Lend-Lease arrangement, pursuant to an agreement between President Roosevelt of the U. S. and Edwin Barclay, President of Liberia. It cost over \$20 million. Also, assistance was provided for the construction of the highway from Monrovia to Ganta. These three investments had the effect of opening up the country economically.

During the 1960's and through U. S. fiscal year 1963, most U. S. aid to Liberia was channeled through the Agency for International Development and its predecessors, and the Export-Import Bank. In addition, relatively minor amounts were made available to Liberia under the Food for Peace Program and other programs.

From fiscal 1949 through fiscal 1963, AID and predecessor agencies' expenditures for economic assistance amounted to \$31.3 million, of which more than one half was spent in the last three fiscal years. In these three fiscal years, the amounts spent through USAID have risen very rapidly from \$3.0 million in fiscal year 1960

to \$7.8 million in fiscal year 1963 and to an estimated \$9.0 million in calendar 1963. About 30% of USAID assistance has gone to education and 20% for public works. One sixth has been spent on technical support, one eighth for agriculture, and one ninth for government administration.

The Export-Import Bank made loans aggregating \$22.3 million in 1951 and 1955 for the purpose of highway construction, water supply and sewerage improvements, and port construction at Harper. The disbursement of these loans took place over several years, and the repayment was to terminate in 1980. In 1959 and 1961, loans amounting to \$12.1 million were authorized for the purchase of power equipment. The disbursement on these loans was completed by 1962. Both loans were to be amortized over a 12  $\frac{1}{2}$  year period with a three year period of grace prior to commencement of amortization. All of these loans had commercial interest charges ranging from 3  $\frac{1}{2}$ % to 5  $\frac{3}{4}$ %.

The total of Export-Import aid to the end of fiscal year 1963 was \$34.4 million of which \$4.2 million had been repaid and in respect of which \$7 million of interest had been paid. Thus the net transfer of resources through the Ex-Im Bank over the period was about \$23 million. In 1963, a refunding was arranged of the amortization payments due for the period 1963-1968 on the loans outstanding. During those years, no amortization will be paid. Interest payments of about \$1.5 million per year will continue, however. <sup>1/</sup>

Thus, the overall assistance of the U. S. to Liberia from 1951 through fiscal year 1963 totalled \$68 million, <sup>2/</sup> of which 43% went

<sup>1/</sup> The Export-Import Bank has also made loans to private companies operating in Liberia for approximately \$10 million in the aggregate.  
<sup>2/</sup> Gross of interest and amortization of loans.

for public works, 19% for power facilities, 14% for education, 6% for agriculture, 5% for government administration, and minor amounts for other purposes except technical support, which accounted for 8%. In terms of resource transfers, during the calendar years from 1956 through 1961, an average of \$6 million annually was made available to the Government of Liberia under U. S. government assistance. In 1962, the net aid exceeded \$7 million and in calendar 1963 it was almost \$9 million.<sup>1/</sup>

This very brief description of past U. S. aid activities in Liberia provides the essential background information to enable us to place the current and expected future aid programs in proper historical perspective. The intent has not been to make an exhaustive analysis of past aid activities, but rather simply to provide a basis from which to view the current program.

C. The U. S. Assistance Program 1964-1968

Appendix A contains an exhaustive description of all current public U. S. economic assistance activities in Liberia. Not included are the military assistance of the U. S. Department of Defense, the propaganda activities of the United States Information Service (although this probably has a development impact inasmuch as it operates one of the few libraries in Monrovia) or the construction and operation of the Voice Of America boosters and transmitters near Monrovia. Private assistance activities have also been omitted such as those of religious and voluntary agencies. In general, the

<sup>1/</sup> Net of repayments of interest and amortization.

criterion for inclusion was that the activity be public in financing, developmental in orientation, and involve some sort of Liberian participation.

The period under consideration, calendar 1964-1968, is mainly in the future. Naturally, as changes in personnel and in the domestic and foreign political scene take place, alterations will be made in the programs of the various U. S. aid giving agencies. Thus errors are likely with respect to the size and scope of particular projects and the commitments on both sides, and these errors are likely to increase the further in the future the period being reviewed.

The projects included are only those which involve expenditures or activity in Liberia during 1964 or which are likely to be undertaken in the near future. In this latter group, no project has been included unless the costs could be estimated at present with some degree of certainty. Because of the normal lead time required before new projects can be implemented, this omission of new projects probably does not seriously affect the figures for 1964-1966. For the last two years, however, the totals of assistance received and Liberian costs undertaken will undoubtedly be higher than the figure shown. However, the shape and nature of possible future projects is too uncertain for present analysis. The expenditures and costs shown represent the present estimate of the likely future situation if commitments on both sides are honored and if no new projects, not already under consideration, are undertaken.

Public Utilities and Education account for about three-fourths

of total gross U. S. assistance to Liberia 1964-1968, and a similar proportion of gross USAID assistance (45% and 30%; 51% and 25% respectively). Government Administration accounts for 6% of both gross U. S. assistance and gross USAID cost, while Health accounts for 8% and 10%, Public Works for 3% and 4%, and Statistics and Planning for 6% and 3% of the total U. S. and USAID figures respectively. Agriculture gets less than 1% of the gross assistance. Somewhat over 10% of the total gross assistance must be repaid by GOL to the U. S. as interest (2% of USAID gross assistance).

These percentages for the entire period conceal some shifts that will take place during the period.<sup>1/</sup> The share of total gross assistance going to education climbs from 29% to 44%, Public Utilities goes from 37 to 42%, Health's share drops from 17% to 5%, Planning and Statistics from 7% to 2%, and Public Works from 4% to 1%. Agriculture's percentage decreases by two-thirds from an initial level slightly in excess of one per cent. Interest charges rise from 7% in 1964 to 23% in 1968.<sup>2/</sup>

The absolute volume of U. S. assistance is very large - about twenty million dollars net in each of 1964, 1965 and 1966, halving to \$10 million in 1967 and dropping to \$6.4 million in 1968.<sup>3/</sup> These are very large sums relative to the Liberian GNP of roughly \$100 million or GOL budget of roughly \$40 million. They are also large relative to the U. S. assistance expenditures elsewhere on a per

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<sup>1/</sup> This assumes, as stated earlier, no new projects other than those already under discussion (e.g., the sewerage project is included but upstream reservoirs for Mt. Coffee are not).

<sup>2/</sup> Parenthetically it should be noted that in 1969, when amortization on the Ex-Im loans recommences, if gross assistance levels of 1968 are maintained debt service will absorb one half of the aid to be given.

<sup>3/</sup> Vide footnote <sup>1/</sup> above.

capita basis - the \$19 per capita in Liberia in 1964 of U. S. assistance expenditures ranks with Jordan and Laos and makes Liberia one of the most favored nations in the world with respect to the volume of U. S. assistance.

In comparison with U. S. assistance prior to 1964, it is of interest to note that U. S. assistance expenditures more than doubled from calendar 1963 to calendar 1964. The years 1964-1966 appear to be the culmination of a very rapid expansion of assistance beginning about 1960. A very substantial shift has taken place at the same time away from public works and agriculture,<sup>1/</sup> to both of which assistance has declined in absolute and relative terms from recent levels of expenditure, in favor of public utilities, education, and health. In addition, thanks to the enlarged size of the program, and the refunding of the Ex-Im loans, interest and amortization payments have dropped sharply relative to gross assistance totals.

The U. S. assistance program is concentrated on public utilities and education. The emphasis on public utilities has the advantage that the projects are largely self-financing and ultimately will more than repay recurring costs, as well as interest payments. However, the economic benefits appear to be concentrated and largely directed toward the urban upper classes. The high priority accorded to this type of activity may be seriously questioned. Considerably larger and wealthier West African cities have less elaborate sewerage systems than that presently existing in Monrovia (e.g. Lagos) and

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<sup>1/</sup> A PL 480 program was to have provided substantial sums for agricultural development in the period under review. Unfortunately it was a victim of administrative difficulties and to some extent political rivalries within GOL. As a result it was suspended in late 1963 and is for the foreseeable future dormant.

power consumption is far lower in other larger capitals (e.g. Freetown). The investment required in public utilities is almost always very high relative to the prospective annual benefits. Therefore such investments need to be justified on the basis of lower risks and external economies. There is room for analysis concerning these factors and possibly doubt regarding their relative importance at the present stage of Liberian development.

In education, the Peace Corps operation in Liberia has a great potential of becoming the centrifugal force which will transform the educational vicious circle into an ever expanding spiral. In addition, USAID programs, in particular teacher training and the Monrovia consolidated school system, are having important positive effects. The U. S. emphasis on education attacks a key Liberian problem, but the program has been formulated with insufficient regard to minimizing the cost of providing a given quantity and quality of education. Well over half of the recurring burden on the GOL budget resulting from the U. S. assistance program is attributable to education.

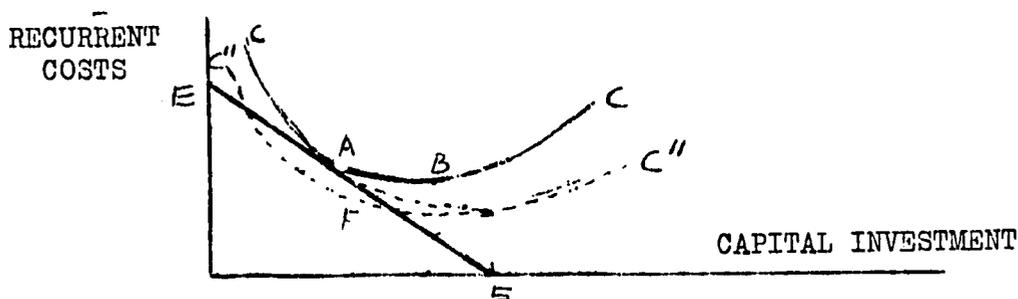
USAID has encouraged the construction of high-cost school buildings both by building them with its own grant funds and advising GOL to construct similar buildings. The costs per student of buildings under construction are eight to ten times as high as those used as guidelines at the Addis Ababa Conference of the African States on the Development of Education in Africa in 1961.<sup>1/</sup> While some of this difference in cost may possibly be explained by higher costs of construction in Liberia and another portion by

1/ These may be found in Annex 4, "Financing of Education", to Final Report, May, 1961, written by Prof. W. Brand, and published by UNESCO.

genuine improvements in the quality of the educational investment some is undoubtedly due to the inclusion of frills which might be questioned even in the U. S. and are out of place in Liberia.

This budgetary problem will continue to be exacerbated by the excessive maintenance costs associated with the expensive buildings. While the least expensive buildings have the largest maintenance and depreciation costs relative to the amount of the investment, the percentage of investment which must be annually renewed and replaced tends to remain relatively constant when more expensive schools are built.<sup>1/</sup> The excessively high investment and maintenance costs of

<sup>1/</sup> The production function of education is shaped as shown in the accompanying figure.



C-C represents the recurrent cost necessary at various levels of capital investment to produce a given output of education. Recurrent cost is the cost required to operate the facility at the given level, and to maintain the value of the investment constant. Interest is not included. As investment rises the life of the investment increases at a decreasing rate, and maintenance costs as a percentage of investment decrease at a decreasing rate. These determine the shape of C-C. There are undoubtedly some economics of scale involved in the production of education, but as long as the function is homogenous we may represent the entire production surface by the CC curve by appropriately adjusting the numbering of the axes for different scales of output.

EE and lines parallel to it are constant cost lines for a given (positive) rate of interest. Point A clearly provides the best input mix by minimizing the cost of the given output. Point B would be optimal for a zero interest rate - showing that normally it is not desirable to invest so as to minimize recurrent costs. Only in the

footnote <sup>1/</sup> continued on following page

educational structures in Liberia preempt budgetary resources which could be devoted to salary increases for teachers. If the latter were possible, the quality gains in Liberian education might exceed the quantity improvements from greater expenditure of funds on buildings and equipment.<sup>1/</sup> A reorientation of U. S. policy subsidizing GOL recurrent costs in education and away from investment in educational plant appears worthy of consideration.

Administration, operation, and organization of the GOL is undoubtedly one of the most difficult and at the same time one of the most essential areas in which to provide assistance. The effort made by USAID and the Peace Corps in this area is one which will only pay off over a long period of time. Although many initial changes have been made, improving operating methods and techniques in any large organization is a task that requires continuing efforts over long periods of time if the gains made are to be consolidated into normal practice. Thus, the administrative procedures introduced in projects currently

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footnote 1/, p. 30, continued

unlikely event that the United States offered to build on a grant basis a fixed number of schools for which the design could be specified by Liberia would B be an optimum choice of input combination. The assertion here is that U. S. constructed schools in Liberia are in the region near point D.

A real point of disagreement regarding the investment cost of school facilities centers on the educational value of the "frills". If these are of little educational value in the Liberian milieu, as the author suspects, then the above analysis holds. If they are valuable, then a size larger than A may be justified. C' - C" or C - C" may represent the proper cost curve and in the former case F is the optimum investment while in the latter case A is unchanged.

1/ A differentiated pay scale for teachers in Liberia has been legislated but not implemented for lack of funds. It provides substantially increased rewards for increased training, and, if implemented, might partly stem the flow of the better educated teachers out of the educational system into better paying positions elsewhere in government or with the concessions.

under way need to be reinforced in some cases through the continuation of U. S. assistance.

A great deal of assistance can still be productively absorbed in improving the operation of the government of Liberia. In particular, the efficiency of middle level and lower level government employees could be sharply improved through programs in clerical procedures and training in use of office machinery. The relative size of the U. S. assistance effort in this sector remains about 6% of the total in the period under review, but the decrease in the total implies a sharp cutback of U. S. expenditures in absolute terms. It is to be hoped that the potential benefits from continued involvement in this sector can be realized through the formulation of or maintenance of a long-run set of projects which at least maintain the absolute level of expenditures.

The difficulties of making informed decisions within the Liberian government will be ameliorated by the program discussed in the previous paragraphs, but the main burden falls on the statistics and planning portion of the program. In view of the small and decreasing size of the U. S. effort made in this area, it is fortunate that the GOL agencies involved have been able to obtain substantial United Nations technical assistance.<sup>1/</sup> The need for expertise and technical assistance in this area is large and will continue so. As will be detailed in the next section, the United States could, by providing more useful data regarding its assistance activities, substantially lessen the burden on the planning apparatus. This would be a very valuable form

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<sup>1/</sup> U. S. assistance to the R. L. National Planning Agency actually accounts for less than 10% of U. S. aid in the portion of the program herein called Planning and Statistics and consequently about 0.5% of total U. S. assistance.

of technical assistance to the Office of National Planning which would cost the United States relatively little.

Insofar as health and public works are concerned, the assistance programs of other countries, of the United Nations, and of the World Bank, are quite important. Consequently, the program of the United States in these sectors is somewhat smaller than it might otherwise have been. The only U. S. project with direct industrial implications is the support of the Liberian Development Corporation. Agriculture also receives very small -- and decreasing -- amounts <sup>1/</sup> of U. S. assistance. In light of the substantial body of opinion which stresses the general -- and in the Liberian context, specific -- importance of these sectors, the reasons for the lack of emphasis in the U. S. aid program on these sectors is a subject inviting serious study. If research of this type could yield information which would aid the identification, formulation, and implementation of projects in these areas, economic development not only in Liberia but in many other countries would be greatly benefited.

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<sup>1/</sup> As noted earlier, the suspended PL 480 program was to have provided additional funds for agriculture. Even if this program were still in operation, the amounts of aid flowing to agriculture relative to the total U. S. assistance program would be quite small.

The following tables summarize the statistical information in the Appendix. These tables have been broken down by sector of governmental activity into Education, Public Utilities, Public Works, Government Administration, etc., Health, Agriculture, and Statistical Information and Planning. For each sector, the number of American experts (line 1), and Liberian participants (line 2) is shown along with the number of man months of activity for each. Construction and engineering in line 3 is the total amount, including both that which is U. S. and that GOL financed, as long as the activity is directly associated with a U. S. aid project. This has been included because of the importance of construction activity in the economy of Liberia. Peace Corps and Army Map Service man years are shown as lines 5A and 5B. All lines except 1, 2, 5A, and 5B are in U. S. dollars.

Expenditures are broken down by grants and loans and by U. S. source. The loan figures are given both gross and net of interest and amortization charges.<sup>1/</sup>

From the viewpoint of allocation of assistance to a sector, the gross loan figure should be used because interest is paid from general GOL funds to general U. S. funds. Prior to the implementation of a project, the extent of interest and amortization payments should, of course, be considered as contingent on the project being undertaken. Once the project is implemented, however, these debt service payments are the general responsibility of GOL, not of a particular project. Consequently, gross aid figures are relevant when comparing the volume of resource transfers going to different sectors, while net aid figures are relevant in determining the total amount of resource transfer to the country in question.

The information in the lower lines of the Tables 1 - 7 and in Table 9 concerns the direct impact on the GOL budget (GOL B), the Republic of Liberia balance of payments (RL BP) and the RL gross national product (RL GNP) of the Liberia commitments with respect to U. S. assistance projects and U. S. official assistance expenditures for all purposes except so-called "technical support". These impacts will be discussed in the sub-section III-D.

<sup>1/</sup> In the case of technical support -- the provision of housing, transportation and administrative services to the USAID operation -- this has not been included in the direct impact figures on GOL B, RL BP, and RL GNP, tables 1 - 7, and 9A. This is because this expenditure is only to a limited extent project associated and is consequently marginal only if the size of the USAID program is sharply altered. See sub-section III-D.

TABLE 1

EDUCATION  
(All except lines 1, 2, 5B in \$1000)

	Calendar Years				
	<u>1964</u>	<u>1965</u>	<u>1966</u>	<u>1967</u>	<u>1968</u>
1. Experts/man months	73/799	84/904	77/895	65/720	47/520
2. Participants/man months	123/930	146/1130	123/920	92/644	74/512
3. Construction engineering	2781	2337	890	685	415
4. Equipment, etc.	446	230	345	118	109
5B. Peace Corps Volunteers/ man years	245	360	460	460	460
6. USAID Cost (Grant)	4555	4302	3985	2794	1973
7A. Loans gross	1220	830	0	0	0
7B. Interest receipts	16	16	16	16	16
7C. Loans, net	1204	814	-16	-16	-16
8A. USAID total, gross	5775	5132	3985	2794	1973
8B. USAID total, net	5759	5116	3969	2778	1957
10. Peace Corps	860	1260	1610	1610	1610
14A. Total U. S. gross	6635	6392	5595	4404	3583
14B. Total U. S. net	6619	6376	5579	4388	3567
Expected direct impact of GOL expenditures and U. S. construction on:					
15. Net GOL B <u>Capital</u>	-183	-565	-210	-335	-235
16. Net GOL B <u>Recurring</u>	-738	-908	-1214	-1504	-1617
17. Net GOL B <u>Total</u>	-921	-1473	-1424	-1839	-1852
18. Gross GOL B	-937	-1489	-1440	-1855	-1868
19. Net RLBP <u>Capital</u>	-80	-200	-100	-272	-192
20. Net RLBP (U.S. Con- struction)	+203	+121	+134	+70	+36
21. Net RLBP (Recurring*)	-358	-419	-532	-550	-546
22. Net RLBP <u>Total</u>	-235	-498	-498	-752	-702
23. Gross RLBP	-251	-514	-514	-768	-718
24. RL GNP	+619	+881	+869	+1042	+1104

\* Includes payments to peace Corps volunteers.

TABLE 2

PUBLIC UTILITIES  
(all except line 1 in \$1000)

	Calendar Years				
	<u>1964</u>	<u>1965</u>	<u>1966</u>	<u>1967</u>	<u>1968</u>
1. Experts/man months	5/60	5/60	5/60	5/60	5/60
3. Construction engineering	8508	10180	14602	5918	3618
6. USAID Cost (Grant)	343	210	210	210	210
7A. USAID Loans, gross	8100	9100	12900	5200	3200
7B. Interest receipts	182	235	295	295	295
7C. Loans, net	7918	8865	12605	4905	2905
8A. USAID total, gross	8443	9310	13110	5410	3410
8B. USAID total, net	8261	9075	12815	5115	3115
11A. Ex-Im. Loans, gross	0	0	0	0	0
11B. Ex-Im. Interest receipts	676	676	676	676	676
11C. Ex-Im. Loans, net	-676	-676	-676	-676	-676
14A. Total U. S. gross	8443	9310	13110	5410	3410
14B. Total U. S. net	7585	8399	12139	4439	2439
Expected impact of GOL expenditures, PUA operations and construction					
15. Net GOL B Capital	-408	-1230	-1752	-710	-360
16. Net GOL B Recurring	-10	-10	+290	+222	+225
17. Net GOL B Total	-418	-1240	-1462	-488	-135
18. Gross GOL B	-1276	-2151	-2433	-1459	-1106
19. Net RLBP Capital	-	-	-	-	-
21. Net RLBP Recurring	-	-	-20	+194	+107
22. Net RLBP Total	-	-	-20	+194	+107
23. Gross RLBP	-858	-911	-991	-777	-864
24. RL GNP	+418	+1190	+2091	+2457	+2335

TABLE 3

PUBLIC WORKS  
(all except lines 1 and 2 in \$1000)

		<u>Calendar Years</u>				
		<u>1964</u>	<u>1965</u>	<u>1966</u>	<u>1967</u>	<u>1968</u>
1.	Experts/man months	18/179	18/188	12/136	6/72	-
2.	Participants/man					
	months	13/92	19/104	20/102	27/156	5/120
4.	Equipment	115	108	105	5	-
6-8.	USAID Cost (Grant)	820	804	645	371	60
11A.	Ex-Im. Loans, gross	0	0	0	0	0
11B.	Ex-Im. Interest					
	receipts	836	836	836	836	836
11C.	Ex-Im. Loans, net	-836	-836	-836	-836	-836
14A.	Total U. S. gross	820	804	645	371	60
14B.	Total U. S. net	-16	-32	-191	-465	-776
Expected direct impact of GOL expenditures on:						
16-17.	Net GOL B (recurring)	-44	-46	-67	-84	-78
18.	Gross GOL B	-380	-882	-903	-920	-914
20-22.	Net RL BP (recurring)	-17	-18	-23	-32	-29
23.	Gross RL BP	-853	-854	-859	-868	-865
24.	RL GNP	+20	+20	+35	+40	+40

TABLE 4

GOVERNMENT ADMINISTRATION, OPERATION, ORGANIZATION  
(all except lines 1, 2, 5B in \$1000)

		Calendar Years				
		1964	1965	1966	1967	1968
1.	Experts/man months	35/365	32/339	27/223	18/156	14/130
2.	Participants/man months	62/270	53/298	44/214	39/195	28/166
3.	Construction	120				
4.	Equipment	192	125	126	68	3
5B.	Peace Corps/ volunteers (man years)	40	40	40	40	40
6-8.	USAID Cost (Grant)	1512	1269	853	553	418
10.	Peace Corps	140	140	140	140	140
14.	U. S. Total	1652	1409	993	693	558
Expected direct impact of GOL expenditures and construction on:						
16-17-18.	GOL B (recurring)	-246	-299	-307	-316	-316
20.	Net RLBP (U.S. Cons.)	+24	-	-	-	-
21.	Net RLBP recurring	-67	-73	-74	-77	-79
22-23.	Net (Gross) RLBP total	-43	-73	-74	-77	-79
24.	RL GNP	+168	+210	+221	+225	+224

TABLE 5

HEALTH  
(all except lines 1 and 2 in \$1000)

	<u>Calendar Years</u>				
	<u>1964</u>	<u>1965</u>	<u>1966</u>	<u>1967</u>	<u>1968</u>
1. Experts/man months	6/66	11/115	17/182	18/185	14/148
2. Participants/man months	4/16	13/96	15/116	10/72	6/48
3. Construction	3659	2598	166		
4. Equipment	32	49	35	5	
6. USAID Cost (Grant)	250	354	548	503	394
7A. USAID Loans, gross	3468	1934	-	-	-
7B. Interest receipts	40	40	40	40	40
7C. Loans, net	3428	1894	-40	-40	-40
8A-14A. USAID total, gross	3718	2288	548	503	394
8B-14B. USAID total, net	3678	2248	508	463	354
Expected direct impact of GOL expenditures and U.S. construction					
15. Net GOL B (Capital)	-191	-689	-191	-25	-25
16. Net GOL B (Recurring)	-30	-59	-77	-694	-694
17. Net GOL B (Total)	-221	-748	-268	-719	-719
18. Gross GOL B	-261	-788	-308	-759	-759
20. Net RLBP (U.S. Construction)	+5	-	-	-	-
21. Net RLBP (Recurrent)	-3	-10	-13	-72	-72
22. Net RLBP (Total)	+2	-10	-13	-72	-72
23. Gross RLBP	-38	-50	-53	-112	-112
24. RL GNP	+197	+707	+222	+615	+617

TABLE 6

AGRICULTURE  
(All except lines 1 and 2 in \$1000)

		<u>Calendar Years</u>				
		<u>1964</u>	<u>1965</u>	<u>1966</u>	<u>1967</u>	<u>1968</u>
1.	Experts/man months	11/90	5/41	3/30	2/24	2/12
2.	Participants/man months	11/76	6/40			
3.	Construction	15				
4.	Commodities	6	3			
6-8.	USAID Cost (Grants)	325	145	77	62	31
Expected direct impact of GOL expenditures and U. S. construction:						
( 16-17-18.	GOL B (Recurring & Total)	-18	-13	-6	-6	-6
20.	Net RLBP (U.S. Construction)	+5	-	-	-	-
21.	Net RLBP (Recurring)	-5	-3	-	-	-
22-23.	RL BP (Total)	0	-3	-	-	-
24.	RL GNP	+11	+6	+6	+6	+6

TABLE 7

STATISTICAL INFORMATION AND PLANNING  
(All except lines 1, 2, 5A in \$1000)

		<u>Calendar Years</u>				
		<u>1964</u>	<u>1965</u>	<u>1966</u>	<u>1967</u>	<u>1968</u>
1.	Experts/man months	21/138	13/132	13/106	7/60	5/38
2.	Participants/man months	26/204	31/226	34/294	33/207	28/186
4.	Commodities	106	64	34	40	13
5A.	U.S. Army Personnel (man years)	61	61	61	61	
6-8.	USAID Cost (Grants)	760	602	493	335	198
9.	USDOD Grants	800	800	800	800	
14.	U.S. Total	1560	1402	1293	1135	198
Expected direct impact of GOL expenditures on:						
15.	GOL B Capital	-380	-390	-400	-400	-400
16.	GOL B Recurrent	-386	-323	-312	-318	-212
17-18.	GOL B Total	-766	-713	-711	-718	-612
21-22-23.	RL BP (Recurrent & Total)	-192	-156	-145	-151	-86
24.	RL GNP	+168	+145	+147	+148	+113

TABLE 8

TOTAL U.S. AID TO LIBERIA  
(All except lines 1, 2, 5A, 5B in \$1000)

	Calendar Years					Total
	1964	1965	1966	1967	1968	
1. Experts/man months	167/1697	168/1779	154/1632	130/1277	87/908	/7293
2. Participants/man months	239/1588	268/1894	236/1646	201/1274	141/1032	/7434
3. Construction	15083	15115	15658	6603	4033	56492
4. Equipment	897	579	645	236	125	2482
5A. USDOD Personnel (man yrs)	61	61	61	61	0	244
5B. USPC Volunteers (man yrs)	285	400	500	500	500	2185
6. USAID Grants	8565	7886	6811	4828	3284	31174
7A. USAID Loans, gross	12788	11864	12900	5200	3200	45950
7B. USAID Interest receipts	238	291	351	351	351	1582
7C. USAID Loans, net	12550	11573	12549	4849	2849	44370
8A. USAID Total, gross	21353	19550	19711	10028	6484	77123
8B. USAID Total, net	21115	19259	19360	9677	6133	75554
9. USDOD Grant	800	800	800	800	0	3200
10. US Peace Corps	1000	1400	1750	1750	1750	7650
11A. Ex-Im. Loans, gross	0	0	0	0	0	0
11B. Ex-Im. Interest receipts	1512	1512	1512	1512	1512	7560
11C. Ex-Im. Loans, net	-1512	-1512	-1512	-1512	-1512	-7560
14A. US Total, gross	23153	21750	22261	12578	8234	87976
14B. US Total, net	21403	19947	20398	10715	6371	78834

TABLE 9  
 IMPACTS OF THE U.S. ASSISTANCE PROGRAM

	Calendar Years					Total 1964-68
	1964	1965	1966	1967	1968	
<b>Direct Impact of GOL AID-connected Expenditures and U.S. Construction Expenditure</b>						
15 Net GOL B (Capital)	-1162	-2874	-2553	-1470	-1020	- 9079
16 Net GOL B (Recurrent)	-1472	-1658	-1692	-2700	-2698	-10220
17 Net GOL B Total	-2634	-4532	-4245	-4170	-3718	-19299
7B+11B Interest & Amortization	-1750	-1803	-1863	-1863	-1863	- 9142
18 Gross GOL B	-4384	-6335	-6108	-6033	-5581	-28441
19 Net RLBP Capital	- 80	- 200	- 100	- 272	- 192	- 844
20 Net RLBP US Constr.	+ 220	+ 103	+ 111	+ 38	+ 7	+ 479
21 Net RLBP Recurring	- 625	+ 661	- 784	- 656	- 676	- 3402
22 Net RLBP Total	- 485	- 758	- 773	- 890	- 861	- 3767
7B+11B Interest & Amortization	-1750	-1803	-1863	-1863	-1863	- 9142
23 Gross RL BP	-2235	-2561	-2636	-2753	-2724	-12909
24 RL GNP	+1601	+3159	+3591	+4533	+4439	+17323
<b>Direct Impact of U.S. Expenditures for Housing, Transportation, Subsistence, and Services. 1/</b>						
D17 GOL B	+ 119	+ 142	+ 150	+ 138	+ 116	+ 665
D22 RL BP	+1791	+2098	+2155	+1936	+1706	+ 9686
D24 RL GNP	+1672	+1956	+2005	+1798	+1590	+ 9021
<b>Total Direct Impact of U.S. Aid Activities and Resultant GOL Expenditures</b>						
ST18 GOLB	-4265	-6193	-5958	-5895	-5465	-27776
ST23 RL BP	- 444	- 463	- 481	- 817	-1018	- 3223
ST24 RL GNP	+3273	+5115	+5596	+6331	+6029	26344
<b>Indirect Multiplier Effects of U.S. Resulting from Direct Impact 2/</b>						
I17 GOL B	+ 821	+1281	+1383	+1485	+1510	+ 6480
I22 RL BP	-2443	-3822	-4184	-4745	-4509	-19703
I24 RL GNP	+2254	+3293	+3579	+3981	+3733	16880
<b>Total Direct and Indirect Effects</b>						
T18 GOL B	-3444	-4912	-4575	-4410	-3955	-21296
T23 RL BP	-2887	-4285	-4665	-5562	-5527	-22926
T24 RL GNP	+5527	+8408	+9175	+10312	+9802	+43224

See footnotes 1/ and 2/ on page 43.

1/ These expenditures include "technical services" expended directly by USAID and the Peace Corps, as well as allowances for personal services (houseboys) and other expatriate purchases of services and commodities in the local markets. The assumptions for USAID on which the figures given are based are that in addition to technical services of over \$400 per month per expert, roughly \$150 per month per expert accrued to the value added of the Liberian economy through purchases by these experts. In addition it was assumed that \$30 per month accrued to GOL in the form of customs revenues based on the commodities purchased. For the Peace Corps expenditures locally were assumed to add about \$2,000 per volunteer per year to Liberian GNP and \$180 per volunteer per year to GOL customs revenue. The Army Map Service activities were assumed to add \$70,000 per year to RL GNP and \$15,000 to customs revenues.

2/ The assumptions regarding multipliers vary depending on the type of income generated, but in general an income multiplier of .25 for government revenues, of .75 for imports and other leakages outside the economy and 1.65 for GNP seemed reasonable. This implies a marginal propensity to import (CIF values) and save abroad, etc., of  $.75/1.65$  or about .45. These multipliers were assumed to operate with no lag. This does violence to reality but provides a convenient way of judging the magnitude of the overall impact of the U.S. assistance program.

#### D. Impact of U. S. Assistance on Liberia

As noted in the previous section, various impacts of assistance are shown in the tables on the preceding pages. Most of the comments made earlier regarding the data, apply to these figures also. In addition there are some further issues to be clarified. The introduction to the Appendix contains definitions of each of the impacts. It is important to note here that each of the impacts is a direct net marginal concept; the net additional amount by which the GOL budget or RL balance of payments or RL national income is directly affected by the continuation or commencement of a particular project.<sup>1/</sup>

A source of possible confusion is the notion of what is included in GOL budgetary impact and GOL commitments with respect to projects. These commitments appear to be either explicit in terms of value or quantities of physical activity and thus spelled out in project agreements, or implicit to the nature of the project. Every attempt has been made realistically and conservatively to evaluate implicit and physically explicit commitments, for the ultimate result is no better than the assumptions on which it is based. An example of the former type of commitment is the sewerage project which will be under negotiation for some time yet. If approved as expected, certain GOL contributions will be required by U. S. law. On the other hand, aid to Liberia in the form of assistance to institutions implies that these institutions will continue to function, thus implying commitments to future operating expense, but similarly implying continued receipt of revenues, if the institution is revenue producing.<sup>2/</sup> However, the

<sup>1/</sup> Positive impact on budget means an increase of budgetary surplus, positive impact on the balance of payments means an increase of the surplus on the balance of payments, and positive impact on GNP means an increase in the total of GNP.

<sup>2/</sup> e.g., a hospital.

impact consists only of the costs of transferring existing GOL employees and inputs to the aided project and of hiring new employees and inputs. Thus, the budget of a given project as shown in the annual GOL budget may give a very large overstatement of the additional impact of the project on the GOL fiscus. GOL B and RL BP impacts have been broken down by capital, recurring, and interest payments and it is shown whether the impact resulted from GOL expenditure or USAID expenditure. In addition, an attempt has been made in Table 9 to estimate the indirect effects of project implementation on the three types of impacts. These indirect effects arise from expenditures made in the local economy by U. S. project-associated personnel and from Liberian national income changes directly generated by the projects under consideration. The assumptions employed for this estimation are contained in the footnotes to Table 9.

The concentration on current projects eliminates from consideration Liberian commitments which resulted from terminated projects. In addition, it was not possible to consider properly the GOL B and RL BP effects of past U. S. activities which have been carried on into the present.<sup>1/</sup> For some purposes this might partially vitiate the usefulness of these GOL and RL cost estimates. For the purpose of analyzing the present and expected U. S. assistance program for the near future, this omission does not appear to be critical because Liberian expenditures for these purposes -- even if inadequate -- have already been considered in the budget discussion in section II-D above.

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<sup>1/</sup> Except for interest payments with respect to Export-Import Bank loans.

The U. S. assistance program puts a substantial burden on the Liberian budget. GOL is supposed to contribute \$28 million in 1964-1968 to support the U. S. assistance program.<sup>1/</sup> This is a very large sum and, even when possible favorable multiplier effects are considered, the \$21 million negative budgetary impact averages more than \$4 million per year, or about one seventh of available revenues after debt service charges have been met. Of the \$21 million, interest payments to the United States account for one third. With the recommendation in 1969 of amortization on the Export-Import loans, debt service will account for over 50% of the total GOL budgetary effort with respect to the U. S. assistance program.<sup>2/</sup>

Recurrent budgetary expense doubles from 1964 to 1967 under this program, while capital expenditures decrease rapidly after 1965. From 1964 to 1965, the overall impact on the budget increases by one half, or \$2 million.<sup>3/</sup> If levels of GOL commitments are compared with earlier years, it is apparent that the volume of commitments has risen extremely rapidly since 1961. All of these considerations have serious implications for the future solvency of Liberia. In particular, there is every reason to doubt that GOL can increase its contribution to the program by \$2 million from 1964 to 1965, since it is already inadequately meeting its commitments as noted in the Appendix.

The impact of the program on the Liberian balance of payments is more uncertain because of the indirect effects. However, it would appear that it is of the order of \$2 - \$4 million negative impact

<sup>1/</sup> See Table 9.

<sup>2/</sup> Assuming as stated earlier that no new projects are implemented other than those already under discussion.

<sup>3/</sup> Even if indirect effects are taken account of (Line T 18, Table 9) the increase of GOL B from 1964 to 1965 is 1.5 million.

per year and the impact is becoming increasingly large. Because of Liberia's unusual monetary system, it is very difficult to gauge its international payments situation. At the moment, however, all the classical mechanisms of the gold standard appear to be operating. Import and trade credit are extremely tight and loans are being repaid without new loans being made. Whether this indicates a payments deficit is problematic. It might simply be an indication of lack of confidence in the short-run economic potentialities by the banking community. In any case, the rapidly increasing need for imports engendered by the U. S. assistance program could be a somewhat hazardous portent for the future.

A large portion (though not all) of the increasing balance-of-payments impact stems from the relatively high propensity to import of Liberians and from the increase in GNP which results from the assistance program. The latter is of the order of \$26 million directly during the five year period or about \$5 million per year and about \$43 million (\$8.6 million per year) if the multiplier effects are taken into account. This is a very substantial amount relative to the Liberian GNP and relative to the size of the flow of assistance. It does not take into account, of course, the ultimately productive effects of most of the activities engaged in, but only the costs of engaging in them.

The composition of this increase in GNP through time, however, should be noted. Through 1966, a large amount of construction <sup>1/</sup> is to take place. This decreases by about \$10 million per annum in 1964

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<sup>1/</sup> See line 3, Table 8.

and 1968 and is replaced by an increased number of teachers and medical personnel and by savings of fuel imports for power production. The sharp drop-off in construction <sup>1/</sup> will surely produce additional unemployment in that sector, while a scarcity of qualified teachers may occur.

It almost goes without saying that any developing economy will be subjected to stresses and strains as part of its growth process. The particular stress of large-scale unemployment in construction can, however, be foreseen and partially alleviated if some thought is given to the phasing of current and new construction projects. <sup>2/</sup> Consideration might be given to lengthening the construction period on some of the current projects as well as to undertaking new construction on a grant basis commencing in 1967. Such new construction should be in projects which have minimal negative budgetary impact.

#### E. Summary

Although Liberia fulfills various criteria for the receipt of U. S. assistance, justification of this aid is best made on the basis of the close and continuing political association between the two countries. The stake of the United States in Liberian development is precisely that, if self-sustaining growth is not achieved, much of the blame - in the eyes of other African countries and unaligned

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<sup>1/</sup> Two large road construction projects also terminate in 1966 and 1967; the World Bank financed roads and the German Road Project. These together involve about \$3-4 million of expenditures per year in 1964, 1965, 1966.

<sup>2/</sup> USAID might soon begin investigation of several proposals of GOL which involve construction in order that these can be implemented in late 1966 or 1967. Projects which might be implemented which would have low operating costs or high pay-offs or both, might be farm to market roads, an important aid to agriculture; airport improvements; an industrial park; upstream reservoir capacity for Mt. Coffee; and additional housing for faculty at Kakata and Gbedin. This is by no means an exhaustive listing.

world opinion - will be placed on the United States; if growth is achieved, Liberia will be an example to the under-developed world of success made possible by emphasis on free enterprise capitalism.

Past U. S. assistance to Liberia has been substantial, but in terms of resource flows, annual expenditures have increased extremely rapidly since 1960. Over the five-year period, 1964-1968, it is expected that Liberia will receive some \$80 million of U. S. economic help. The current rate of expenditures is about one-fifth of Liberian national income or about one-half the GOL budget. This puts the U. S. aid program in a commanding position relative to the Liberian development effort.

There can be little doubt that the U. S. assistance program has had, and is having, a positive impact on the development of Liberia. Its contributions in the field of education and improved government administration are notable and attack key barriers blocking progress in Liberia. There is, however, reason to believe that too little consideration has been given to the budgetary problem of GOL which is worsened by the U. S. program.

Moreover, the U. S. program contributes little to relieving the short-run pressures resulting from the present depression, because the benefits from the program as presently constituted are almost all long-term and in large part non-monetary. Were it possible to undertake more projects in agriculture and industry, the typically more rapid payoffs in monetary terms in these sectors might alleviate short-run difficulties without imposing permanent recurring cost burdens on the Liberian budget. In addition, such projects might generate additional exports or substitutes for imports, either of

which would make the impact of the U. S. program on the Liberian balance of payments more favorable. At present, the only project in the U. S. assistance program which appears to have a significantly positive balance-of-payments impact is the Mt. Coffee project.

The phasing of U. S. assistance expenditures through time appears likely to result in unemployment in construction in the latter years of the period while teaching and some other occupations are over-employed. This is a problem which cannot be entirely solved by providing more capital assistance, because Liberia cannot afford the counterpart contributions or the recurrent costs associated with most such assistance. Thus, lengthening out the construction on the present projects somewhat, coupled with undertaking additional construction on a grant basis of a type which pays off rapidly, might be the most appropriate way to alleviate this potential problem.

The U. S. agencies responsible for aid to Liberia have many dedicated people who have devoted considerable time to attempting to devise a sound U. S. assistance program to Liberia. Concern has arisen within USAID regarding the impact of the U. S. program on the Liberian budget. But, with no solid information regarding this relationship available on which to base decisions, the problem has remained unresolved. Yet it is of increasing importance. It is the contention of this paper that this information gap can be bridged at relatively modest cost and that the availability of information regarding the impact of U. S. assistance can make a critical contribution to the formulation of the U. S. assistance program, not only in Liberia but in many other countries as well. This issue will be examined in more detail in the following section.

#### IV. IMPROVING THE U. S. ASSISTANCE EFFORT

There is a method for the analysis of projects and programs which could profitably be employed to assist in the formulation of U. S. assistance policy in many countries. The essence of this method is the determination of the likely schedule of activity of each of the projects involving U. S. assistance in order to determine the scheduling of inputs and outputs of the overall program through time. The concern is mainly with the expected expenditures of the U. S. and the recipient country, not the total obligations or commitments.

This method is carried out in some detail in the Appendix, where assistance expenditures and GOL contributions have been programmed over a five-year period. There, the assumptions required for this analysis are described, and in the tables in the main text the ultimate aggregate results are summarized. The purpose of this section of this paper is to examine briefly this method of analysis, the data it requires, and its usefulness as an aid to policy formulation and development planning.

##### A. A Project Presentation Format

When a project, whether emanating from the recipient country or from a U. S. agency, is proposed for U. S. financing, the initial review should determine as well as possible the likely amounts of inputs into and outputs from the project over the first few years of its life. Ideally, this should be broken down both on a U. S. fiscal year basis and on a recipient-country fiscal year basis. This will show the proposed net requirements and benefits of the project for each year of the planning period - say, five years.

On the basis of this information, modifications in the original proposal may be introduced and the shape of the project may be altered in various ways in order to satisfy the two countries involved. These changes are made through negotiation which culminates in the agreement on the financing of the project. At this stage, the inputs, outputs, and costs and benefits to each party in each of the coming years should be readily estimated. As the project gets into operation, some additional changes may be made. Consequently, the expected annual requirements and benefits of the project should be revised for the beginning of each fiscal year (twice annually, if the U. S. and the recipient-country's fiscal years differ) in order that information regarding the project be kept current. Thus, if decisions have to be made at any time to alter the U. S. program, the economic data on which to make an informed decision will be available.

It should be noted that the total of expenditures in a given year for a particular project does not give sufficiently detailed information for the purposes to be outlined below. What is needed is data regarding the directions in which expenditures are to be made (construction, participants, etc.) in order that counterpart contributions can be estimated since such contributions vary according to the type of activity undertaken.

The usefulness of programming inputs and outputs is that they may be used to obtain estimates of the effects of the project on the supply of key scarce inputs and on national output. Which impacts of a project appear worthy of analysis depends on the situation in the recipient country. In the present study, budgetary changes, balance-of-payments shifts, and movements in national income, as

well as volume of construction and numbers of expatriates and of participants, have been the variables on which attention has been concentrated. Most of these are likely to be important in all aided countries. In addition, it may be useful to estimate the effect of projects on bank deposits, money supply, sectoral incomes, and other variables.

Fortunately, some of this programming of inputs for specific projects is already being done, but it does not seem to be carried out in any systematic, consistent way. Rather, what is done is for purposes of intra-agency operation (for example, provision of housing for experts) instead of project analysis and review. If the same format were used for expenditures as is now used for obligations - programming them by project purpose for several years in advance, a substantial analytic gain would be made.

#### B. Aggregative Considerations

In the past few years, very substantial progress has been made in coordinating different elements of U. S. foreign assistance. The task is not yet complete and may never be. However, it would be highly desirable if one agency - perhaps the embassy in each country, or USAID, since it is the channel through which most assistance flows - were to assemble information on future assistance programs of all U. S. agencies operating in each specific country. In some countries, this might suggest opportunities for coordination of projects which at present are not related to one another. More importantly, this would produce information on the overall economic impact of American assistance in a country, as well as information on the expected flow of U. S. assistance to the country in the near future. Such

information, which surely is essential to informed policy-making, is at present unavailable in detail for many countries.

Inasmuch as the existence of this information gap and its causes have been explored elsewhere,<sup>1/</sup> it would serve no useful purpose to explore the background of the "gap" in detail. A major problem is that planning, and consequently "program assistance", has only become respectable in the past few years. AID has been unable to hire a sufficient number of economists to program its assistance. Also, it has been uncertain about, and slow to make, the administrative changes necessary to promote this function. Other agencies have clung to the discreet project approach and emphasized financial and technical considerations while neglecting project interrelationships and economic impacts.

Within AID, most of the attention has centered on obligations - the amounts committed to a project by a project agreement between AID and the recipient government. While the amounts obligated in any year undoubtedly are very important with respect to the relationship between AID and Congress, they have no stable relationship to the total amounts required for a project nor do they provide any precise indication of the rate at which funds will be expended. Indeed, obligated funds are sometimes de-obligated rather than expended.

<sup>1/</sup> Asher, R. E., op. cit., p. 70-71 and p. 128 et passim.  
Robock, S. H., Brazil's Developing Northeast, A Study of Regional Planning and Foreign Aid, the Brookings Institution, Washington, D. C., 1963, p. 16, 141-143 and implications in much of the final chapter.  
Lewis, J. P. Quiet Crisis in India, The Brookings Institution, 1962, Washington, D. C., p. 270, 286, 290 et passim, p. 302-303.

Obligated but unexpended funds form the so-called "pipeline".<sup>1/</sup> The size of the pipeline also has little influence on the rate of expenditure - the relationship rather is reversed.

However, it is the expected expenditure of aid, not the obligation of funds which has the impact on the recipient country's economy. It is the expenditures which must be matched by counterpart contributions. Expenditures are what the recipient country is concerned with; hence, expenditures should also be the concern of U. S. policy makers.<sup>2/</sup>

#### 1. Program Impacts

The systematic consistent evaluation of prospective annual inputs into and outputs from each project makes possible the summation of this information in order to arrive at sectoral, regional, and economy-wide totals of inputs into and outputs from the entire set of projects or activities which make up the assistance program to a given country. In any country where U. S. assistance is sizeable in terms of the income of the country, the aggregated amounts of inputs and outputs will be important components of the total amounts of inputs required for and outputs resulting from the entire development effort of the country in question.

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<sup>1/</sup> The analogy is inapt. The "pipeline" is the lower half of a tank into which obligated funds flow at varying rates and out of which deobligations and expenditures flow. How full the tank is depends on the speed of the flows out of and into the tank. Unless the tank is nearly empty, however, the amount in the tank or flowing into the tank does not affect the rate at which funds are flowing out of the tank. It is this latter flow that is the interesting quantity for planning because it determines the impact of assistance.

<sup>2/</sup> Expenditures tend to lag slightly behind physical receipt of goods and services which is actually the quantity we wish to measure and know. However, this lag is short and the relationship between expenditures and physical receipt is stable and consistent so that expenditures provide a reliable proxy for the quantity we wish to know. Obligations do not provide such a proxy.

Therefore, one of the reasons why programming of inputs (expenditures) and outputs of projects is important is that information is generated regarding possible scarcities of inputs.<sup>1/</sup> This makes possible the rephrasing and modification of projects to relieve the scarcity. In a country in which U. S. assistance participated only peripherally in the development effort, this aggregative impact of the U. S. program on input scarcities would be less important but still very useful data as a component of the overall demand for inputs.

In addition, the effect on the balance of payments and on national income of the program are certainly also of key importance for planning purposes - the former because shortage of foreign exchange is often a crucial developmental bottleneck which foreign assistance is supposed to relieve; the latter because it provides an estimate of the immediate economic output resulting from the program (although it does not include political, social, and non-monetary benefits). Knowledge of national income effects is also necessary if the indirect impacts of the program are to be estimated, because additional incomes will result in additional government revenues, additional imports, and additional demands for domestic inputs. While the estimation of these "multiplier" impacts of the assistance program is not a simple task, it cannot even be begun if information on the initial direct national income effects of the program is not available.

At the aggregative level, it is also necessary to take account of the effects in the local economy of consumption by the expatriates who are supported by the assistance program. This consists of

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<sup>1/</sup> e.g., Excessive construction is planned, or insufficient housing in remote areas is available, or recipient country budgetary resources are inadequate to defray the planned levels of recurring cost.

purchases of housing, food, domestic services, and other goods and services. This expenditure has important balance of payments effects as well as raising recipient country incomes. In order to estimate this indirect impact, it is necessary first to know how much input into all assistance projects of such expatriate expert and Peace Corps services is programmed. In addition, information regarding personal budgets of such personnel must be generated.

## 2. Program Structure

Analysis of the programmed inputs and outputs which are expected to result from the projects undertaken with American assistance can give a useful insight into the sectoral and regional balance of the assistance program. Considerations of program structure have usually been dealt with by AID in terms of obligations rather than expenditures. Because balance is inherently a somewhat vague concept -- it being possible to suggest serious imbalance, but impossible to prove proper weighting of a program -- obligations may sometimes provide a reasonably accurate guide to the structure of a program. However, expected expenditures are no more difficult to obtain than obligations. Since they correctly reflect the structure of a program, analysis regarding sectoral and regional balances can more accurately be carried out if such information is available. Of course, if information regarding the sectoral or regional balances of the entire development assistance program is desired, then both the expected U. S. expenditures as well as the programmed recipient country contributions must be considered. This may give a very different picture regarding balance than that obtained by considering U. S. expenditures alone. In either case, however, it is first necessary to program the inputs and outputs of

the assisted projects in order to analyze the changing balance of an assistance program.

### 3. Program Phasing

The employment effects of the program may also be generated by programming inputs and outputs. In the case of Liberia, a general rise in incomes over the period concealed an abrupt shift from incomes in construction to professional income. Since it is unlikely that the same persons will perform both activities, unemployment of inputs in the construction sector may result. The phasing of expenditures is thus a useful by-product of the analysis of the programmed inputs and outputs.

Aid expenditures which are increased rapidly or decreased abruptly - even though obligations are maintained relatively stable - may produce a wide variety of repercussions in the economy of the recipient country. The same is true of shifts in expenditure between regions or sectors. Such repercussions might well produce substantial distaste for American assistance -- surely not the desired reaction on our part. Phasing of assistance expenditures is, therefore, a matter of considerable importance. It is, however, almost impossible to make useful policy regarding such phasing if inputs and outputs of U. S. assistance projects are not programmed.

### C. Technical Assistance for the Planning Office

The analytical aspect of the planning procedure consists in large part of determining the input requirements and output yields of a wide variety of projects, in order that, in the ultimate plan, the outputs of intermediate projects in the productive process will find employment as inputs in other projects and that the overall increase in income will be as large as possible given the overall limitations on

the availability of primary inputs. This task requires the services of a considerable staff of well-trained, competent economists, which few under-developed countries have. Moreover, in other parts of the government, skilled and educated men are in short supply. Thus, it is seldom that the analytical staff of the planning office is not overburdened by the task it is supposed to accomplish.

To this point, it has been argued that the U. S. should program its assistance expenditures in order to provide itself with information necessary for making policy decisions such that its assistance program will have the desired effect on the development of the assisted country. In addition, it is clear that the information generated by programming inputs and outputs on U. S. assisted projects is exactly the data required by the country's own planning office for inclusion in its overall analysis. If the United States were to do the analysis recommended above and make this available to the planning office of the under-developed country, that agency would be relieved of a substantial burden. Since much of the information required is already available to U. S. agencies in raw form, processing it could be accomplished without much additional effort. Thus, a valuable form of technical assistance could be supplied, at low cost to the United States.

This suggestion assumes particular importance in an economy in which the U. S. involvement is relatively large. In such an economy, there can be no doubt that a critical factor constraining any useful development plan is the expected volume of U. S. assistance, and its distribution, chronologically, sectorally, and spatially. If information in a usable form regarding U. S. intentions is not made available to the planning bureau in such an economy, its planning effort will

never be anything but a waste of expensive resources which has little or no relation to the actual -- perhaps poorly-conceived -- decision-making processes of the country.

The objections that such assistance programming would commit the United States in advance to a program in which it later might not want to participate, lose force when confronted with the existence of projections of assistance in a variety of unclassified documents.<sup>1/</sup> It is from such sources that the tables in the Appendix have been constructed. Alternative projections of aid expenditure levels could be provided which would be contingent on fulfillment of self-help conditions, continuing Congressional appropriations, etc.<sup>2/</sup> Uncertainty regarding Congressional appropriations plays only a minor role in making possible aid projections difficult. In the first place, one and one half to two years of expenditures are in the pipeline (i.e., appropriated, allotted and obligated, but not expended). In the second place, some agencies (Ex-Im Bank, for example) are partly free from the appropriations restriction. In Liberia, failure of Congress to appropriate funds, or AID/Washington to allot them, has certainly not been a problem.

U. S. policy emphasizes at present the necessity of development planning as a condition of continued receipt of assistance. It does not follow, however, that planning in any meaningful sense can take

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<sup>1/</sup> The principle source of such projections of expenditures is the "program book", which provides information regarding the scheduling of experts' services, participant training, commodity delivery, etc. In addition, it contains estimates of the total additional funding required for completion of each project and the number of years over which this funding is to take place. Another source of expenditure projections is Congressional Hearings. For example, the Foreign Operations Appropriations for 1964, Hearings. (USGPO: Washington 1963) p. 959 contain such projections for the Monrovia Consolidated Schools.  
<sup>2/</sup> This was done, for example, under the Marshall Plan, where aid was projected over a four year period contingent on continuing Congressional appropriations.

place prior to the formulation of U. S. assistance strategy for a country heavily dependent on U. S. aid. Rather, planning on both sides must take place concurrently. No diplomatic reason prevents the disclosure of the initial U. S. bargaining position -- its minimal program of expenditures. On the contrary, such information, if properly made available, serves to strengthen the hands of those in the recipient country who favor rational decision-making on the basis of facts, and who are more prepared to accept the self-help sacrifices demanded by a well-formulated U. S. development assistance strategy in order to gain the benefits offered.

#### D. Conclusion

In concluding, it is perhaps useful to note that programming U. S. assistance in the manner advocated above will not in itself improve the American assistance effort. Programming inputs and outputs is solely a way of defining and identifying the assistance program being pursued and its probable effects. Analysis then of the inputs and outputs relative to the resources and needs of the recipient country can pinpoint the strengths and weaknesses of the program. Identification of these virtues and blemishes is a short, but crucial, step toward improvement of a program. Altering emphases, formulating new projects which are both feasible and productive, making the necessary improvements in existing projects, are all far more difficult and require much expenditure of effort and time by American officials in the various aid-giving agencies.

Programming and analysis make it possible to spot critical limitations in a proposed program well in advance of the actual occurrence of the bottleneck or crisis. This allows time for the arduous task

of reshaping the assistance program in such a way that the bottleneck can be avoided. These benefits are well worth the relatively minor cost of producing the information on expected inputs and outputs from the available raw data.

## APPENDIX

### INTRODUCTION

In this appendix, a project by project analysis of expected official United States economic assistance to Liberia during the calendar years 1964 through 1968 is presented. A brief discussion of each project is followed by a table showing the extent of expected expert assistance and participant training in physical terms; expected dollar expenditures on construction,<sup>1/</sup> engineering, and equipment; the U.S. cost broken into loans and grants; and amortization and interest payments due. In addition the tables show the direct impacts on the GOL budget, Liberian balance of payments, and Liberian national income from U.S. expenditures and from GOL contributions and payments committed under the project agreement.

Peace Corps activities, Export-Import Bank involvement and economic aspects of U.S. Department of Defense operations have been included along with the Agency for International Development<sup>2/</sup> projects which preponderate. Activities of the Voice of America, U.S. Information

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<sup>1/</sup> Overall figures for construction include project-associated construction financed by GOL and thus are the total of all U.S. assistance-associated construction activity.

<sup>2/</sup> Activities of AID/Liberia which were not directly associated with a specific project but rather concerned mainly with the internal operation of USAID were excluded whenever possible. The rationale for this is that such activities could — were AID highly centralized — be carried out in Washington as are other internal AID activities directly concerned with Liberia. Consequently they are analogous to the U.S. Embassy operations in Liberia which were also excluded.

Service, and military activities of the U.S. Department of Defense have not been included although they undoubtedly affect the Liberian economy just as do the activities of the U.S. Embassy and its rather large staff. These latter activities of the United States are not engaged in because of their potential contributions to Liberian economic and social development, and although U.S. policy should be concerned with the impact that these non-developmental activities have on Liberia, they fall outside the frame of reference of this study. In addition, private (e.g. CARE or religious) or collective public (e.g. World Bank, United Nations, or IMF) assistance to Liberia has not been included because it is not directly subject to U.S. official policy decisions.

It is important to note that all current projects and a number of proposed projects have been included although in most cases the financing — particularly for the later years — has not yet been provided. For obvious reasons no new as yet unproposed or unformulated, projects have been included, although undoubtedly some such projects will be implemented prior to the end of the period under review. The inability to forecast assistance to such new projects is reflected in a declining volume of expected U.S. assistance after 1966.

In other respects the projections of assistance and GOL commitments with respect to this assistance are as accurate as they could be made as of June 1964. In some cases uncertainty regarding programs led to what may turn out to be conservative estimates of expenditures or of commitments. Moreover, the flow

of events since mid-1964 has undoubtedly already led to modifications in some of the projects. However, it is believed that such changes are likely to be small relative to the overall program.

The information in this appendix has — as noted in the introduction — mainly been taken from the unclassified portion of the "Program Book." However, the presentation, unlike that of the "Program Book," is organized along the sectoral lines used in the tables in the main text: Education; Public Utilities; Public Works; Governmental Administration, Operation and Organization; Health; Agriculture; and Statistical Information and Planning.

Direct budgetary (GOL B) impact is the effect on the GOL budget of participation in a project. It includes the commitments to capital outlays as well as interest, amortization, and recurrent costs. It is a net figure from which project revenues which accrue to GOL are subtracted. Since it is supposed to measure the strain on the GOL budget caused by commitments to U.S. assistance projects, projects which will be solely supported by existing GOL civil servants and staff, rather than new or upgraded employees, are assumed to result in no budgetary impact. Negative values reflected lowered budgetary resources. Positive (negative) direct balance of payments impact (RLBP) refers to the improvement (deterioration) of the Republic of Liberia's balance of payments resulting directly from the implementation and operation of a project. A number of assumptions which are detailed below were used in order to approximate this impact.

Direct impact on Liberian (GNP)(RLGNP) is similarly defined as the change in Liberian national income (at factor cost) resulting directly from implementation and operation of a project. In general,

it was assumed that new GOL employees had been unemployed or students prior to their employment; consequently the entire salary constituted an addition to GNP. Payments to participant trainees were considered transfers.

A number of other assumptions were necessary for the derivation of these values.<sup>1/</sup> For projects for which development loans are authorized, it was arbitrarily assumed that the loan exactly covered the foreign exchange costs of the school construction (though not the interest payments due). Consequently the GOL contribution must have gone entirely for local costs and this served to raise local GNP by the amount expended by GOL, (given the lack of full employment in construction currently prevailing). For most other construction projects it was assumed that 20% of the cost was local cost and the remainder foreign exchange costs. If these local costs were to be borne by U.S. AID, then a favorable effect on the Liberian balance of payments equal to the effect on Liberian GNP would occur. If the foreign exchange costs were to be borne by Liberia, then the balance of payments would be correspondingly adversely affected. Transfer payments to acquire property or indemnity owners of property were, of course, not included in GNP or balance of payments impact.

It was further assumed that the "salary" received by participant trainees from GOL constituted a transfer payment during the period of

<sup>1/</sup> Note: In each of the tables below, the numbers in the left hand column refer to the corresponding quantities in the summary tables in the main text. In the summary tables gross and net figures are given for loans and total aid as well as GOL budgetary import and R.L. balance of payments impact. In each case the difference between the gross and net figures is the interest and amortization payments due.

their training and consequently it was not included in GNP. However, it was assumed that a variable portion up to 50% of this transfer payment was spent on imports thus involving an effect on the balance of payments.

Operating costs of public facilities such as schools, hospitals, offices, were considered to consist mainly of salaries and consequently were assumed to be 90% addition to GNP and only 10% imports (clerical supplies, books, replacements of equipment, gasoline, etc.). Maintenance costs of roads or public works, however, were assumed to have a larger import component (33%). In cases where administration of some service was carried out largely with expatriate assistance this was taken into account in assessing the impact on the balance of payments and national income, and it was assumed that such experts or Peace Corps volunteers were not residents of Liberia. (Thus the initial balance of payments impact of GOL payments to the Peace Corps is sharply negative, but since the volunteers spend more than these amounts in Liberia, the overall impact is considerably more favorable).

TABLE A-1

## EDUCATIONAL ADMINISTRATION AND TRAINING

	<u>1964</u>	<u>1965</u>	<u>1966</u>	<u>1967</u>	<u>1968</u>
1. Experts/*man months	11/120	8/84	6/48	2/24	1/12
2. Participants/ man months	18/124	25/164	17/104	15/92	12/76
4. Equipment (\$1000)	10	20	15	5	
6. U.S. Cost (\$1000)	426	308	187	111	68
Expected Direct Impact (\$1000) of GOL Expen- ditures					
16. GOL B	-80	-94	-88	-88	-90
21. RL BP	-60	-60	-60	-60	-60
24. RL GNP	+10	+10	+19	+20	+24

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\*/ Included in 1964 figure are the contract services of the American Institute of Research which provides one testing technician.

## PROJECTS

### EDUCATIONAL ADMINISTRATION AND TRAINING

Under this project extensive administrative assistance has been provided to the Department of Education in the form of experts' services, participant training and a limited amount of equipment. This project commenced in 1961 and is supposed to terminate in 1969. It touches the entire Department of Education and the goal is the reorganization and streamlining of the activities there. At present the flow of expenditures for this project has already passed its peak and is gradually being phased downward. Table A-1 summarizes the likely scheduling of expert services, participant training and provision of equipment during the years 1964 to 1968.

The equipment largely consists of professional books and demonstration materials. Some of the experts' services are, in fact, divided between USAID internal administration and the Department of Education. In 1964 this involves at least 24 man-months of services, but because the amount of such non-aid services could not be estimated for 1965-1968 it has been included in the table for the entire period.

GOL costs consist of the loss of the services of the participants and approximately \$70,000 per year for supplies, travel, printing and equipment to provide support to the various elements of this project.

## MONROVIA CONSOLIDATED SCHOOL SYSTEM

The Monrovia Consolidated Schools project is a long term project which commenced in late 1961 and is expected to continue until mid-1972 and possibly beyond. The goal of the project is to increase the percentage of Monrovia school-age children who are attending school and to improve the operation of the school system in Monrovia.

USAID is providing the project with the following types of assistance: The services of a contract team of educators (the San Francisco State College Contract); extensive school design, engineering and construction; equipment and supplies for the new schools; participant training for large numbers of Liberians; and the necessary support costs of maintaining the large numbers of contract personnel and other experts concerned. Most of this assistance is being given in the form of grants, though in 1964 the loan component is large.

Table A-2 provides detailed information regarding all phases of this project. The table is based on expected school construction. Actual commitments for construction in 1966-1968 do not yet exist. This project has, for the sake of convenience, been broken into five components: The San Francisco contract and non-contract participant training, elementary schools, secondary schools, maintenance shops, and engineering services not included elsewhere. These last two components do not involve GOL commitments in the period under review.

GOL commitments with respect to the first component consist of the provision of office space and some clerical staff. The estimate of cost involved is quite conservative. In addition the services of

participant trainees are lost, and this loss of services is a GOL cost which runs about \$150 per month per trainee.

The GOL commitment with respect to the Bassa elementary school, which is partly financed by a development loan, is to make a counterpart contribution of 68 thousand dollars and to pay interest on the entire amount of the loan not repaid at 3/4%. Amortization commences only after a ten year grace period. USAID supplies books, equipment and furniture for this school on a grant basis and GOL will pay for the operation and maintenance of the school.

Two other 14 room elementary schools were planned for construction with development grant financing. Both these schools — one on Newport Street, the other on U.N. Drive — were to have been started in early 1964. The quid pro quo for this grant-financed school construction was to have been the construction on a matching basis by the GOL of 10 room elementary schools.

The decision by USAID to start building only one grant-financed school in 1964 was based on the probability that the GOL would be able to finance the construction of only one elementary school in 1964-1965. In fact, the 1964 GOL budget contains no funds for such construction, so it appears questionable whether this commitment will be met by GOL.

On completion of the Newport and Krutown schools, it is hoped at present that additional elementary school construction will be undertaken immediately on a matching one for one basis. The U.S. has stated its willingness to provide such additional schools through development grants; the problem is whether GOL will be able to find

sufficient funds to match this potential U.S. aid. No commitment yet exists for these schools, but Table A-2 includes two fourteen room schools constructed with U.S. financing and two ten room schools constructed with GOL financing in 1966 through 1968.

USAID will provide equipment and furniture for all of these schools. Books for the Liberian financed schools are, however, a Liberian responsibility. Similarly operation and maintenance of all the schools is a Liberian responsibility. The costs shown assume that the schools started in 1964 will be used beginning in 1966, two more will be available in April 1967 and two more in mid-1968. The costs shown are somewhat lower than the San Francisco estimates for the same number of schools and are therefore quite conservative. It was assumed that \$40,000 was the annual operating and maintenance cost of a 14 room school, \$30,000 for a 10 room school, and that some general salary increases would be necessary in order to hire a sufficient number of teachers to staff the schools.

The Junior-Senior high school is being constructed with development loan financing and a GOL contribution of 20% of the total cost of \$2.1 million. In addition GOL must pay a credit fee of 3/4% on the total loan not repaid. Amortization will begin in 1974. The operating cost of this school will be about \$200,000 per year and is expected to commence in 1967. It is expected that this school will have about 1,200 students, while the 14 room elementary schools will have 500 and the 10 room elementary schools 360.

TABLE A - 2

MONROVIA CONSOLIDATED SCHOOL SYSTEM  
(All figures in \$1000 except lines 1. and 2.)

	<u>1964</u>	<u>1965</u>	<u>1966</u>	<u>1967</u>	<u>1968</u>
<b>San Francisco Contract &amp; Non Contract Participant Training</b>					
1. Experts/man months	20/221	34/330	34/404	33/333	21/240
2. Participants/ man months	48/354	45/382	27/248	8/64	
6. U.S. Cost (Grant)	755	1067	1190	921	630
16. GOL Cost (SF Contract)	12	12	12	12	12
16. (Participants)	55	57	37	10	
<b>Elementary Schools</b>					
<b>Bossa School</b>					
7A. U.S. Loan	88	264			
15. GOL Contribution	17	51			
7B. Interest	3	3	3	3	3
Amortization	Commences in 1974				
6. U.S. Grants (Newport Street)	120	230	170	350	180
15. GOL Self-financed (Krutom, etc.)	100	215	100	315	215
6. Books & Equip. (U.S. Grant)			130	82	82
15. Books (GOL)			20	20	20
16. Operation (GOL)			110	190	280
<b>Junior-Senior High School</b>					
7A. U.S. Loan	1132	566			
15. GOL Contribution	66	264	90		
7B. Interest	13	13	13	13	13
Amortization	Commences in 1974				
16. Operation (GOL)				200	210
<b>Warehouse Maintenance</b>					
6. Shops (U.S. Grant)			100		
<b>Engineering Services</b>					
6. (U.S. Grant)	65	80	20	20	20
6. U.S. Grants	940	1377	1610	1373	892
7C. Loans (net of interest)	1204	814	-16	-16	-16
8B. Total	2144	2191	1594	1357	876
<b>Expected Direct Impact of GOL expenditures on</b>					
18. GOL B	-266	-615	-385	-763	-753
23. 20. RL SP	-121	-213	-142	-332	-257
24. RL GNP	+115	+370	+221	+426	+496
<b>Expected Direct Impact of U.S. expenditures on Construction</b>					
20. RL BP	+24	+46	+54	+70	+36
24. RL GNP	+24	+46	+54	+70	+36

## RURAL SCHOOL DEVELOPMENT

The rural school development project has been under way since 1955, and U.S. assistance to it is expected to terminate in 1968 or 1969. U.S. aid is currently in the form of the services of education advisors, the training of participants, the design and construction of a large number of six room schools as well as of other structures, and the provision of equipment and supplies for these schools as well as other rural schools constructed with GOL financing or with local funds.

Table A-3 summarizes the scheduling of the experts, participants, construction, and equipping as well as the resulting U.S. and GOL costs. The GOL costs consist mainly of the operating and maintenance costs of the rural schools which are being constructed with USAID financing. Twenty of these schools will be completed in 1964 in the Gbarnga district, and financing has already been provided for twenty more in Lofa and Nimba counties. This latter group will probably be constructed in 1965 and 1966. It was assumed that maintenance costs ran 5% of the original cost of the buildings and that the salaries of teachers and administrators was \$1000 per classroom per year. In addition replacement costs of text books and teaching supplies as well as the loss of services of the participants were taken into account.

Also included in the figure for construction and engineering are engineering services and feasibility studies on a secondary school to be located at Gbarnga. The equipment consists of school furniture as well as equipment for district education offices and

furnishings for eight schools to be constructed with GOL financing. Moreover basic school supplies for the first year of operation for all forty-eight schools will be supplied by USAID.

It is anticipated that part of the staffing of these rural schools will be undertaken by the Peace Corps — at least for an initial period. This would tend to lower the GOL operating costs somewhat, because this would mean a salary assumption of \$800 to \$850<sup>1/</sup>per classroom per year would be appropriate.

If Peace Corps volunteers filled one hundred teaching posts each year beginning 1965, the GOL costs would decrease by about \$15,000 per year, and the figures for effect on the Liberian balance of payments and gross national product of the GOL expenditure would be decreased (algebraically) by about \$78,000 per year and about \$94,000 per year respectively.

<sup>1/</sup>Peace Corps volunteers cost GOL slightly more than \$750 per year; with administration running at \$50-\$100 per classroom per year, the figure given is obtained.

TABLE A - 3

## RURAL SCHOOL DEVELOPMENT

	<u>1964</u>	<u>1965</u>	<u>1966</u>	<u>1967</u>	<u>1968</u>
1. Experts/man months*	6/52	6/72	6/72	6/72	6/48
2. Participants/man months	18/88	25/152	24/144	21/144	24/144
3. Construction & Engineering (\$1000)	246	247	210		
4. Equipment (\$1000)	99	100	130	11	7
6. U.S. Costs (Grant) (\$1000)	517	603	592	263	199
Expected Direct impact (\$1000) of GOL Expenditures on					
17. GOL B	-108	-175	-255	-265	-275
19. 21. RL 3P	-13	-23	-31	-32	-33
24. RL GNP	+90	+144	+216	+225	+234
Direct impact (\$1000) of U.S. Construction on					
20. RL BP	+40	+40	+40		
24. RL GNP	+40	+40	+40		

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\* Including Contract services

## VOCATIONAL EDUCATION

USAID has been extensively involved in assisting vocational education in Liberia since 1954. The project at Booker Washington Institute is expected to continue until 1967. A number of vocational training instructors are to be supplied through 1967. In addition, a continuing program of participant training is being carried out. During 1964, construction which began in mid-1963 will be completed on a girls dormitory, a boys dormitory, a farm mechanics shop, two washing facilities, four duplex staff houses and the remodeling of two dormitories. In addition engineering design and supervision are taking place on this construction as well as new construction which will be commenced and completed in 1964. This latter construction is of an autoshop annex, an infirmary and access roads.

The GOL costs with respect to this project include the lost services of the participants, the operation and maintenance of the buildings, facilities and equipment provided as well as operations and maintenance of the commodities provided to this project in earlier years.

Although BVI is partly financed from sources outside GOL, it cannot be anticipated that such revenues will rise to cover any part of the additional costs involved. Consequently, these additional costs are the responsibility of GOL. The estimates shown are minimal amounts for the operation and maintenance of the various facilities mentioned above plus the salaries of the participants. In fact, in 1964, BVI received about \$40,000 less in GOL budgetary support than in 1963. The greater part (\$23,000) of this cut in funds was for

maintenance and repairs and for electricity (\$4,000). Both of these are key items in the continued operation of an institution. It seems fairly clear that budget austerity is preventing GOL from meeting its commitments adequately to support this institution. If GOL cost in table A-4 reflected the amount by which the 1964 budgetary allotments should be raised in order that FWI should function properly, the amounts would be about \$60,000 higher in each year than those shown in the table.

TABLE A-4

VOCATIONAL EDUCATION

	<u>1964</u>	<u>1965</u>	<u>1966</u>	<u>1967</u>	<u>1968</u>
1. Experts/man months	6/72	7/72	4/48	2/24	
2. Participants/man months	2/24	3/36	3/36	3/24	
3. Construction and Engineering (\$1000)	430				
4. Equipment (\$1000)	45	10			
6. U.S. Cost	707	233	154	77	
Direct Impact (\$1000) of GOL expenditures on					
17. GOL B	-17	-19	-20	-20	-16
19.-21. RL BP	-3	-4	-4	-4	-2
24. RL GNP	+12	+12	+13	+14	+14
Direct Impact (\$1000) of U.S. Construction on					
20. RL BP	+80				
24. RL GNP	+80				

## RURAL TEACHER TRAINING

USAID participation in this project began in 1959 and is scheduled to terminate in 1969. The project has consisted of the creation of two rural teacher training institutes -- one at Zorzor -- which commenced operations in 1961, and one at Kakata, which opens in 1964. In addition there has been discussion regarding the creation of a third teacher training institute in Webbo but this appears unlikely at present.

United States aid consists of the services of the Tuskegee Institute contract team, the provision of training to Liberian participants and extensive engineering, design, construction, and equipment. The Institute at Zorzor was constructed and enlarged with U.S. grant financing. That at Kakata was built with GOL funds. Although ultimately the operation of both of these facilities will be entirely a GOL responsibility, currently a considerable amount of assistance is being provided through the Tuskegee team, and in the near future, possibly by the Peace Corps as well.

Zorzor handles 250 students with an anticipated 100 graduates per year. Kakata currently has room for 128 of which about 50 would graduate per year. There has been discussion regarding the possible expansion of Kakata in 1966 to the same size as Zorzor. This appears unlikely in the absence of USAID financing, because GOL resources do not appear sufficient to finance this expansion alone. In the event that loan financing were available with 20% participation by GOL, the costs to GOL would increase by about \$40,000 per year over the amounts committed by Liberia in the absence of such an expansion.

Table A-5 shows the schedule of expert assistance, participant training, construction, and provision of equipment as well as the resultant U.S. and GOL costs. GOL costs consist of the operations and maintenance costs of the two institutes including provision for the lost services of participants. These estimates are based on USAID and Tuskegee estimates of the minimum amounts required if these institutes are to function effectively and efficiently. In 1964 the GOL budget contains only \$56,000 for Kakata and \$80,000 for Zorzor, \$53,000 less than the minimum necessary.

The U.S. construction and equipment costs provides the following items; completion in 1964 at Kakata of six faculty housing units costing \$23,000 each, and at Zorzor of one classroom building, a dormitory, a dining hall and kitchen, a manual arts and maintenance building as well as a remodeling job on the library. At Zorzor design and construction of an improved electric system including a new 100 kw generator and a better water supply at Zorzor are also expected to take place during 1964. The equipment in 1964 and 1965 consists mainly of transportation equipment, electronic language laboratory equipment, and furnishings for the Zorzor buildings.

Construction in 1965 includes two prefabricated warehouses — one at each site, and fourteen staff houses, each costing \$25,000.

TABLE A-5

## RURAL TEACHER TRAINING

	<u>1964</u>	<u>1965</u>	<u>1966</u>	<u>1967</u>	<u>1968</u>
1. Experts/*man months	14/168	15/180	13/155	8/94	5/60
2. Participants/man months	8/152	20/176	17/132	12/104	8/76
3. Engineering & Construction (\$1000)	342	410			
4. Equipment (\$1000)	142	50			
16. Cost of Operation (\$1000)					
Kakata	87	106	108	108	108
Zorzor	122	142	154	154	154
6. U.S. Cost (\$1000)	1085	1111	554	352	226
Expected Direct Impact (\$1000) of GOL expenditures on					
16. GOL B	-209	-248	-262	-262	-262
21. RL BP	-26	-32	-31	-30	-30
24. RL GNP	+175	+205	+225	+226	+227
Direct Impact (\$1000) of U.S. Construction on					
20. RL BP	+34	+35			
24. RL GNP	+34	+35			

\*Tuskegee Institute Contract

## PROFESSIONAL AND HIGHER EDUCATION

U.S. assistance under this project to the University of Liberia and to Cuttington College commenced in 1962 and is expected to continue through 1969. Originally USAID was going to assist in the creation of the new campus of U.L., outside Monrovia, but a policy change in 1963 suspended all assistance for that purpose with the exception of construction in progress. In fact, access roads and three buildings for the College of Agriculture were constructed on the new site. This construction was completed in 1964. During 1965 and 1966 a dormitory will be designed and constructed on the present campus. The major portion of U.S. assistance to this project consists of the services of the Cornell University team. This contract together with associated support costs of the experts accounts for about \$500,000 annually of U.S. aid during the period under review.

In addition a large number of participants are to be trained in the United States with the aim of increasing the proportion of qualified Liberians on the U.L. faculty. About twelve participants annually are to leave Liberia for study periods of one to two years.

Roughly one quarter of a million dollars of equipment is being provided to U.L. in the form of library books, furnishings and equipment, instructional equipment, administrative and shop equipment and furnishings of College of Agriculture buildings. The aid to Cuttington College consists mainly of the completion of construction of science and housing facilities.

The scheduling of expert assistance, participant training, construction and provision of equipment, as well as the U.S. costs and

GOL costs arising from this aid is shown in Table A-6. The GOL costs include the loss of the services of participants, operation and maintenance costs of the buildings constructed at the new site as well as the dormitory to be constructed in Monrovia. In addition, in 1964 an estimated \$35,000 is needed for the new agriculture buildings in order to make them usable. At present they lack electricity and water, and GOL is responsible for providing these. No provision for this amount was made in the 1964 budget.

For the later years of the period under review it has been assumed that substantial salary increases for returned participants were necessary. At present U.L. is unable to provide its better qualified Liberian teachers with adequate compensation; the result is that within a short period of time they find better jobs with concessions or elsewhere in government. If the training provided to the participants is not to be wasted, they must receive sufficient monetary incentive on return to U.L. to keep them there. This would imply salary increases of roughly \$1000 to \$2000 per man.

TABLE A-6

PROFESSIONAL AND HIGHER EDUCATION

	<u>1964</u>	<u>1965</u>	<u>1966</u>	<u>1967</u>	<u>1968</u>
1. Experts/man months*	16/166	14/166	14/168	14/168	14/160
2. Participants/man months	29/178	28/220	35/256	30/216	30/216
3. Engineering & Construction (U.L.)** (\$1000)	65	10	200		
4. Equipment (U.L.) (\$1000)	150	50	50		
3. Aid to Cuttington College (\$1000)	110				
6. U.S. Cost (\$1000)	880	670	888	618	588
Expected Direct Impact (\$1000) of GOL expenditures on					
17. GOL B	-62	-54	-71	-98	-113
19.21. RL BP	-37	-20	-22	-22	-24
24. RL GNP	+13	+18	+40	+60	+72
Direct Impact (\$1000) of U.S. Construction and Aid to Cuttington College					
GOL B					
20. RL BP	+25		+40		
24. RL GNP	+25		+40		

\* Cornell University Contract

+\*\* \$35,000 of the figure for 1964 is the GOL commitment to complete the College of Agriculture buildings already constructed.

### MT. COFFEE HYDROELECTRIC PROJECT

The Mt. Coffee Hydroelectric dam project is the largest single project currently under way in Liberia. Table A-7 shows the costs of the project to the GOL, the costs to the U.S. and the costs to the Public Utilities Administration for the years 1964 through 1968. The cost of the project has been estimated in the Stanley Engineering Company feasibility study at \$27,439,000. \$23,400,000 of this is for the generating facilities at Mt. Coffee, the remainder is for the necessary transmission lines and sub-stations. The contracted costs have thus far run below the feasibility study estimates so that the final cost should be slightly less than \$27,000,000. Not included in these costs are the costs of land acquisition, compensation for agricultural investments destroyed, reservoir clearing (excluding forebay) and interest during construction.

The U.S. has provided a development loan of \$24,300,000 or 90% of the total cost. The credit fee on this loan is 3/4% per annum starting in 1964. No amortization is scheduled until 1973.

If the current construction schedule holds, the first generator at Mt. Coffee will start producing power in August 1966 and the second generator will be put into service toward the end of 1966. Each generator has a capacity of 15,000 kilowatts. The initial installation will contain two generators with provision for the installation of four additional generators at a cost of \$3,000,000 each.

The project is a "run of the river" installation. Consequently during the latter part of the dry season it will be able to produce only about 11,000 kilowatts on a continuous basis. Unfortunately

this is the season of peak power demand in Liberia (power demands of air conditioners are larger in the dry season) so that a large amount of thermal capacity will have to be retained in order to meet power requirements in the dry season. This problem can be ameliorated by the construction at an additional cost of several million dollars of reservoirs upstream from Mt. Coffee. Most probably construction of the initial reservoir will have to be undertaken in 1967 or 1968.

The schedule of installation of additional generator units calls for an additional 15,000 kilowatts every three years. Thus the third generator would be installed in 1969 and the fourth in 1972. In order for there to be sufficient dry season water flow to justify the installation of additional generators, upstream storage reservoirs mentioned in the previous paragraph must be constructed.

Thus, although Table A-7 shows GOL receipts from PUA of \$950,000 in 1967 far outweighing the GOL costs of \$232,000, it is very likely that GOL costs exceeding \$1,000,000 per annum will be incurred in 1967 and 1968, for the construction of reservoir capacity. Indeed, if the construction of such capacity is not promptly undertaken, it is possible that the PUA will not have sufficient revenues — even at existing power rates — to make the million dollar annual interest payments to GOL. This is reflected in a recent Stanley Engineering Company Cash-Flow Analysis of the Mt. Coffee Project, in which cash deficits are anticipated the first several years.

The interest payments of PUA to GOL in 1964 and 1965 will almost certainly be defaulted, because PUA has a very tight cash position currently, and the project will produce no revenues until

late 1966. In 1966 it has been assumed that \$300,000 of interest would be paid by FUA to GOL, but that the remainder of the amount due (\$490,000) would be defaulted.

It may be noted that FUA interest payments to GOL are far larger than those of the GOL to the U.S. This results from a 3 1/2% interest rate charged FUA on the entire cost of the project. Thus the implied subsidy involved in the low interest charge on development loans accrues to GOL rather than to users of electric power in Liberia who otherwise would have benefited.

Since a decision to construct upstream reservoirs has not yet been made, it would be premature to venture a guess regarding the likelihood of external financing for a portion of the costs of such a supplementary project. However, delay in building reservoir capacity would probably result in Mt. Coffee earning sufficient revenues to pay interest and amortization charges. In view of the heavy commitment that the United States has made to public utilities in Liberia, it is consequently likely that some form of U.S. financing — possibly on less favorable terms than the loan for the initial project — may be forthcoming for a portion of the costs of the necessary reservoirs and capacity expansion.

In light of these considerations, the GOL costs in Table A-7 provide an accurate estimate in 1964, 1965 and 1966 of GOL commitments. In 1967 and 1968 the ultimate figures are subject to the possibility of large errors. Most probably the GOL commitments for the two years taken together will be of the order of \$400,000, but this estimate might be in error by \$1,000,000 up or down. A figure of zero has

however, been added into the overall totals for each of these years under GOL budgetary impact.

Some additional comments are necessary regarding the assumptions on which Table A-7 is based. The revenue assumption of FUA is based on the equivalent of one fourth of a year's operation in 1966 and full operation thereafter with deliveries of prime power to the distributive system of 70,000,000 kwh and 60,000,000 kwh of secondary power sales. The savings of fuel imports is assumed to be equal to \$400,000 annually when Mt. Coffee is fully operating.

Thus the balance of payments effect of the project is compounded of interest payments to the U.S., imports of 80% of replacement expenditure, all of administration and insurance and one third of operation and maintenance expense plus the lowered imports of fuel for thermal power generation. The impact on GNP consists as usual of the "local cost contribution" plus 20% of the replacement expenditures plus the net value added of the project less required imports. GOL interest payments abroad have been treated as a transfer payment, not as a portion of domestic income (i.e., factor payment abroad).

TABLE A-7

MT. COFFEE HYDROELECTRIC PROJECT  
(\$1000)

	<u>1964</u>	<u>1965</u>	<u>1966</u>	<u>1967</u>	<u>1968</u>
7A. U.S. Loan	8100	8100	8100		
7C. Net U.S. Cost	7918	7918	7918	-182	-182
15. GOL Capital Contribution	408	1080	1212		
15. Other Capital costs*		50	50	50	
7B. Interest payments to U.S.	182	182	182	182	182
Amortization to U.S.	Begins 1973				
Gross GOL Costs	590	1312	1444	232	182
PUA					
Interest payments to GOL	160	475	790	950	950
Amortization to GOL	Begins 1971				
Operation & maintenance			119	237	237
Administration & Insurance			80	80	80
Replacements				58	58
Anticipated Revenues from project (-)			499	2000	2000
Surplus (-) or Deficit (+)	+160	+475	+490	-685	-685
Expected Impact of GOL and PUA expenditures on					
18. GOL B	-590	-1312	-1144	?	?
23. RL BP	-182	-182	-202	+12	+12
24. RL GNP	408	1080	1591	1787	1787

\* These consist of reservoir clearing costs (excluding forebay), land acquisition costs and indemnification for rubber trees and other agricultural investments which are destroyed. No precise estimate of these costs exists. The figures shown provide only an idea of the order of magnitude of these costs.

## MONROVIA WATER SYSTEM

The loan for the Monrovia Water System has been approved. It is for \$7,000,000. The GOL contribution is \$800,000. Interest on the loan is at 3/4% on the entire \$7,000,000 during the initial 10 years. Thereafter interest will be charged at 2% on the outstanding balance while amortization will take place over twenty years starting in 1975. The loan has been made to the GOL which in turn will loan \$7,800,000 to the FUA for the actual operation of the water system. This loan will be made at 3 1/2% interest on the outstanding balance, and with repayment of principal over twenty years commencing in 1970.

Construction of this project will commence either late in 1965 or early in 1966, and will continue over a period of two years.

When completed it is expected that its revenues will be sufficient to enable FUA to pay the fixed charges of interest and amortization over a twenty year period; however surpluses above the fixed charges toward the latter part of the amortization period will offset deficits which will occur at the beginning. These deficits would be approximately \$400,000 per year at the beginning of the period if amortization began without a grace period. With the grace period there should be sufficient revenues to make the interest payments in 1968 and 1969 and to keep the deficit to \$.2 to \$.3 million in 1970 when the first amortization payment is due.

As table A-8 shows, FUA will run a deficit in 1965-1967 equal to its payments due GOL. Consequently, for those years gross GOL costs give a reasonably accurate picture of the likely budgetary impact of the project. For 1968 the budgetary impact may be positive although

it may turn out that expected revenues will be less than originally anticipated because of initial difficulties in getting the new water system in operation. In addition, land acquisition costs of an unknown magnitude will probably be incurred. Consequently, conservative treatment would be to consider 1968 as involving no GOL budgetary import.

It should be noted that the precise schedule of GOL capital contribution has not yet been worked out, and the construction schedule is subject to variations. Consequently the phasing of GOL commitments with respect to this project almost certainly will differ somewhat from that shown.

TABLE A-8

MONROVIA WATER SYSTEM  
(\$1000)

	<u>1964</u>	<u>1965</u>	<u>1966</u>	<u>1967</u>	<u>1968</u>
7A. U.S. Loan		1000	4000	2000	
15. GOL Contribution		100	400	300	
15. Other Capital costs (land acquisition, indemnification, etc.)					???
7B. Interest payments to U.S.		53	53	53	53
Amortization		Commences in 1975			
Gross GOL		153	453	353	53
FUA Costs					
Interest Payments to GOL		3	113	240	273
Amortization Payments to GOL		Commences in 1970			
Expense of operation					265
Estimated Revenues (-)					530
Deficit		3	113	240	8
Net GOL Costs		150	340	113	-220
8B. Total U.S. Costs		947	3947	1947	-53
Expected Impact of GOL and PUA expenditures on					
18. GOL B		-153	-453	-353	
23. RL BP		-53	-53	-53	-140
24. RL GNP		+100	+400	+300	+178

## MONROVIA SEWERAGE SYSTEM

A feasibility study on the Monrovia Sewerage System is currently being carried out by a consulting firm from Chicago. This is being financed by USAID. The completed study in the fall of 1964 will probably result in a loan application to USAID for construction of the sewerage facilities. If this loan application is approved, U.S. funds will cover 90% of the construction cost of the system, while Liberia will pay the remainder. Interest will probably be 3/4% during the 10 year grace period and 2% thereafter.

It is unlikely that construction on such a system could commence prior to the beginning of the dry season in October 1966. The construction period would probably be about two to three years. Consequently expected GOL commitments will be approximately as shown in table A-9. Most probably the actual arrangement will be a two-step loan as is the case for the Monrovia Water Supply and the Mt. Coffee project.

TABLE A-9

MONROVIA SEWERAGE SYSTEM  
(\$1000)

	<u>1964</u>	<u>1965</u>	<u>1966</u>	<u>1967</u>	<u>1968</u>	<u>1969</u>
7A. U.S. Loan			800	3200	3200	500
6. U.S. Grant	133					
15. GOL Contribution			90	360	360	90
7B. Interest			60	60	60	60
Amortization		Commences 1976				
Operating Cost		Commences 1970				
8B. Total U.S. Cost	133		740	3140	3140	740
18. Impact on GOL B			150	420	420	150
23. RL BP			60	60	60	60
24. RL GNP			90	360	360	90

PUBLIC UTILITIES MANAGEMENT

USAID provides professional utility management and consulting services under this project to the newly formed Public Utilities Administration. (PUA). This project commenced in 1964 and is expected to continue at least through 1970. Table A-10 outlines the USAID and GOL costs involved in the implementation of this utilities management arrangement which supplies five experts from Sanderson and Porter Company under contract to PUA. The GOL costs consist of the provision of office space and clerical assistance, while the USAID costs include both contract and support costs.

TABLE A-10

		PUBLIC UTILITIES MANAGEMENT				
		<u>1964</u>	<u>1965</u>	<u>1966</u>	<u>1967</u>	<u>1968</u>
1.	Experts/man months*	5/60	5/60	5/60	5/60	5/60
6.	U.S. Cost (\$1000)	210	210	210	210	210
15.	GOL B (\$1000)	-10	-10	-10	-10	-10
	RL BF(\$1000)	-	-	-	-	-
24.	RL GNP (\$1000)	+10	+10	+10	+10	+10

\* Sanderson and Porter Contract

**PUBLIC WORKS ADMINISTRATION AND TRAINING**

Participant training under this project commenced in 1961.

The J.G. White Contract began in late 1962. Both are scheduled for termination in 1967-1968. Together they form the bulk of assistance provided to the Department of Public Works and Utilities by USAID. The scheduling of experts' services and of participant training and equipment deliveries along with resultant USAID and GOL costs is shown in Table A-11.

The equipment provided consists mainly of drafting and engineering materials and office furniture. In addition \$40,000 is to be spent during 1964 to improve the Monrovia Water System. The technical assistance under this contract is intended to assist DPW and U in its reorganization along the lines laid out by SCOGO and improve the Department's administration, planning, training and operation. The amounts shown as GOL costs reflect only the lost service of the participant trainees. In addition GOL may be involved in the expenditure of substantial amounts for training beginning 1966.

TABLE A-11

PUBLIC WORKS ADMINISTRATION AND TRAINING					
	<u>1964</u>	<u>1975</u>	<u>1966</u>	<u>1967</u>	<u>1968</u>
1. Experts/man months*	12/140	12/116	8/96	6/72	
2. Participants/man months	13/92	19/104	20/112	27/156	15/120
4. Equipment (\$1000)	74	8	5	5	
6. U.S. Grant total (\$1000)	680	524	445	371	60
Expected direct impact (\$1000) of GOL expenditure on					
16. GOL B	-14	-16	-17	-24	-18
21. RL BP	-7	-8	-8	-12	-9
24. RL GNP	-	-	-	-	-

\* J.G. White Contract

## RURAL PUBLIC WORKS

This project began in 1962 and is scheduled to terminate in 1966. During 1964 the services of a USAID direct hire civil engineer plus a Seabee team of road construction and maintenance specialists will be supplied to Liberia under this project by USAID. During the remaining period of the project these technicians will remain in Liberia and be supported with substantial amounts of equipment.

The goal of this project is twofold — to improve the road maintenance capabilities of the Department of Public Works and Utilities in the interior of Liberia and to do a limited amount of road construction. In 1962-1963 a 26 mile road was constructed in Bong County under this project. GOL costs consist mainly of participation in the training aspect of this project and the necessary maintenance costs of the roads which have been constructed.

In addition in the latter part of the period under review the maintenance cost of the construction equipment supplied has been taken into account.

TABLE A-12

### RURAL PUBLIC WORKS

	<u>1964</u>	<u>1965</u>	<u>1966</u>	<u>1967</u>	<u>1968</u>
1. Experts/man months	6/39	6/72	4/40		
4. Commodities (\$1000)	41	100	100		
6. U.S. Grant (\$1000)	140	280	200		
Expected direct impact(\$1000) of GOL expenditures on					
16. GOL B	-30	-30	-50	-60	-60
21. RL BP	10	10	15	20	20
24. RL GNP	20	20	35	40	40

## GOVERNMENT REORGANIZATION

The operation of the Special Commission on Government Operations (SCOGO) has received considerable U.S. assistance. The Public Administration Services team accounts for the major portion of U.S. expenditures though a limited amount of commodities are being delivered and several participants are funded. Table A-13 shows the schedule of experts' services, participant training and equipment delivery for the government reorganization project and fiscal and supply management project. Although these are separate projects they are similar enough to be presented together. Moreover, PAS experts are involved in both activities.

The cost to the GOL of these projects consists mainly of the cost of operation of SCOGO, although lost participants' services account for about one fifth of the total GOL budgetary impact. The future of SCOGO is at present uncertain as is the nature of U.S. assistance in this area of activity. However, it is a reasonable assumption that SCOGO would cease to function without U.S. support.

Some of the activities of the fiscal and supply management project would continue even if SCOGO ceased to operate. At present this project is mainly concerned with customs administration, but it is likely that the emphasis will be shifted somewhat in about 1966.

It should be noted with regard to these two projects that additional USAID personnel are charged to the funding of these projects although they spend their entire efforts on internal USAID activities. These have not been included here.

TABLE A-13

## GOVERNMENT REORGANIZATION (A) &amp; FISCAL &amp; SUPPLY MANAGEMENT (B)

	<u>1964</u>	<u>1965</u>	<u>1966</u>	<u>1967</u>	<u>1968</u>
A 1. Experts/man months*	8/96	8/96	6/10	3/30	3/30
2. Participants/man months	11/38	4/24	4/16	8/40	8/48
4. Commodities (\$1000)	10				
6. U.S. Cost (Grant) (\$1000)	422	404	168	100	104
B 1. Experts/man months	6/46	3/30	3/36	3/36	3/36
2. Participants/man months	9/52	9/56	8/48	10/56	6/48
4. Commodities (\$1000)	40		40	40	
U.S. Cost (Grant) (\$1000)	<u>190</u>	<u>103</u>	<u>154</u>	<u>158</u>	<u>114</u>
6. Total U.S. Cost (\$1000)	612	507	322	258	218
10. Expected direct impact (\$1000) of GOL expenditures on					
16. GOL B	-72	-73	-65	-59	-53
21. RL BP	-9	-9	-9	-12	-14
24. RL GNP	54	57	50	38	30

\* Includes PAS Contract during 1964 and 1965.

## COMMUNICATIONS MEDIA

This project began in the mid-1950's and is now scheduled to terminate in 1967-1968. The schedule of assistance to be provided during the period under review is shown in Table A-14 which also shows the USAID and GOL costs arising from this assistance.

The goal of this project is to improve the operation and expand the capabilities of the Audio-Visual Division of the Liberian Information Service. To this end the services of several experts are being made available and a large participant training program is under way. In addition large amounts of electronic and photographic equipment have been and continue to be supplied. The GOL costs consist of quite substantial sums for the maintenance and repair of this equipment -- estimated at 10% of the value of the equipment provided -- and minor amounts for office and working space and lost services of participants.

TABLE A-14

### COMMUNICATIONS MEDIA

	<u>1964</u>	<u>1965</u>	<u>1966</u>	<u>1967</u>	<u>1968</u>
1. Experts/man months	7/70	5/54	3/24	1/6	
2. Participants/man months	13/80	11/76	7/40	6/40	2/16
4. Commodities (\$1000)	30	15	15	5	
6. U.S. Costs (Grant) (\$1000)	245	188	95	40	8
Expected Direct Impact (\$1000) of GOL Expenditures on					
16. GOL B	-32	-35	-33	-36	-35
21. RL BP	-12	-13	-12	-12	-12
24. RL GNP	16	18	18	21	22

## PUBLIC SAFETY

This project commenced in 1958 and is scheduled to be phased out in 1967. Under it, extensive assistance has been provided to the Liberian National Police Force by USAID. Table A-15 summarizes the expected scheduling of experts' services, participant training, construction and provision of equipment, along with the resultant USAID and GOL costs.

The construction shown is of four police outposts in rural areas of Liberia. These will be completed during 1964 and USAID will provide them with communications equipment, vehicles and the other necessary equipment and furnishings. This will account for a major share of the commodities being supplied during 1964 and 1965 by USAID. In addition small amounts of garage maintenance equipment and traffic equipment will be supplied.

GOL costs consist mainly of the amounts necessary for the staffing and operation and maintenance of these new outposts. This has been estimated at \$15,000 per outpost per year. In addition maintenance of the equipment supplied under this project involves substantial outlays, and loss of the services of the participant trainees adds a relatively minor amount to the GOL commitment. It may be noted that the estimates made here of GOL commitments with respect to this project are very substantially below estimates of USAID.

TABLE A-15  
PUBLIC SAFETY

	<u>1964</u>	<u>1965</u>	<u>1966</u>	<u>1967</u>	<u>1968</u>
1. Experts/man months	10/120	11/114	7/60	3/20	
2. Participants/man months	20/60	10/30	10/30	5/15	
3. Construction (\$1000)	120				
4. Equipment (\$1000)	110	110	50	20	
6. U.S. Costs (Grant) (\$1000)	545	400	215	68	
Expected Direct Impact of GOL expenditures on					
16. GOL B (\$1000)	-68	-88	-92	-95	-95
21. RL BP (\$1000)	-9	-11	-13	-14	-14
24. RL GNP (\$1000)	55	75	78	80	81
Expected Direct Impact of U.S. Construction expenditures on					
20. RL BP (\$1000)	+24				
24. RL GNP (\$1000)	+24				

## LOCAL GOVERNMENT ADMINISTRATION

This project had its inception in the activities of the Rural Area Development (RAD) project. The goal is threefold: To set up a Bureau of Local Government in the Department of the Interior, the function of which will be to assist and strengthen local government in Liberia; to establish a pilot local government project by building on the existing RAD base; and to train local government personnel to improve their effectiveness. The project commenced in 1963 and is expected to continue to 1970.

U.S. assistance consists mainly of the services of experts, and the provision of training to participants. Some of this training may take place in third countries. The scheduling of this assistance is shown in Table A-16 along with the resultant U.S. and GOL costs.

The estimates of GOL costs are substantially lower than USAID estimates. Most of the GOL cost will go to set up and operate a functioning Bureau of Local Government and to assist in the operation of the pilot project at Gbarnga.

TABLE A-16

### LOCAL GOVERNMENT ADMINISTRATION

	<u>1964</u>	<u>1965</u>	<u>1966</u>	<u>1967</u>	<u>1968</u>
1. Experts/man months	2/18	2/24	3/36	3/36	3/36
2. Participants/man months	5/24	7/44	3/24		
4. Commodities (\$1000)			15		
6. U.S. Cost (Grant) (\$1000)	60	84	117	90	90
Expected Direct Impact of GOL expenditures on					
17. GOL B (\$1000)	-40	-60	-70	-80	-80
22. RL BP (\$1000)	-4	-6	-6	-6	-6
24. RL GNP (\$1000)	35	52	63	74	74

**LABOR ADMINISTRATION AND TRAINING**

The intent of this project which commenced in 1963 and is scheduled to terminate in 1970 is to improve the administration of the Bureau of Labor Services, to assist this Bureau in the creation of more adequate labor legislation, and to initiate a training and education program for labor leadership in Liberia.

The scheduling of experts' services, participant training, and the provision of commodities is shown in Table A-17 along with the resultant GOL and USAID costs. Not all of the participants are GOL employees. Consequently GOL costs do not reflect the lost services of these participants. However, a small allowance has been made for additional costs to the Bureau of Labor services which will arise if the tasks envisioned by the project are carried out.

TABLE A-17

**LABOR ADMINISTRATION AND TRAINING**

	<u>1964</u>	<u>1965</u>	<u>1966</u>	<u>1967</u>	<u>1968</u>
1. Experts/man months	2/15	3/21	5/27	5/28	5/28
2. Participants/man months	4/16	12/68	12/56	10/44	12/54
4. Commodities (\$1000)	2		6	3	3
6. USAID Cost (\$1000)	50	90	104	97	102
Direct Impact Expected of GOL expenditures on					
16. GOL B (\$1000)	-2	-11	-15	-14	-19
21. RL BP (\$1000)	-1	-12	-2	-1	-1
24. RL GNP (\$1000)			12	12	17

PUBLIC HEALTH ADMINISTRATION

This project has been under way since 1961 and it is expected to terminate in 1967-1968. The goal of the project is to provide assistance in improving the organization, administration and operation of the National Public Health Service. Two public health advisors are supplied, one on a part-time basis. Both of these advisors spend part of their time working on internal USAID problems so only one of them has been included in Table A-18 which shows the scheduling of assistance and the resultant USAID and GOL costs. These latter costs consist of the lost services of the participants.

In addition to the assistance shown here, USAID has financed a health planning project which is staffed and operated by WHO. This project involves \$100,000 in U.S. costs during 1964 and 1965, which has been excluded from the U.S. assistance figures since it is being provided through multilateral channels.

TABLE A-18

PUBLIC HEALTH ADMINISTRATION

	<u>1964</u>	<u>1965</u>	<u>1966</u>	<u>1967</u>	<u>1968</u>
1. Experts/man months	1/12	1/12	1/12	1/9	
2. Participants/ man months	2/8	4/24	6/32	8/48	4/32
4. Commodities (\$1000)		3			
6. U.S. Costs (Grant) (\$1000)	34	45	46	46	16
Expected Direct Impact of GOL expenditures on					
16. GOL B (\$1000)	-1	-4	-6	-9	-6
21.. RL BP (\$1000)		-2	-3	-4	-3
24. RL GNP (\$1000)					

## NATIONAL MEDICAL CENTER

The creation of the National Medical Center is a project involving the Liberian Government, USAID, and the National Baptist Mission.

Three different, currently existing institutions are involved -- The Tubman National Institute of Medical Arts, (TNIMA) the Liberian Government Hospital, and the Maternity Center Hospital; as well as a new hospital, interim training center, and permanent training center.

The plan is to relocate the TNIMA in new temporary quarters at the Maternity Center Hospital, using that hospital for instructional purposes during the period while the Medical Center is being constructed. TNIMA will become an integral part of the Medical Center on its completion, and the 250 bed hospital at the Center will replace the Liberian Government Hospital. However, the old hospital will probably continue to be used for medical purposes although no decision on this matter has yet been made. The temporary classrooms at the Maternity Center will be converted into an outpatient clinic when the Center is completed in late 1966 or 1967.

In order to carry out this plan a number of experts in hospital management and paramedical teaching will be needed. Also the Maternity Hospital must be purchased from the National Baptist Mission and some renovation and alterations must be undertaken on it. USAID has made a \$5.3 million loan to GOL for the Medical Center. Engineering design, equipment for the Center, and construction of the interim training buildings, as well as renovation of portions of the Maternity Hospital, are to be provided to Liberia through development grants. In addition USAID is going to provide a team of

medical experts. Originally this was to have been under a contract arrangement with the University of Cincinnati (Ohio) but this plan was cancelled, and the U.S. Public Health service is to provide the necessary personnel. The GOL will bear the other costs of operation of the center, and the entire costs ultimately on withdrawal of U.S. expert assistance in the 1970's. In addition GOL has to pay for the Maternity Center Hospital and to make a counterpart contribution with respect to the U.S. development loan.

The United States involvement in this program is long term, it being anticipated that aid to the Medical Center will continue to be made available through 1975. Table A-19 shows the scheduling of the U.S. and GOL contributions to this project for the years 1964-1968. The estimate for the increased hospital operating cost is subject to an error which is dependent on the use made of the old government hospital and the extent of U.S. operating assistance.

In addition to the facilities for medical care which are to be established and operated under this project, the training aspect of the project is supposed to produce about ninety graduates annually beginning in 1969. Roughly half of these will be nurses (graduate and practical) while the remainder will be medical corpsmen, auxiliaries, and sanitarians. The period of training is to be about two years, and the incoming students will be secondary school graduates.

TABLE A-19

NATIONAL MEDICAL CENTER  
(\$1000)

	<u>1964</u>	<u>1965</u>	<u>1966</u>	<u>1967</u>	<u>1968</u>
7A. U.S. Loan	3468	1934			
GOL Contribution	166	664	166		
7B. Interest	40	40	40	40	40
Amortization	Commences in 1974				
Purchase of Maternity Hospital	25	25	25	25	25
15. Total GOL Capital and Interest Costs	231	729	231	65	65
16. Increased TNIMA Operating Cost		8	8	23	23
16. Increased Hospital Operating Cost				600	600
16. Participant Training		6	6		
18. Total GOL Costs	231	743	245	688	688
6. U.S. Grant Equipment & Construction	50	25	25		
6. U.S. Grant Experts & Participants		150	300	300	300
14B. Total U.S. Costs	3478	2069	285	260	260
Direct Impact of Expected GOL expenditure on					
18. GOL B	-231	-743	-245	-688	-688
23.-20. RL BP	-40	-44	-44	-102	-102
24. RL GNP	+166	671	173	561	561
Direct Impact of U.S. construction expenditure					
GOL B					
20. RL BP	+5				
24. RL GNP	+5				

## RURAL HEALTH SERVICES

This project began in the mid-1950's and is expected to be continued into 1967 or 1968. The goal of the project is to improve the health services provided to Liberians in rural areas. The experts involved form a health "team" which operates in the Gbarnga area. Although this team fulfills an operating task, a training function is also carried out inasmuch as each member of the team has a Liberian counterpart. Working with this team provides a practical rural intership for graduates of TNIMA or the new Medical Center.

Table A-20 shows the schedule of expert assistance, participant training, and provision of commodities along with the U.S. costs and the GOL contribution to the project. This GOL cost consists in part of the lost services of the participants and mainly of the salary costs of the counterparts and other necessary medical and paramedical personnel. In addition GOL is supposed to provide a limited but increasing amount of medical supplies to the project.

Some of the increase in GOL costs during the period under review are the results from staffing and operating the Field Training Station which is expected to be opened in 1966 or 1967.

TABLE A-20

## RURAL HEALTH SERVICES

	<u>1964</u>	<u>1965</u>	<u>1966</u>	<u>1967</u>	<u>1968</u>
1. Experts/man months	5/54	5/55	6/63	5/56	2/28
2. Participants/man months	2/8	4/12	4/24	2/24	2/16
4. Commodities (\$1000)	27	21	10	5	
6. U.S. Cost (Grant) (\$1000)	166	164	177	157	78
Direct Impact of Expected GOL expenditures on					
16. GOL B (\$1000)	-29	-41	-57	-62	-65
21. RL BP (\$1000)	-3	-4	-6	-6	-7
24. RL GNP (\$1000)	26	36	49	54	56

## AGRICULTURE ADMINISTRATION AND TRAINING

This is a relatively minor activity in which USAID has been engaged since 1963, and which is expected to continue through 1968. It consists of the provision of advisors to the Department of Agriculture for extension and for rural youth activities, and the training of a very limited number of Liberians through the participant training program. Table A-21 shows the schedule of expert and participant assistance and the resultant U.S. and GOL costs.

TABLE A-21

### AGRICULTURE ADMINISTRATION AND TRAINING

	<u>1964</u>	<u>1965</u>	<u>1966</u>	<u>1967</u>	<u>1968</u>
1. Experts/man months	2/20	2/24	2/18	1/12	1/6
2. Participants/man months	3/16	2/16			
6. U.S. Costs (\$1000)	60	70	45	30	15
Expected Direct Impact of GOL expenditures on					
16. GOL B (\$1000)	2	2			
21. RL BP (\$1000)	1	1			
24. RL GNP (\$1000)					

## AGRICULTURAL EXTENSION

This project consisted of supplying expert services and training to assist the GOL to establish a well-functioning agricultural extension service. USAID is withdrawing from this project during 1965. Table A-22 shows the experts, participants and commodities involved in this project. The commodities are for rural youth and extension activities. In addition to the participants shown, eleven others were assisted at Cuttington College under this project during 1964.

TABLE A-22

### AGRICULTURAL EXTENSION

	<u>1964</u>	<u>1965</u>	<u>1966</u>	<u>1967</u>	<u>1968</u>
1. Experts/man months	3/17	1/2			
2. Participants/man months	4/30				
4. Commodities (\$1000)	4				
6. U.S. Cost (Grant) (\$1000)	84	10			
Expected Direct Impact of GOL expenditures on					
GOL B (\$1000)	-5				
RL BP(\$1000)	-2				
RL GNP (\$1000)					

AGRICULTURAL CREDIT

USAID has funded \$9000 in 1964 for a survey of Liberian agricultural credit problems with a view to assessing the possibilities of supplying assistance to Liberia in the establishing of rural credit institutions of a cooperative type. Most probably the result of this survey will be an offer to GOL to provide expert assistance and participant training in this area. The size of this project is at present speculative, and only the initial survey has been included in Table A-23 below.

TABLE A-23

AGRICULTURAL CREDIT

	<u>1964</u>	<u>1965</u>	<u>1966</u>	<u>1967</u>	<u>1968</u>
1. Experts/man months	1/4				
6. U.S. Cost (Grant) (\$1000)	9000				
Direct Impact on					
GOL B (\$1000)	0				
RL BP (\$1000)	0				
RL GNP (\$1000)	0				

## FORESTRY

The forestry project in Liberia is a long term effort on the part of USAID to improve the utilization of the forest resources of Liberia. At present this project consists mainly of the services of forestry advisors, the provision of a limited amount of equipment and assistance to participants. Table A-24 shows more precisely the U.S. aid and GOL participation in this project.

Two of the advisors are leaving during 1964, with only one remaining thereafter until 1968. The commodities are for the College of Forestry and consist primarily of instruments. GOL cost is the loss of services of the participants.

TABLE A-24

### FORESTRY

	<u>1964</u>	<u>1965</u>	<u>1966</u>	<u>1967</u>	<u>1968</u>
1. Experts/man months	3/25	1/12	1/12	1/12	1/6
2. Participants/ man months	3/24	3/24			
4. Commodities (\$1000)	2	3			
6. U.S. Cost (\$1000)	92	50	32	32	16
Direct Impact of GOL expenditures on					
16. GOL B (\$1000)	-5	-5			
21. RL BP (\$1000)	-2	-2			
RL GNP (\$1000)					

## FRESH WATER FISHERIES

This project involved the construction of eighteen fish ponds in the interior of Liberia, the stocking of these ponds, training of Liberians to develop this resource and provision of U.S. experts to make available extension services. Roughly half of the construction of the eighteen ponds was done during the early part of 1964. A Liberian participant trainee returned in mid-1964 after a year of training in the United States. U.S. assistance to this project will terminate in early 1965.

Table A-25 shows the GOL and U.S. involvement in this project. The GOL cost is the maintenance cost and the cost of restocking the ponds and continuing research and extension efforts in this field.

TABLE A-25

### FRESH WATER FISHERIES (\$1000)

	<u>1964</u>	<u>1965</u>	<u>1966</u>	<u>1967</u>	<u>1968</u>
1. Experts/man months	2/24	1/3			
2. Participants/man months	1/6				
4. Construction (\$1000)	15				
6. Total U.S. Cost (\$1000)	80	15			
Expected Impact of GOL expenditures on					
16. GOL B (\$1000)	-6	-6	-6	-6	-6
21. RL BP (\$1000)					
24. RL GNP(\$1000)	6	6	6	6	6
Expected Impact of U.S. construction on					
26. RL BP (\$1000)	+5				
24. RL GNP (\$1000)	+5				

## NATIONAL PLANNING AND ECONOMIC STATISTICS

With respect to the National Planning Agency, USAID provides assistance to the Broad Street Office and to the Bureau of Statistics on Bushrod Island. At present this assistance is gradually being phased out, and no expert assistance beyond the end of 1964 -- with one possible exception -- is planned.

Table A-26 shows the assistance to the Office of National Planning for the years 1964 through 1968. A fairly large number of participants are studying under U.S. auspices and expenditures will continue to be made for this purpose into 1968. The U.S. costs shown reflect the total U.S. costs of the various services supplied including USAID attributed overhead. The GOL costs reflect the provision of office space, rental of the IBM machines, and publication cost of the census. The cost to the GOL of participant training is the loss of the services of the individuals involved.

TABLE A-26

### NATIONAL PLANNING (A) AND STATISTICS (B)

	<u>1964</u>	<u>1965</u>	<u>1966</u>	<u>1967</u>	<u>1968</u>
<b>A</b>					
1. Experts <sup>*</sup> /man months	5/26				
2. Participants/man months	11/112	8/90	8/90	8/90	8/45
4. Commodities (\$1000)					
6. U.S. Grant (\$1000)	10				
<b>B</b>					
1. Experts/man months	4/18	1/12	1/12		
2. Participants/man months	2/24	2/18			
6. U.S. Costs (Grant) (\$1000)	324	85	76	36	18
Expected Direct Impact of GOL expenditures on					
16. GOL B (\$1000)	-111	-63	-60	-61	-50
21. RL BP(\$1000)	-68	-51	-50	-51	-46
24. RL GNP (\$1000)	+28				

\* Klein-Saks contracts and other "country" contracts.

## LIBERIAN DEVELOPMENT CORPORATION

The Liberian Development Corporation was set up by BOL in order to stimulate and encourage Liberian business enterprises. The Corporation is supposed by law to receive one per cent of GOL revenues annually for the purpose of providing capital for lending purposes. In addition the operating costs of the Corporation must be provided for.

USAID has provided the Checchi team of industrial development specialists to assist the Corporation in carrying out its responsibilities. In addition it is providing a substantial amount of training to participants in order to enable Liberians to take over the management and operation of the Corporation by 1972. A limited amount of commodities is also being supplied. Table A-27 details the phasing of expert assistance, participant training, and commodity delivery along with the resultant USAID costs and GOL commitments. The LDC operating budget of \$22,000 has been provided for in the GOL 1964 budget, but only \$185,000 was set aside for the LDC capital budget — roughly one half of the committed amount.

TABLE A-27

### LIBERIAN DEVELOPMENT CORPORATION

	<u>1964</u>	<u>1965</u>	<u>1966</u>	<u>1967</u>	<u>1968</u>
1. Experts* / man months	9/64	9/90	9/64	5/36	3/20
2. Participants/man months	5/28	6/36	6/36	6/36	6/36
4. Commodities (\$1000)	3	2			
6. U.S. Cost (Grant) (\$1000)	240	323	236	138	78
16. GOL Cost Operating (\$1000)	22	24	26	27	27
15. Capital (\$1000)	380	390	400	400	400
Total Direct Impact of GOL expenditures on					
17. GOL B (\$1000)	-402	-414	-426	-427	-427
22. RL B (\$1000)	-4	-5	-5	-5	-5
24. RL GNP (\$1000)	15	15	17	18	18

\* Checchi Contract

This project had its inception prior to 1964, but operations really began in January of this year. It is a four year project which falls into two interrelated sections — geological survey and a topographical mapping project. The former part of the project involves the services of two experts from the United States Geological Survey who arrived in Liberia at the beginning of 1964. Four participants are or were in the U.S. for the study of geology under this project at the beginning of 1964. The number of such students will be augmented during the next four years. In addition about \$54,000 worth of equipment will be supplied by USAID. Most of this equipment consists of vehicles and laboratory equipment.

The topographical mapping project which will be carried out at the same time and which will jointly use some equipment with the geological survey project is an undertaking involving GOL, the U.S. Department of Defense and USAID. The U.S. Army Map Service is supplying the services of sixty-one military personnel and one civilian, and will pay for the costs of the necessary aerial surveys. Support costs of the civilian are being covered by USAID. Nearly \$190,000 of equipment will be supplied to this part of the project by USAID. Mostly this consists of specialized equipment for mapping purposes although several vehicles are also included. In addition there is a substantial participant training program.

Table A-28 summarizes the scheduling of experts' services, participant training and provision of equipment as well as the resultant USAID, U.S. Department of Defense and GOL costs. These costs are broken down

These costs are broken down between the two parts of the project, and the GOL costs are broken down into functional categories. This latter breakdown makes quite clear the nature of the very large GOL participation in this project. The sums shown, however, appear to be relatively generous estimates of the amounts needed to carry out the project. In particular the amounts shown for personnel are undoubtedly on the high side. They have been taken from the project analysis of USAID.

It should be noted that the entire Bureau of Natural Resources and Surveys budget in 1964 was only \$279,000 of which \$37,000 was for the Geological survey. This should be adequate to support this part of the project since the office space will be taken care of by the housing bureau, and there is a limited allowance for travel in the general BNRS budget.

However, the \$23,000 budgeted for the Topographical Mapping Project is totally inadequate to provide the necessary \$54,000 of equipment; and \$85,000 of travel and support during 1964. This failure to support this activity adequately has resulted in a slowing down of the rate of progress being made, particularly in the training of Liberians in the work. This training function is important, because on termination of U.S. aid in 1968, the trained Liberians will complete the tasks begun with U.S. assistance and continue without assistance.

This is undoubtedly one of the most important projects in progress in Liberia. A comprehensive survey of Liberian natural resources has never been made, yet is essential if the development potential of this country is to be fully utilized. The topographical survey will provide the information necessary for precisely delineating concession areas, lessen the costs of road construction and have numerous other benefits.

TABLE A-28

## GEOLOGICAL SURVEY (A)

	<u>1964</u>	<u>1965</u>	<u>1966</u>	<u>1967</u>	<u>1968</u>
1. Experts/man months	2/24	2/24	2/24	2/24	2/18
2. Participants/man months	8/56	10/80	10/96	9/54	5/23
4. Equipment (\$1000)	27	5	14	5	3
6. USAID Cost (\$1000)	125	115	122	101	70
17. GOL Cost (\$1000)	53	66	70	70	80

## TOPOGRAPHICAL MAPPING (B)

5A. U.S. Army personnel man years	61	61	61	61	
1. Other experts/man months	1/6	1/12	1/6		
2. Participants/man months		5/20	10/45	10/45	9/41
4. Equipment (\$1000)	66	57	20	35	10
6. USAID Cost (\$1000)	71	79	49	60	32
9. U.S. DOD Cost (\$1000)	800	800	800	800	800
17. GOL Cost (\$1000)	200	170	155	160	55

## T-TALS (A &amp; B) (\$1000)

6. USAID Cost	196	194	181	161	102
9. U.S. DOD Cost	800	800	800	800	
12. GOL Costs					
Equipment & Supplies	57	26	10	15	10
Office space	16	10	10	10	10
Travel & Support	95	105	105	105	30
Personnel	85	95	100	100	85
Total Direct Impact (\$1000) of Expected GOL expenditures on					
17. GOL B	-253	-236	-225	-230	-135
22. RL BP	-120	-100	-90	-95	-35
24. RL GNP	125	130	130	130	95

## PEACE CORPS

The U.S. Peace Corps had 285 volunteers in Liberia as of mid-1964, and this number is expected to increase to about 400 in September 1964 when the next group arrives and the initial batch of volunteers returns to the U.S.A. In September 1965 the number of volunteers may become 500. Most of the volunteers are teachers, but approximately 40 are working in various administrative type jobs. This latter group is not expected to expand when the number of volunteers is increased. This latter group has been considered as belonging to the government administration, organization and operating sector while the main portion of Peace Corps aid is to education.

The GOL commitment with respect to the Peace Corps consists of a contribution of \$750 per volunteer, plus about \$13,000 for administrative and miscellaneous expenses, plus some rent-free houses. However, Liberia's contributions are lagged four months so that the increase in the number of volunteers will not affect the 1964 budget but only the 1965 and future budgets. For 1964, \$192,000 is in the Department of Education Budget for the Peace Corps. Table A-28 shows the schedule of expected GOL and U.S. costs with respect to this program. These costs are broken down by sector.

The assumption regarding the Peace Corps operation in Liberia is that Peace Corps volunteers do not displace Liberian teachers or volunteers or substitute for Liberians. Instead it is assumed that the volunteers constitute a net addition to the teaching and administrative manpower of the country. Thus GOL disbursements to PC volunteers are not a substitute for payments to Liberians, but rather a burden on the budget additional to that of the Liberian salary payments.

TABLE A-29

PEACE CORPS

	<u>1964</u>	<u>1965</u>	<u>1966</u>	<u>1967</u>	<u>1968</u>
5B. Number of volunteers	285	400	500	500	500
10. U.S. Cost (\$1000)	1000	1400	1750	1750	1750
Direct Total Impact (\$1000) of GOL Expenditures on					
16. GOL B	227	316	391	391	391
21. RL BP	226	315	390	390	390
24. RL GNP	1	1	1	1	1
Education GOL B	-195	-284	-359	-359	-359
Education RL BP	-194	-283	-358	-358	-358
Education RL GNP	+1	+1	+1	+1	+1
GAOO GOL B	-32	-32	-32	-32	-32
GAOO RL BP	-32	-32	-32	-32	-32
GAOO RL GNP	0	0	0	0	0

**U.S. DEPARTMENT OF DEFENSE**

The United States Department of Defense provides aid to Liberia in several ways. The details regarding the military and military intelligence assistance program are not public knowledge, although they do result in a minimum of \$15,000 of Government of Liberia budgetary expenditure per annum. Very substantial assistance is provided to Liberia by the U.S. Army Map Service in connection with the topographical map survey described above. In addition a Seabee construction team is coming to Liberia under USAID sponsorship.

**U.S. EXPORT-IMPORT BANK**

The loans made by the Ex-Im Bank have been described in the main text. \$22.25 million have been loaned for public works and \$12.1 million for power equipment. A \$13.3 million refunding loan has also been made with respect to principal repayments from 1963 through 1968. Table A-30 shows the impact of the interest payments due on the Liberian economy.

**TABLE A-30**

		<b>EXPORT-IMPORT BANK</b>				
		<b>(\$1000)</b>				
		<u>1964</u>	<u>1965</u>	<u>1966</u>	<u>1967</u>	<u>1968</u>
11B.	Public Works Interest	836	836	836	836	836
	Payments					
11B.	Public Utilities Interest	676	676	676	676	676
	Payments					
	Public Works GOLB-RLBP	-836	-836	-836	-836	-836
	Public Utilities GOLB-RLBP	-676	-676	-676	-676	-676
18.-23.	Total GOL B, RL BP		-1512	-1512	-1512	-1512