UNCLASSIFIED

PD-ACC-052

[redacted]

PROPOSED

DEVELOPMENT ASSISTANCE PROGRAM

USAID/DOMINICAN REPUBLIC
October 31, 1973

Decontrol following July 1, 1978

[redacted]

BEST AVAILABLE

[redacted]

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1. THE DEVELOPMENT OVERVIEW

PART A. DIRECTOR'S STRATEGY STATEMENT

The Task

On July 10 AID/W called for a reappraisal and updating of Dominican economic trends and U.S. assistance strategy. The October 31 date for submission of the Development Assistance Plan (DAP) was "designed to allow the new Mission Director ample opportunity to actively supervise and participate in the DAP exercise and for the final product to fully reflect his views."

Among the three choices: Mission phase out, a presence program and staff, or, programming of assistance to the Dominican Republic "complementary or supplementary to that available or expected to be available through multilateral channels," the third choice is to be preferred. The first would have adverse political as well as developmental repercussions. From a developmental viewpoint the second has limited usefulness.

There are a number of preconditions for proceeding on the third alternative, among them being that (1) support of the Dominican development effort is in the U.S. interest, (2) a sufficiently suitable developmental environment exists, (3) aid is needed and wanted and, even at the margin of external resource flow and internal resource allocation for investment, can have important developmental consequences and (4) U.S. bilateral aid would be complementary to multilateral aid. All four preconditions prevail.

The Background

U.S. development policy and posture has had two major phases since the 1965 revolution.

From 1965 to 1969 the U.S. development presence was substantial in virtually every major aspect of Dominican economic life. Bilateral aid commitments totalled $267 million. This type of situation, while justified at the time, could not be tolerated indefinitely by either of the two sovereign powers. Even though the Dominicans may like to lean heavily on the United States, it would be unwise to encourage this over-reliance for many reasons.

From 1969 to 1973 our U.S. development policy was to reduce the obvious dependence of the Dominican Republic on the United States, by urging it to seek external aid and assistance from

international and multilateral sources where possible, while at the same time retrenching U.S. bilateral aid and reducing the U.S. official presence. Diminishing of U.S. aid also occurred because the Government of the Dominican Republic did not respond positively to a number of macro-economic policy recommendations which the U.S. thought important.

The U.S. development approach of the two periods can be seen to have been quite different. Yet each in retrospect appears to have been suited to its particular time and circumstance. Nevertheless there is belief by some Dominicans that the first period ended too abruptly and might usefully have been prolonged by a year or two.

There are now indications that the Government may be about to embark on a new development tack where the character of investments may be changing and become more productively oriented. Consequently, the call to prepare a Development Assistance Plan, based on a reappraisal of the development environment and prospects, is timely.

On the Dominican side this last period of eight years was one of demonstrable economic progress, with the investments and policies of the earlier part leading to significant economic results in the latter part. This progress is particularly noteworthy since the Dominican Republic had been run as a repressive family fiefdom for 31 years until 1961, and, the 1961 to 1965 period was one characterized by its somewhat chaotic and indecisive nature and with confused and mixed economic indicators and consequences.

Based on the experience of the past eight years, one cannot help but conclude that given adequate leadership, generally favorable conditions and a measure of external help, the Dominicans are capable of achieving significant development progress.

The Setting

Thus, in examining the present scene and contemplating future prospects, the progress of the past several years, following on periods of confusion and stagnation, are realities to be taken into account. The setting, then, is as follows:

- There has been much economic progress and there is a generally favorable economic atmosphere for development and for new foreign investment. GNP growth is high; exports earnings are high, although these are attributable in considerable part to weather and world prices paid for traditional Dominican exports of sugar, coffee and cacao.

- While prices for these Dominican exports can be expected to continue to be favorable in the near term, the import bill is also increasing at an unprecedented rate, both for investment and for food needs of a growing population. This year's bill for imported food alone, for example, is estimated at $80 million.

- The Dominican Republic has not been insulated from world-wide inflationary trends, and in the past year, this is becoming increasingly a constraint on development -- in addition to being a political issue.

- The Government of the Dominican Republic has a development planning organization but has no "approved" development plan. It has a National Development Commission with broad participation which discusses but does not decide unless the President is presiding. The Commission is used to attempt to achieve a consensus, but all the important issues -- and many minor ones -- are explicitly decided by the President.

- Public sector investment is proportionately high in relation to current expenditure -- one of the highest, if not the highest, among all developing countries, so high in fact that the IBRD has complained that current expenditures are getting short shrift.

- Much of past development investment has been for construction and much of that has been in projects where pay out is long-delayed. Even so, the pattern of investment is shifting with, for example, construction of schools and clinics more evident in the latter years.

- The Dominican Republic has a small, dynamic and not inefficient private sector, but 60% of industry is in government hands. Many government industries are subsidized and otherwise would run at a loss. (28% of industrial investment is said to be in foreign hands.)

- The country is primarily agricultural but because of relatively low yields the food crops it does produce for its own consumption are not sufficient to feed its people. Statistics are not generally reliable but per capita food production in 1972 is believed by some to be slightly less than in 1962.

- All land considered cultivable is cultivated (not necessarily by tilling). The ratio of .18 Ha. per person in 1966 was one of the lowest in the world and the situation has worsened.

- Forest lands are frequently forest wastes. Watersheds are eroding; dams are silting prematurely. Forest resource management cannot be said to exist.

- Substantial human and financial resources are allocated for education but no progress has been made in increasing educational opportunity for a greater percentage of school age children.

- Two-thirds of the people suffer from some form of malnutrition. This has affected both physical and mental capacities of much of the population. By the age of six months, the lower middle and lower class Dominican child has a measurably smaller cranial growth and by the third year underdevelopment amounts to 1.5 centimeters as compared with better fed Dominican children. What appears to be a healthy six-year old is frequently nine years old.

- Malnutrition is thus a constraint together with size of family in achieving a sustainable development progress in the Dominican Republic.

- But, the most urgent and pressing reality is that by the Year 2000, there will be nearly ten million people in the Dominican Republic <u>if</u> birth rates decline significantly, fourteen million if they do not. This country currently provides only bare subsistence for much of its present population, which even now numbers four and one-half million people.

- More than half of Dominicans now living will see the Year 2000. Thus, the problems of that year are foreseeable problems for one-half the present population.

- All decision-making power and much of Dominican decision-making is in the one pair of hands. Most surely the President will not live to see Year 2000. Yet, the decisions he makes today can have decisive consequences as to whether or not there will be a viable Twenty First Century for the Dominican Republic.

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Our U.S. Interest

Why is this small island nation important to us?

Our U.S. concern about the Dominican future, i.e., in the period to the end of this century, derives not from altruistic and idealistic motives so much as U.S. goals and interests as we see them. While our own national interests in the Dominican Republic are limited and by and large specific, they are nonetheless important. Among them are:

- The Dominican Republic is the fourth largest world exporter of sugar (after Cuba, Brazil and Australia). As supplier to the U.S. market it ranks second (after the Philippines). In the current trade-off on use of U.S. farm land, Dominican need for access to the U.S. market is less compelling than our need for Dominican sugar. The U.S. price of sugar is thus less a subsidy and becomes more a guaranty of availability. Nevertheless, it still constitutes a significant economic contribution as free foreign exchange to the Dominican Republic.

- The Dominican Republic is an existing and potential supplier of strategic ores to the United States and the Free World. About 30% of the Free World supply of mined ferro-nickel comes from the Dominican Republic. Bauxite is also an export. The Dominican Republic has heavily mineralized zones where copper and other minerals are known to exist in commercial quantities. Gold and silver are about to be mined on a significant scale.

- A nation cannot long remain at the economic and social margin with deteriorating longer-term prospects, without becoming a center of political unrest and ferment. This can affect our interests adversely. Also such ferment does not respect national borders. On the other hand an agriculturally-productive Dominican Republic could, for example, help feed an industrialized Puerto Rico.

- Thus, there is a convergence of Dominican and U.S. interests that the Dominicans develop.

The Issue of Over-Dependency

While the Dominican Republic rates occasional passing references in our history books, the United States figures prominently in chapter after chapter of theirs.

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References are frequent to our interventions, our collection of their customs revenues, our military occupations of their country, our prospective purchases and leases of large portions of Samaná Bay and adjacent land. Even outright U.S. annexation of the Dominican Republic failed in 1870 by the single vote of Senate Foreign Relations Chairman, Charles Sumner.

For one hundred years the Dominicans have come to anticipate, even expect, the United States to come to their aid if problems become overwhelming. The memory of 1965 is also sharp and clear and the $267 million in U.S. bilateral aid commitment over the following four years was but one more indication to them of their closeness and dependence on the United States for their survival and well-being.

Thus, the bilateral aid policies of 1969 to 1973 were an atypical rather than typical response to the over-dependency issue. The sharp reduction of U.S. bilateral economic aid and the gradual reductions contemplated for P.L. 480, Title I and Title II programs were part of an overall policy to get them to rely much more on themselves and on their own resources. This new bilateral aid policy direction was instituted in a period when the Dominican economy was showing vigor and its own foreign exchange earnings were pretty much keeping pace with the expanding economy and the fairly sizeable and increasing development effort. Consequently we now find ourselves at the end of 1973 with the Dominicans showing more self-confidence, and concurrently, with our being relatively unencumbered by extensive past bilateral aid commitments and obligations.

While the short-term economic prospects are favorable, the intermediate term prospects, e.g. after 1973-1974, are not all that encouraging and the longer term prospects, because of the demands of an expanding population, are likely to be extremely difficult. Unless sound development measures are accelerated and development policies instituted which, for example, will keep people and agricultural production in some sort of reasonable balance, the economic viability now being achieved will be transitory and of no lasting benefit.

The reality of the Dominican dilemma is beginning to be understood at the highest levels in the country and a shift in the pattern of public sector investment toward more immediately beneficial and productive activities is beginning to occur. At this time even modest inputs of bilateral aid can have more than their accustomed welcome and impact if directed toward critical problem areas.

Over-dependency has an ugly way of reasserting and imposing itself whenever a viable independence has not been achieved. Whether the United States would again step forward to avoid threatened economic and social disaster in the Dominican Republic by providing, in the Dominican context, "massive" aid is a moot question. The current question, however, is are there certain reasonable bilateral aid measures which can usefully be taken now to help prepare Dominicans better to face their critical problems and policy issues? The President and other Dominicans at the highest levels think so and have asked for our help.

Even if the Dominicans follow sound development policies and programs, and obtain a measure of external development aid, there is no assurance that their economy will be viable in the Year 2000. But, if they don't there is virtual certainty their economic viability will be severely compromised.

Criterion for Allocation of U.S. Resources

For many reasons U.S. bilateral aid to the Dominican Republic will likely be relatively small for the foreseeable future. With respect to external resource flows and internal resource allocations for development, it will likely be marginal. Therefore, to justify aid at the margin it must be in areas, e.g. developmental sectoral planning, where relatively small inputs can result in comparatively major benefits.

Future U.S. bilateral aid decisions should be based on increasingly better analytical foundations. In this respect even the reconnaissance assessments undertaken in connection with the preparation of this paper, commend certain areas to our further attention. We have identified some, but not all, of the major policy options open to the Government of the Dominican Republic in the agricultural, health and education fields. If the necessary Dominican development policy decisions appear to be well-conceived and forthcoming, there are areas where bilateral economic aid inputs can provide the margin of difference to assure more beneficial significant results.

The Focus

We have covered the subject areas requested, and some more intensively than others. Basically our focus is on people and reflects closely the new legislative base as it seems to us to be evolving. We have sought to examine some of those policies, policy choices and actions which affect people and their quality of life.

In preparing this DAP, the most intensive Mission effort has been spent on the agricultural sector since this country is primarily agricultural. Most people derive their livelihood from agriculture. Most traditional and non-traditional exports are agricultural in origin. Most industry is agro-industry. It would therefore be difficult to understand any aspect of Dominican economic life without having some comprehension of Dominican agriculture.

Consistent with our focus on people, much attention in agriculture was focused on food production, examining some, but only some, of its employment creation and income redistribution effects. For example, in the Dominican Republic new industrial investment has tended to be capital intensive. Investment in agriculture, however, produces nearly twice the number of jobs.

The consensus of opinion among all observers is that increasing agricultural production is essential to development in this country and better planning is a key to increasing agricultural production. Thus, we have given particular attention to the question of upgrading the technical analytical capacities of the Agriculture Secretariat's planning staff where there already has been a request for assistance. Better analytical preparation by Dominicans is essential -- as they themselves acknowledge -- if agricultural developmental policy decisions, by Dominicans, are to be the most beneficial ones for the country. The same is true in other sectors.

The Dominican public health effort is poorly-oriented and executed. It depends on costly physican rather than more simplified health services. It emphasizes curative rather than preventive medicine. While top decision makers have repeatedly promulgated good policies for changing the situation, the governmental administrative structure has been too weak to carry them out.

The public and private capacity for making family planning services available is severely limited. Practically all of the usual constraints prevail. Family planning services could be expanded rapidly and several fold if there were enough doctors, nurses, facilities, equipment, knowledge, budget and motivation. Rapid expansion of family planning services would meet the existing needs of that small group of women who are highly motivated (older women of higher parity), but in the long run the critical problem will be that of creating demand among the younger women for family planning services in the highly fertile age groups. The expected support of the

United Nations Fund for Population Activities can be important in accelerating progress in this area. Nevertheless, we must consider whether the critical factors are all being adequately met.

There is a growing body of evidence that suggests that reduction in infant and preschool child mortality (when the latter is high) favors declining fertility. Couples want fewer children when they feel assured that those children they have will reach adulthood. The strikingly high death rates among preschool children are largely a reflection of poor nutritional status. The nutritional state of Dominicans is known to be low. Furthermore, such things as the essential tripling of agricultural production by the Year 2000 will be difficult if the mass of the people have insufficient energy to improve their performance appreciably, and later, the mental powers to comprehend and use new technologies as they may become available. Thus, nutritional inadequacies would seem to constitute a major constraint on development in the Dominican Republic. This conclusion must be subjected to further examination to see whether generally accepted concepts about nutrition have specific application in this country. The 1969 Nutritional Survey of the Dominican Republic provides a good starting point to consider this question.

Improved general education is among the few most important preconditions for development in the Dominican Republic but the short-term prospects for major improvement seem doubtful. We will want to defer any appreciable bilateral aid activity for now, but will want to look at the situation again in a year or two.

As indicated earlier, our analytical focus in these DAP assessments has been on important aspects affecting large numbers of Dominicans; more and better food for better health and productivity; consideration of the complex of measures which may help to reduce the present high rate of population increase. In a sense our proposed concentration on agriculture and health constitutes an interrelated, multisectoral approach on basic problems affecting quality of life.

The Title II program has met too many basic food needs of too many people too long. The existing dependency of about 17% of the population and 38% of the enrolled primary school children for supplementary food each day clearly illustrates the unsatisfactory Dominican over-dependence on the United States in daily life. We have given some consideration to how the burden can be shifted to the Dominicans without loss of the nutritional benefit involved. Time will be required to make much headway on this problem.

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Additional Pertinent Considerations

The Dominican environment may be somewhat unique given the factors cited earlier.

Some may say that a lack of an "approved" national development plan constitutes an inhibition, but one should not conclude that there is no pattern of development and investment. There is. Many top Dominican officials are giving focus and direction to the pattern of development. While the absence of an "approved" plan may inhibit easy discussion, its absence does not prevent planning or execution or cooperative aid activity.

Absolute decision-making power in a popularly-elected executive is unusual in our experience, but it conforms closely to the cultural pattern which has long predominated in the Dominican Republic.

The past presidential decisions to invest and meet operational costs of government, largely by using current savings, made sense if he had doubts about relative priorities or the absorptive capacity of governmental institutions to spend wisely. Also the President, as a historian, is keenly aware that much of his country's past problems occurred because of poor fiscal management and contraction of excessive foreign debt. There are now indications that a stepped-up external developmental borrowing is contemplated and that investment more productive in shorter term pay out will be favored over some of the past investments. Indeed, access to increased external developmental lending on easy terms will be necessary to fuel the development effort necessary to avoid a deteriorating economic situation over the longer term. Although the up-coming elections will place great premium on political advantage in the short-term, this factor can be expected to be transitory.

The Year 2000 dramatizes the issues and is compelling. There are persuasive reasons to believe the potential impact of the population pressure is keenly felt and that major policy choices are under serious consideration.

The Development Strategy

My conclusion is not to dwell on the realities of the environment longer than may be necessary to understand them. I think they can be given undue weight. We must accept the framework of the realities as the environment in which to consider the developmental opportunities. And, they do exist.

[redacted]

I conclude that some bilateral aid in agriculture can be undertaken now and would meet the criterion cited above and be effective and complementary to the work of the IDB and others. I also conclude that while we know too little about health -- family planning and nutrition possibilities in the Dominican situation -- further examination would likely result in the conclusion that a near-term future effort would be worthwhile. Certainly the population projections convince us that this area cannot be ignored.

Consistent with balance of payments needs, a modest P.L. 480, Title I, level should be reinstituted when possible, but scheduled for progressive reduction. Title II programs should be shifted to Dominican financing and control as rapidly as it may be possible to do so efficiently, with their not only backfilling behind us but also expanding coverage, particularly maternal/child care.

Using an interdisciplinary approach we can constructively bring our energies and capacities to bear on the policy choices in these two major areas of agriculture and health; on helping Dominicans improve the analytical bases for decision-making in these areas; on the transfer of technology, particularly on stepped-up development training programs for Dominicans.

J. [illegible] Robinson, Director

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PART B. ECONOMIC AND SOCIAL DEVELOPMENT PERFORMANCE AND PROSPECTS

Recent Economic Performance

The period 1960-68 was one of stagnation and deterioration of the Dominican economy resulting from the severe economic and social dislocations and atrophy of production capacity caused by civil war, foreign military intervention and an extended drought in 1967-68. Per capita economic growth averaged less than one percent yearly during the 1960-68 period.

The legacy of the thirty-year Trujillo dictatorship, which ended in 1961, also took its toll during the 1960's. Under Trujillo, travel and education abroad, except for the favored few, were actively discouraged. Particularly during the later years of the dictatorship, capital flight became extensive, and the ambitious plans for the expansion of foreign private investment and tourism failed to materialize.(1) Public services deteriorated and the economy progressively became a vehicle for the personal gain of the members of the Trujillo family.

The country was faced, at the end of the Civil War in 1965, with a depressed economy dependent on a few agricultural crops, a paucity of trained and effective civil servants and a distinct lack of confidence about the country's prospects -- on the part of Dominicans as well as foreigners.

The Government of President Joaquin Balaguer, elected in 1966 and re-elected in 1970, has brought a return to political stability which has been the major underpinning of the economic upswing that began to show itself in 1969. This upswing essentially has been fueled by four factors: production increases in traditional agricultural products for export, principally sugar: substantial private foreign and domestic investment; sharply rising public sector capital expenditures; and large external resource transfers mainly in the 1965 to 1969 period, predominantly U.S. bilateral assistance.

With regard to sugar, the country, since 1969, has reaped the benefits of good weather, continued guarantee of access to

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(1) See Crasweller, Robert D., Trujillo, The Life and Times of a Caribbean Dictator (1966), particularly Chapter 19.

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the preferential U.S. sugar market and a rapidly rising world price for sugar. During 1970-72, world sugar prices close to doubled to 7.3 cents per pound (the average world sugar price in 1973, Jan-Sept, was 9.3 cents per pound) and the U.S. import quota granted to the Dominican Republic was increased overall by 40,000 short tons. The volume of sugar exports has increased 20% annually the past two years and foreign exchange earnings from sugar and sugar by-products rose from $115.9 million in 1970 to $145.6 million in 1971 and $176.4 million in 1972.

Second, economic growth has been spurred by foreign and domestic investment, mainly by a $200 million foreign investment in a large ferro-nickel facility and an externally financed oil refinery. Also, domestic private investment began to pick up in 1969. Private capital formation was stimulated by the establishment of manufacturing firms and the expansion of old enterprises qualifying under incentive legislation, principally liberal tariff exonerations on capital and raw material imports, and premised on an industrialization policy of import substitution.

Third, the Balaguer Government has placed primary reliance on public sector capital expenditures, financed in significant amounts from increased public savings, in order to expand infrastructure, such as power, irrigation and roads, and generate economic growth. The Government has also seen fit to direct substantial expenditures to public works of little immediate development returns but with longer run benefit for tourism and to arrest further deterioration and squatter penetration of high value urban lands. These works with their high labor content, have been mainly for the purpose, however, of ameliorating over the short term urban unemployment and absorbing part of the flow of migrants from rural areas.

Last, U.S. bilateral assistance stimulated and facilitated the growth of the economy, principally through the resources committed in the 1965-69 period, amounting to $267 million, prior to the upswing, and less so in the later period from 1969 to the present when our resource commitment diminished to $78.6 million. These large aid flows not only helped to shore-up in a major way a precarious balance of payments situation from 1964-70, but also to expand significantly and upgrade the skilled manpower resources of the country through technical assistance and participant grants and especially to enlarge and complement the capital development investments of the Government. For example, AID's share of total Central Government investment averaged 28% for

the 1966-69 period with a high of 50% in 1966 and a low of 14% in 1969. In the three years, 1970-72, AID's share diminished to 8.6%. Many useful projects with a high development benefit such as the Tavera Dam, the development of the Instituto Superior de Agricultura, agricultural credit, to mention but a few, could not have been carried out without U.S. support. There is little doubt that U.S. assistance was a major factor in preparing the ground for the economic growth of the last four years.

These four factors combine to explain an average annual real GDP growth of 10.7% for the country during the 1969-72 period. Indications are that this rapid growth is continuing in 1973, although rising inflation will diminish the rate of real growth.

Public and Private Investment

Total investment during the 1969-72 period grew at an average annual rate of 22.6% in current prices. Public sector investment and explicit Government policies played an increasing role in complementing and stimulating private investment. This expanded rather sluggishly before the inception of the ferro-nickel and oil refinery projects in 1970. In spite of these two large private projects, the average growth rate of public fixed investment in 1969-72 (29.8%) outstripped the average rate of increase in private fixed investment (18.2%). Central Government capital expenditures increased from RD$69.5 million in 1969 to RD$138 million in 1973. Construction of the Tavera and Valdesia dams, investments by the Dominican Electric Corporation, expansion of irrigation facilities as well as transport and urban housing are major items of this public sector fixed investment.

This ambitious program of public expenditures has been financed increasingly out of public savings, concomitant with a reduction of foreign assistance and a rapid rise in public revenue. Tax revenues have increased practically at the same rate as GNP over the past 4 years. There is, however, ample room for the improvement of tax collections and broadening of the tax base. Since 1967, the Government has successfully carried out a concerted effort to hold down Government current expenditures so as to augment public savings. This effort, however laudable as a reflection of effective fiscal management, has not been without its relative costs. The recent IBRD Report on the Dominican Economy (Report No. 62a-DO, April 1973) has rightly pointed out that "this strong savings effort has been made at some cost in terms of delaying improvements in public administration and public

investment planning. The slow growth of current expenditures has restricted the quality and impact of public education, agricultural services, tourist promotion, and maintenance of fixed capital, especially roads. If the country is to utilize effectively its increasing fixed investment, these public services must be rapidly improved." It particularly seems inappropriate that public expenditures to the key production sector of agriculture as a percent of the total GODR budget actually declined between 1968 and 1971, from 11% to 10%. It appears clear that President Balaguer will have to loosen the purse strings on current Government expenditures in the coming years and that a resulting declining volume of public investment will have to be selectively supplemented and expanded by increased flows of external assistance if an effective attack is to be made on the key development problems facing the country.

In the private sector, investment policies have favored capital intensive industrialization. This has mainly been the result of the industrial incentives legislation of 1968 through which the Government sought to develop by means of protectionist, import substitution policies, a new group of Dominican industrialists. The IBRD report cited above points out in this regard that "since (1967) considerable industrial investment has been attracted by heavy protection and considerable tariff incentives for capital and raw material imports. The result has been the creation of a high-priced industrial sector. Profits in industry are high, while the employment creation effect is minimal; the capital-labor ratio of new firms which were granted incentives by the Government during 1967-71 approximates that of the United States. There has been a noticeable increase in the proportion of capital and raw material imports to total imports during the period, even when imports for the ferro-nickel and refinery products are excluded. The combined tariff incentives and protection has thus resulted in a closer linking of imports to a type of industrial growth that will provide little increase in employment, exports, or economic growth. Equally important, it has been difficult to channel private investment into agriculture and other employment-creating activities because of the higher financial returns received in industry."(2) It should be pointed out, however, that in recent months the Government has

(2) For further discussion of the capital intensity of Dominican industrialization see Promociones Industriales, C.A., The Industrialization Policy in the Dominican Republic (May 1972), particularly pp. 38-39 and Table 15 in the Annex.

been applying a less liberal interpretation of the Industrial Incentives Law, particularly in light of the revenues being lost through the tariff exoneration provisions.

There is little doubt that present import substitution policies should be changed and that new policies are needed for the purpose of stimulating more private investment in the agricultural sector, particularly into small-scale capital farm improvements and labor-intensive agro-industry enterprises of various kinds. The Government should encourage investment in agro-industry in new areas which will absorb excess, under-employed labor on the land as well as diffuse the present heavy urban concentration of industry.

Fiscal Management

During the early and particularly middle 1960's, public finances were dependent on budgetary support loans from AID. Since 1967, however, the Government has successfully reduced its prior high dependence on foreign assistance while at the same time tripling public sector investment. This is an outstanding achievement by any standard.

The Dominican budgetary system provides a unique method of controlling the growth of current expenditures and centralizing capital outlays within the Presidency. Budget estimates are based on the revenue expectation for the preceding year. In effect, actual revenues are substantially underestimated. The current expenditures of the different Secretariats are based on these underestimated revenues. Any revenues above the budgeted level are distributed on an ad hoc basis by the Office of the President, i.e., by the President, for various public investment projects. As a result, capital expenditure bears little resemblance to the original capital budget, and the Presidency assumes a large role in the execution of government investment. In 1971, for example, 90% of government investment was executed by the Presidency. Given this type of fiscal management, the President's role is obviously central to the decision-making process involved in the planning and programming of capital outlays, irrespective of their source.

As a result of the Government's rigorous fiscal effort, the proportion of capital expenditures financed by public savings increased from two-fifths in 1967 to about 70% in 1971-72. At the same time, gross external resources in support of these investments declined from 46% to 22%; the remainder being financed from

non-budgetary revenues and net internal borrowing. The declining proportion of official lending was due principally to the drop in U.S. budget support, but in part to the difficulties the public sector encountered in preparing projects suitable for review by international lending agencies. The Government also showed itself unwilling to hold up what it considered high priority projects while it waited for international agencies to complete their lengthy project consultations and reviews. This tendency now appears to be lessening in light of an apparent willingness by the President to expand development borrowing and the growing ability of CODR officials to deal effectively with international lending institutions.

Development Constraints

There are two primary economic constraints on the development of the Dominican Republic that require attention: inflation and foreign exchange availability. With regard to the former, the rapid expansion of credit and money in the domestic economy, plus inflationary pressures from abroad reflected in the rising costs of imports, have recently triggered steady increases in the cost of living. There are growing fears that the accelerating rate of inflation will intensify further non-productive distortions of resource allocations, and pose problems for the fragile political stability only so recently won.

However, in attempting to determine what is happening to the price level and to obtain a meaningful focus on what the Government should do, that is, to control or moderate inflation, we are hampered by the lack of adequate statistics. There is only one systematically collected body of price data in the country -- the Santo Domingo cost of living index. This index obviously is not the same as a cost of living index for the Dominican Republic. Also, the Santo Domingo index has a number of procedural weaknesses.(3) This is not to say that the Santo Domingo index

(3) Inter alia, the index combines both price relatives (to the base period) and expenditure relatives. Therefore, the "cost of living index has the disconcerting property of varying with the level of tax collections, family contributions and trips abroad." (Slighton, Still Another Look at the Dominican Economy, Feb. 1973). Further, rents, one of the most important indicators of the cost of living, are largely imputed since most dwelling units are owner occupied. Thus, "an increase in imputed rents implies both an increase in family income as well as an increase in the cost of living, and the significance of the index is blurred somewhat." (Slighton).

is without meaning. Particular components of the index are well conceived, such as the food price series, and the figures obtained are apparently quite reliable.

The official index shows that the cost of living in Santo Domingo (12 mos. average) rose 3.8% in 1970, 3.7% in 1971, and 8.6% in 1972. The projected rate of increase in 1973 is 15%. This has been, at least in part, stimulated by drought-related supply shortages of basic staples and inventory manipulation of foodstuffs by retailers and wholesalers.

Although the longer run seriousness of the present inflation is not clear and the Government's willingness to attack more than its visible symptoms is manifestly in doubt, its principal cause seems clear. The main source of the inflation is not a large budgetary deficit, as is often the case in developing countries, but rather the excessive expansion of credit to the private sector. Bank credit to the private sector has increased from RD$72.1 million in 1966 to RD$275.8 million in 1972. The largest part of this private sector credit has consistently gone to the industrial and trade sectors. For example in 1972, well over half of the total credit (RD$275.8 million) went to borrowers in industry (RD$114 million) and trade (RD$69.3 million). Private sector credit is so easy that prime Dominican borrowers have access to almost all the credit they want at an effective interest rate of 9% while their counterparts in developed countries have to pay effective rates of about 50% higher. In recent weeks, the cost of living has surfaced as a major political-economic issue, particularly in the urban areas of Santo Domingo and Santiago. While President Balaguer has long tolerated the present rate of inflation, even believing that mild inflation was a necessary ingredient and consequence of the development process, it constitutes a severe form of substitute taxation on those least able to afford it.

From the vantage point of economic development, the second most invidious aspect of this easy availability of credit at low rates is that it favors investments of a more capital-intensive rather than labor-intensive nature. Prescriptive measures to contain the present inflation should include tighter credit and higher interest rates to private sector borrowers. This would not only diminish the rate of inflation but would also contribute to a reversal of the present inequitable situation where lower and middle class depositors (who account for almost all the saving deposits) receive unrealistically low deposit rates in order that upper class and foreign borrowers can continue to borrow capital at subsidized rates.

The limited resources available for public and private investment, as well as complementary external assistance transfers, indicate that somewhat more credit should be channelled away from industry and trade toward labor-intensive enterprises where there is a clear comparative advantage, primarily in the agricultural sector. This would both increase food production and expand employment creation in small agro-industries. The Government appears to be moving in this direction. The Governor of the Central Bank pointed out in the spring of this year that "we have considered that the time has come to make a retrospective analysis of our credit policy to the (industrial) sector, to redirect it towards more definite areas in accordance with our present development needs....FIDE (Fondo de Inversiones para el Desarrollo Económico) has taken the initiative in its second stage, of redirecting its industrial policies in order to emphasize and favor labor-intensive investments and those directed to develop the domestic agro-industrial sector." (Speech by Dr. Diógenes Fernández before the American Chamber of Commerce, Santo Domingo. March, 1973.)

To the extent that this redirection of development resources contributes to substantial increases in food production in order to meet mounting urban consumption demand, it would likely be deflationary. To the extent that it increases money supply in rural areas, many of which are economically depressed, there is a possibility of some added price inflation. However, the prospective inflationary impact would be at best marginal if controlled through effective fiscal and monetary management. Further, the President's past views may be right that a moderate level of inflation is tolerable if the tradeoff is the reduction of unemployment and some redistribution of real income.

Foreign exchange availability continues to be a constraint on Dominican economic development, though more so in the period after 1972-73 than now. Whereas the severe balance of payments pressures of the 1964-70 period were lessened when a greatly improved export performance sharply expanded foreign exchange earnings, the medium outlook is rife with uncertainties. It seems reasonably clear that the two-year hiatus of relative balance of payments ease is nearly over, and renewed balance of payments pressures are likely to occur in 1974 or 1975 at the latest.

Even though the prospects for the next two or three years for traditional exports appear good, it will not prove possible

under any foreseeable circumstance for the Dominican Republic to sustain the extraordinary 30 to 40% export increases of the last two years. Export earnings are more likely to return to normal levels of growth since other than ferro-nickel (13.5% of total exports), sugar and sugar by-products constituted 50.7% of total exports in 1972. The estimates for these items in 1973 are 18.9% and 48.6% respectively. Increased fuel costs also limit the incremental growth prospects of ferro-nickel. A positive element in the balance of payments picture is the prospect that the Government could begin to accrue foreign exchange earnings in 1975 from the new, largely foreign-owned Rosario Dominicana gold and silver mining operation. Projections of foreign exchange earnings are soft, but based on the planned production level and reasonable assumptions on future world prices for precious metals, the range of net earnings would be around $20 million a year through 1979.

Another key variable in the Dominican balance of payments picture is constantly mounting import demand. It is important to note in this regard that the improvement in the Dominican Republic's international liquidity position over the last two years resulting from the large increases in foreign exchange availability was relatively small because the rate of growth of demand for foreign exchange for imports was considerably greater than the rate of growth of total output.

It is important also to note that the Government has already this year had to use its foreign exchange to make substantial and unplanned food purchases abroad, principally wheat and rice, at high prices and on non-concessional terms, in part to compensate for the large cutback in the P.L. 480 program as well as to cover a sizeable rice deficit.

Additional measures could be taken to reduce less-essential imports and other foreign exchange outflows and losses. In this regard, the Government will have to face sooner or later the difficult question of how to gain control over or phase out the parallel foreign exchange market which allows an 8 to 14% premium over the official parity granted to U.S. dollars. Given this premium, the parallel market encourages evasion through false declaration of export and import values and removes significant amounts of invisible earnings, i.e. spendable income, from the official monetary system.

It is clear that increased planning of the use of scarce foreign exchange will be required in the years just ahead. Fiscal and monetary precautions will be called for to hold expansion of

aggregate demand to manageable levels and greater reliance should be placed on official assistance flows for high priority development projects.

The recent IBRD Report, cited above, has aptly summed up the prescriptive side of the Dominican balance of payments situation: "The key to attenuating the foreign exchange constraint will be in a more economic use of imports. More selective industrial incentive policies combined with increased tariffs on capital and raw material imports would encourage a more efficient and employment-generating use of these goods. While this may temporarily slow down new investment in manufacturing, it would also increase the relative profitability of agriculture, agro-industry, and other investments that suit the country's resource endowment and comparative advantage. The growth of public investment (and imports linked to it) can be slowed if it is shifted to more directly productive sectors as the Government expects (to do) without sacrificing the growth of employment or output. To reach this goal, an increasing proportion of public capital should be spent on projects financeable by official lending agencies and fiscal support for credit institutions, especially for agriculture."

Population, Employment and Other Social Factors

Due to the country's poverty, the recent public expenditure efforts to improve urban living standards, and the civil disorders of the mid-1960's, there has been considerable internal and external migration. During the past decade, some 43% of the increased urban population is accounted for by migration from rural to urban areas. About 25,000 people are now migrating yearly to urban areas and an additional 16,000 to the United States. The Government of the Dominican Republic has sought to cope with internal migration by providing an expanded short-term job market for unskilled labor through public construction activities. Unfortunately the more urban jobs created, the more people tend to migrate to the cities.

There are at present no reasonably comprehensive or dependable figures on unemployment/underemployment in the Dominican Republic. A 1969 survey of the Santo Domingo area, based on limited samplings, indicated a fairly constant level of 12-15% unemployment of the male work force. No doubt, there is also a large mass of underemployed rural workers. The office of National Statistics estimates total unemployment/underemployment at 33-35% of the adult male work force but does not clearly define "underemployment." This could well be an underestimation. Further, the labor force has become progressively younger. Approximately

50,000 new male adults of 15 years of age enter into the available labor supply annually.

Reliable statistics are lacking not only on employment but on wages and work force composition. The consensus among economic observers is that industrial wages increased between a third to a half in the 1969-72 period. Other evidence indicates that the unskilled urban industrial worker earned about twice that of his counterpart in urban construction or rural agriculture in 1969. The IBRD estimates that average rural incomes are about one third of urban incomes. Maldistribution of income indeed appears to be very sharp in the country. While country-wide data are lacking, the 1969 sample survey for Santo Domingo finds that the richest fifth received over 55% of the city's income.(4)

The effects of the recent economic growth upon income distribution and employment are far from clear given the lack of data on this subject, both as to previous periods and the present. It is evident that unemployment remains high in the urban areas, that the consumption of the visibly affluent has increased -- witness the recent but not untypical boom in residential housing construction -- and that inroads into the large concentrations of rural property in the hands of a few with the concomitant unequal income distribution have to date been marginal at best. Further, rapid urbanization through the migration of unskilled rural labor and capital-intensive industrialization stands to increase the concentration of income.

On the other hand, markedly increased Government expenditures on public works projects and substantial industrial expansion, however narrow its manpower base, have increased absolutely the number of jobs available, particularly in the capital area, and urban consumer demand and expenditures for goods as well as for social services such as education and health have apparently risen somewhat over the last three years among the lower and middle income strata as well as, of course, in the upper.

The population growth rate of the Dominican Republic is probably 3.0% annually. Given the present 4.5 million population of the country, the population will be nearly 10 million by Year 2000. This is a conservative estimate and assumes significant decreases in the population growth rate through the remaining quarter of this century.

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(4) The Rand Economist, Robert Slighton, has further pointed out that the techniques employed in the Santo Domingo survey almost inevitably result in an underestimate of the share of income received by the most favored group.

Last, the Dominican diet for the large percentage of the population is manifestly inadequate in terms of proteins and caloric intake. The food deficit has been estimated at 500 calories per day per person.

The socio-economic development problems outlined above are obviously of serious dimension, inter-related and not amenable to short-run solution. Some of them are given further attention in other sections of the DAP. It is sufficient here to note them. At the same time it should be stressed that any development strategy which does not address itself to lowering the population growth rate will be illusory and that whatever the projected rate of economic growth explicit to the strategy is, it must be expressed in terms of policies and programs calculated to improve the living standards of increasing numbers of Dominicans if it is to be politically and socially viable over the longer term.

GODR Development Priorities

The Government of the Dominican Republic is highly centrist in character, both laterally in terms of executive relations with the other organs of the Central Government and vertically in terms of relations with the lower units of Government. This unipolar organization of power has both a historical basis as well as a recent explanation in terms of the quality of the governmental bureaucracy which President Balaguer has had to contend with after thirty years of Trujillo. In the final analysis, the development priorities of the Government of the Dominican Republic are the development priorities of the President, qualified by the increasing role of the Central Bank and a number of respected officials in other governmental agencies.

Until late in 1971, Balaguer's public investment priorities appear on balance to have been more short-run in objective and with high political content and benefit, i.e. trying to create enough jobs in urban areas through construction projects in order to keep political and social tensions in check. These projects included substantial investments in housing, streets and parks. However, major investments were made in the country's highway grid and in two multimillion dollar hydro-electric projects. These latter investments gave considerable impetus to the country's economic growth. By 1972, with a more stable political environment, a rapidly moving economy and rigorous fiscal management, sharply increased resources were available for investment. While maintaining his housing and urban beautification expenditures, the President directed substantially increased amounts of money into public capital formation such as irrigation and feeder

roads as well as services, such as health. He has also sought to encourage better performance by long-neglected agricultural institutions such as the Secretariat of Agriculture, the Agricultural Bank, and the Agrarian Reform Institute by providing additional budget resources and new leadership. In early 1972, a new set of agrarian reform laws was enacted, although the complicated programs which have ensued have lagged and on the whole have not been effectively administered. In the present year, the Government of the Dominican Republic at least in part in response to the rising cost of living, has directed larger sums of money into food production programs in the agricultural sector.

In brief, the President's approach to development, though not based on rigorous institutional planning or analytically refined priorities, has followed a quite consistent pattern of predominant emphasis on needed public infrastructure development -- not inappropriate for the stage of development of the country. There is also a record of consistent encouragement of foreign and domestic private investment, and increasing indications that the President's intention now is to direct a larger proportion of public resources into the support of productive enterprises in the agricultural sector with a more immediate return as well as improved government services.

However, a slowdown in public sector savings is likely over the next few years in light of necessary increases in the long tightly held current expenditures of the Government. These increases are patently required if public services are to be upgraded and extended -- and even maintained. Thus, a reversal in the previously declining level of net foreign assistance will be necessary in order to supplement the limited capital development resources of the Government. It is quite unlikely that the high GODR investment levels which have characterized the past five years can be maintained through the middle years of this decade.

Last, the markedly improving development climate in a number of GODR institutions is worthy of mention. The level of professional capacity, motivation and willingness to consider development alternatives have progressively improved, for example, among key staff of the Central Bank and the Secretariat of Agriculture. These institutions, as well as the Export Promotion Office (CEDOPEX), the Electric Corporation, the Price Stabilization Institute, the Housing Bank and the Potable Water Institute, have been able to develop reasonably capable staffs, to stay free of excessive political influence and to deal with increasing

effectiveness with international assistance agencies. This is not to say that further professionalization and institutional changes are not needed. There is wide room for improvements and structural reform. In fact, because of the weakness of a number of GODR institutions, some of the stronger ones have assumed duties which are not their direct responsibility. The Central Bank has been especially active in taking on non-Central Bank functions. However, it is becoming increasingly apparent, particularly in agencies such as the Central Bank and the Secretariat of Agriculture, that the situation is ripe for a more constructive and systematic dialogue with external donors on development problems and priorities as well as for a more effective utilization of well-conceived foreign assistance.

External Assistance

From 1966 to 1973 net annual foreign assistance disbursements fell from $50 million to $18 million while Dominican GNP climbed from RD$1.1 billion to about RD$2.5 billion, thus dropping net foreign assistance as a component of GNP from 5% to about 7/10's of 1%. Foreign assistance as a percent of public sector expenditures declined from nearly 16% to about 3.5%. The share of this foreign assistance provided by U.S. bilateral aid (including P.L. 480) declined from close to 100% in 1966 to one third at the present.

The progressive diminution of U.S. assistance, specifically from 1969 to 1973, was in part due to the GODR's negative response to a set of macro-economic policy changes which had been discussed as a basis for consideration of program lending, and to a resulting U.S. reliance on concessional P.L. 480 food imports and continued preferential access of Dominican sugar to the U.S. market as the principal elements of the economic transfer of resources. The P.L. 480 tool has been lost in FY 1974, with the recent large worldwide cutbacks in food availabilities under the program.

Within the past two years, the loan portfolios of the IDB and IBRD/IDA in the Dominican Republic have been undergoing expansion but this expansion at the present reflects commitments more than disbursements. Their present approved active loans to the Dominican Republic are shown in Annex A to this section. The prospects of further expansion appear to be very good given the number of proposed loans now in various stages of consultation and review.

The UNDP and its associated UN agencies have replaced the U.S. as the largest provider of technical assistance. At the

present time the UN has 55 technicians in the Dominican Republic providing advisory assistance principally in the fields of agriculture, education, public administration and health.

The intention of the Government of the Dominican Republic appears to be to pursue more vigorously than in the past an expanded role for multilateral assistance in the development programs of the country. Both the recent IBRD and OAS/CIAP Reports on the Dominican economy emphasize that the present level of growth -- or a diminished but certainly respectable rate of around 7% -- is not likely to be sustained without an expansion of official aid flows and that this expansion should be better directed to the quality and equity of the economic development being achieved.(5) There is increasing awareness of these same points by a number of influential Dominicans in both the public and private sectors. For example, the Governor of the Central Bank in the speech cited above states, after describing the prospective loan activities of IBRD and IDB in 1973 and 1974, that "the idea is to have prepared and ready sufficient development projects, as required to maintain the high rate of economic growth, with the purpose of having a three to four year program of continuous investments into the basic priority sectors for the planned development of the domestic economy."

The capital and technical assistance of the multilateral agencies in the Dominican Republic is markedly project oriented. Technical assistance appears to be of good quality but on balance is still overly fragmented in too many small projects in too many areas, notwithstanding the new UNDP country programming prescriptions. The project lending of IDB and IBRD has tended to concentrate on high-cost infrastructure, although there are some notable exceptions, e.g., agricultural credit.

This discrete project approach of the multilateral agencies in the Dominican Republic makes it difficult for them to facilitate or enhance institutional reforms or influence broader sectoral development policies. Similarly, a sector approach to assistance based on a collaborative analytical assessment of the development problems of the sector, their interrelations, and an arraying of the investment priorities, essentially is removed from the purview of their activities in the country. While it may be desirable to

(5) See for example the most recent OAS/CIAP Report on the Dominican Economy, Domestic Efforts and the Needs for External Financing for the Development of the Dominican Republic, August 1972, particularly Chapter V.

move them in the sectoral direction over the longer term, such a general approach, even if proven feasible, could have no early benefit for the Dominican Republic. Consequently, a critical need is not now being met.

[redacted]

Annex A

Active Loans of IBRD and IDB to the Dominican Republic

Loan	Year	Amount (in Millions)
IBRD/IDA		
Secondary Education	1970	$ 4.0
Cattle Credit	1971	$ 5.0
Yaque Del Norte Irrigation	1973	$13.0
IDB		
Water and Sewage Development	1967	$ 3.0
Tavera Dam	1968	$22.9
FIDE	1969	$ 7.0
Water and Sewage Development	1970	$ 4.1
University (UGMM) Secondary Education	1971	$ 3.4
Rural Electrification	1972	$ 7.4
Pre-Investment Fund	1972	$ 1.5
PIDAGRO	1973	$24.8
Fisheries	1973	$ 1.6
Santo Domingo Water	1973	$18.6

Proposed Loans*

IBRD/IDA	
Road Maintenance	$ 5.0
Tourism (North Coast)	$17.0
IDB	
Education Credit Fund	$ 1.6
Yaque Del Norte Irrigation	$20.0
Tourism (Boca Chica)	$10.0
Bao/Tavera	$18.0
Telecommunications	$ 5.0

*Loan figures are best estimates at present time.

[redacted]

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ANNEX I

ANNEX II

Introduction and Summary

The Dominican Republic has basically an agricultural economy and is heavily dependent upon agricultural exports to earn foreign exchange. Seventy-five percent of exports are agricultural in origin. Agriculture employs about 60% of the labor force and contributes 22% of the gross domestic product. The country's location with respect to overseas markets and its favorable climate and rich soils should continue to assure agriculture a leading role in the development of the economy.

The country has a total of 12,160,000 acres of land, approximately half of which is suitable for crops and livestock. With a present population of about 4.5 million people the land/man ratio is very low, less than half an acre crop land equivalent* per person. The level of productivity in agriculture is also extremely low, and, even though all the land suitable for agriculture is now in agricultural use at one level of efficiency or another, the country is not meeting its basic domestic food needs from commodities it produces for its own consumption.

It is a commonly-accepted estimate that only about one third of the potential productive capacity of Dominican agriculture is being tapped. Under the most optimistic assumptions population growth will be nearly ten million by the Year 2000. Nutritionists estimate the present food deficit at 500 calories per day per person in the Dominican Republic. If these estimates are reasonably correct, simple arithmetic makes the implications very clear. Even if agricultural production is tripled within the next 27 years, the Dominican Republic will barely be able to meet the minimum food requirements for all its people and maintain exports proportional to the present level. This is even more serious when one contemplates the financial and technical resources that will be required and the actions that will have to be taken in order to meet this minimum need.

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* Crop land plus pasture land converted to crop land at 15 acres of pasture equal 1 acre of crop land.

The base from which this formidable task must be accomplished is neither very broad nor very solid. Responsibility for agricultural development at the present time, although presumably that of the Secretariat of Agriculture, is scattered among various decentralized, loosely coordinated agencies. Agricultural policy is presently determined at the highest levels of Government, under a variety of pressures from groups with different economic or social interests. In view of the quality and quantity of data and information available concerning the sector, it is fair to say that policy decisions are almost always made on the basis of insufficient knowledge. That is not to say, however, that they are always incorrect.

The priorities for agriculture have changed little in recent years. These are (1) to give continued emphasis to the traditional export crops upon which export earnings are so heavily dependent; (2) to meet domestic food needs through technical and financial assistance to the more dependable and efficient producers; and (3) to maintain stability in the sector through widely publicized, but often inadequate, responses to economic and social pressures. At the same time considerable priority has been given to training and other activities necessary to develop the institutional capability and to broaden the base from which a meaningful agricultural sector program could be launched, but this capability is still inadequate to do the job.

It is extremely difficult, due to the complexity of the sector, to determine actual resource allocations to agriculture. Allocations to areas of critical importance such as staff training and the development of training facilities have been reasonably high, though insufficient to meet the growing need. Total public sector expenditures through the budget in agriculture have been increasing significantly (from RD$26.6 million in 1968 to RD$40.4 million in 1972) but this has really constituted a declining percentage of the total Dominican budget (from 10.8% - 1968 to 9.6% - 1972) during that period. Although there have been some significant non-budgetary allocations to the sector such as a RD$25.0 million bond issue to increase agricultural credit, the total allocation to agriculture is neither proportional to the present importance of the sector nor to the urgency of increasing food production in line with increasing demand.

Total resources available to agricultural development -- land, technical, financial -- are limited in proportion to the size of the job to be done. Thus, careful allocation of resources is of greatest importance. Considering the scarcity of accurate and meaningful knowledge and data, the past absence of a sector approach to planning and the pronounced decentralization of responsibilities and programs, there has been no single focus or mechanism guiding the allocation of resources within the sector. Consequently, most programs and projects have, to date, been a reflection of pressures of the moment and the priority interests of international entities offering technical and financial support.

A very preliminary assessment of the agricultural sector and the policies, priorities and programs affecting its development indicates the following:

- There is an urgent need for a single focal point within the sector for planning, resource allocation and coordination since the sector will be unlikely to meet the demands upon it in the absence of focus and direction.

- In a real sense sector planning is not presently being done although it is now being begun under the leadership of the Secretary of Agriculture.

- Additional and better information and data are essential to sound sector planning and resource allocation.

- There is presently a possibility for changing policies and priorities which would accelerate food production, employment generation and income redistribution (and which would be more clearly identified by better information and data).

A few key individuals in agriculture (most notably the Secretary of Agriculture and some of his principal staff) are acutely aware of the need to rapidly increase food production, rural employment and income for low income families. The problems are much more apparent than the solutions, and this is further complicated by the need for institutional changes (at least operational) before real solutions are likely to be found.

Steps already taken by the Secretariat constitute a rational approach toward sound policy, planning and coordination.

A close look at the present projects and programs in agriculture, including the IDB financed PIDAGRO (Integrated Plan for Agricultural Development) project, reveals a conglomerate collection of efforts that, combined, do not really constitute a sector program. Several key areas are also left out altogether, some of which are important to overall success in the sector. A principal weakness, however, lies in lack of experience and capability in planning, coordination and evaluation, which is indispensable to efficient utilization of limited resources.

The movement toward rationalization of the policy and planning mechanism in the sector is centered in the Planning Office of the Secretariat of State for Agriculture which is beginning to undertake a comprehensive sectoral assessment and to attempt to coordinate institutional planning functions within the present institutional framework. This assessment has varying degrees of support in most of the other agriculture agencies, and also has particularly strong and effective support by the Central Bank. This effort merits support by the USAID with the expectation that substantial policy changes will result from systematic analysis. Among these changes will be: (1) a definite commitment to meet domestic food consumption and agricultural export demands based on more accurately-quantified nutritional and trade requirements; (2) policy changes which support appreciably increased agricultural credit requirements and which will help create incentives for expanded utilization of private credit resources in agriculture; and (3) identification of human resource requirements, particularly in agricultural technicians and skilled labor.

Continuing analysis will probably reveal (1) a need for greater private participation in agricultural services such as production and marketing of improved seed and plant material; (2) a need for adjustments to permit more efficient use of available Dominican institutional resources; and (3) the need to establish effective policies on land ownership and use.

Beyond assistance in sectoral analysis and planning the USAID Mission is prepared to consider, within a revised policy framework, financial support in key areas where domestic

resources are insufficient and other donors have not provided assistance. These areas which have been selected through the analytical process so far include (1) small farm credit to as many as 37,500 additional units through various credit institutions; (2) marketing infrastructure credit to upgrade quality, extend periods of commodity availability, provide credit to small producers, increase farm employment and increase non-farm employment in marketing channels; (3) guarantee arrangements which might be needed to promote reduction in reserve requirements to facilitate expanded participation of private credit institutions in the agricultural sector or promote capital formation in a farm mortgage credit institution; (4) technical assistance to the Government of the Dominican Republic in establishment of a system for production and distribution (marketing) of improved seed and plant material; (5) foundation capital for a system of vocational education which should be developed to impart basic skills to at least 20,000 persons annually; and (6) a program to upgrade Dominican agricultural education at the university level.

I. DESCRIPTION OF THE AGRICULTURAL SECTOR

A. Resource Base

1. Land - The Dominican Republic's 19,000 square miles of land were meticulously studied and classified in the "Study on the Development and Planning of Natural Resources" of the OAS, published in 1969. This exceptionally detailed and well documented source material indicates that, with the exception of the arid regions of the southwest, all land of currently acceptable productive capacity is presently being used for agriculture or livestock. Furthermore, much mountainous and steeply rolling land is intensively cultivated because of population pressure on scarce land resources, creating a threat of accelerated environmental deterioration. However, less than optimum land use patterns are perpetuated by the lack of coherent land policies and the fact that there is no tax on land, save an inheritance tax. The ratio of .18 Ha. of cultivated (not necessarily tillable) land per person estimated for 1966 was, at the time, one of the lowest in the world and certainly has worsened. But, farm land has not generally been used properly despite its scarcity and the need to optimize production. Of the country's total of 12,160,000 acres of land, approximately one-half is classified as suitable for crops and livestock. According to informally processed data from a reliable June 1973 survey of major crops and livestock, nearly 7.0 million acres, (well over half) of the total is being used for either crops or livestock. Of those 7.0 million acres, 4.16 million were in pastures, the remainder (2.84 million) being dedicated to cultivated crops. The cultivated area includes 606,000 acres planted to sugar and 921,000 dedicated to coffee and cacao, leaving roughly 1,313,000 acres for non-export food crop production. There are no large areas of unused land in the country, hence any real production increases must come from increased productivity.

2. Water - Irrigation programs have affected somewhat more than 270,000 acres to date and are being extended into new zones of the arid southwest and the Cibao valley with expectation of bringing 160,000 additional acres into production by 1980. As with land, there is no rational water-use policy, and, tariffs on agricultural water are not efficiently applied. Upstream land is often heavily over-irrigated. Downstream systems are often under-supplied because of this unnecessarily heavy use. Irrigation systems tend to deteriorate rapidly

because of poor user maintenance and because tariffs are not sufficient to support government services in this area. Almost half, (131,000 acres) of the extant irrigation grids covered rice lands in June 1973. Corn and beans were planted on an additional 17,000 acres of irrigated land. Data on allocations of the remainder of irrigation resources are not available at present but the Dominican Electricity Corporation (CDE) in its feasibility study for the Tavera-Bao hydroelectric project indicated that the majority is used for minor fruits and vegetables, basic to the Dominican diet, and little is allocated to sugar.

Future irrigation works are clearly aimed at food production, not industrial export crops. The Tavera-Bao complex is intended to irrigate 48,000 additional acres of the Cibao valley, an area of small farms regarded as the country's breadbasket. Irrigation grids now being pushed into the southwest have similar potential beneficiaries.

Assuming a farm size of 10 acres, 16,000 farm units could benefit from planned irrigation works. The fly in the ointment is the potentially short life of these hydraulic resource projects because of poor watershed management. Some informed observers believe Tavera Dam's useful life could be less than 20 years because of erosion and consequent silting. FAO is aware of the possible problem and has developed a watershed management plan, but little progress has made in putting the recommendations into effect.

3. Labor - There are many estimates of the rural labor supply, all of which indicate substantial unemployment and underemployment in the rural area. The 1969 OAS study, cited above, indicated that nearly one half of the rural labor supply was marginal to requirements at that time and, with annual population increases of 3.0%, little improvement will have occurred in the interim. Productivity of labor in agriculture is therefore among the lowest in Latin America. Problems of physical and mental development of the 60% of the population living in the rural areas remain generally unresolved. Daily caloric intake is estimated to be 500 calories or more below requirements. Basic skills are generally lacking. The rural sector's skilled labor supply is therefore quite limited, both in terms of its applicability to agriculture and in relation to marketable skills outside. The most current and reliable evidence of this limitation appears in the 1973 report "Análisis

de la Economía Cafetera" published by the Secretariat of Agriculture, in March 1973. The data gathered by a comprehensive probability area survey indicated that of the 78,164 coffee producers, 52% were illiterate and only 12.3% had any education beyond the fifth year. Another reliable nationwide survey completed in 1968 showed that 59% of urban-bound migrants had less than four years of education and only 12% had eight or more years. Though these data vary, the magnitude of the problem is clear.

4. Credit is available in severely limited amounts from both governmental and non-governmental sources, formal and informal; the most optimistic estimate possible is that no more than 60,000 of the 470,000 farm units have access to formal credit resources. Traditionally the Agricultural Bank has provided the lion's share of available formal credit but the activities of commercial banks have expanded at a more rapid pace, from 17% of the total loaned for agricultural purposes in 1965 to 31% in 1969 and probably a greater share today, with the impetus from the World Bank Cattle loan, Chase Manhattan Supervised Cattle Credit and USAID's FIDE loan through the Central Bank. The total Agricultural Bank loans have risen nonetheless, and should reach RD$45,000,000 this year; commercial banks can be expected to provide about RD$21,000,000. The IDB loan contemplates disbursement of RD$17,045,000 by 1976 on a schedule which will peak at RD$6,423,600 in 1975 and center on livestock production, oriented-credit and agrarian reform project needs. Even these increased assets will not significantly expand the number of farmers receiving credit.

Commercial bank credit flows to a small group of selected farmers, most of whom have substantial non-agricultural assets or income and all of whom are able to offer substantial loan security. This group could number as high as 1,500, but 1,000 would probably be closer. The Agricultural Bank claims a cumulative total of 112,000 customers but typically closes only about 32,000 loans a year. Since some customers obtain more than one loan each year, a safe estimate would be that the Agricultural Bank services about 27,000 customers annually.

In 1972 the Agricultural Bank extended RD$31,465,000 in credit, about two-thirds of which went for short-term food crop production. The remainder was disbursed for machinery, equipment and small scale improvements such as tobacco drying sheds, importation of inputs, livestock and livestock feeds, and a wide variety of other purposes. The Bank's average loan size was

RD$1,015 in 1972, about par for recent years. There is no minimum loan size. The upper limit without consultation with the Executive authority is RD$250,000. In 1972 there were 2,065 Agricultural Bank loans above RD$5,000 which collectively accounted for RD$12,137,000 of the year's total. By contrast the 24,275 loans below RD$1,000 accounted for only RD$9,491,000. Long-term capital formation credit is extremely limited. Only 1,082 loans totaling RD$4,728,000 were extended for periods longer than 36 months. This dearth of investment credit is prevalent in other lending institutions as well, although the deficit has not been quantified.

A major weakness of public institutional credit is that it tends to respond to hastily constructed near-term production goals rather than economic demand. Between 1965 and 1970 for example, over half of all institutional credit went into rice production, to eventually meet a goal of self-sufficiency in that crop. The cost of this achievement was never weighed against other possible opportunities. It now seems probable that major blocks of credit by the Agricultural Bank will flow to projects of the Agrarian Reform Institute (IAD) where financial loss is a near certainty since the Institute's record in administration of credit blocks is extremely poor. Up to 75% delinquency has been noted in certain portfolios largely because IAD finds collection of loans politically and administratively awkward.

There is little data on the amount of informal credit (financing from commercial enterprises, middlemen, processors and the like) available to Dominican farmers but it is presumed to be substantial, since an estimated RD$350,000,000 value is placed on 1973 agricultural production and formal credit sources provide only RD$66,000,000. Even substantial amounts of high cost informal credit cannot be assumed to have met the effective demand of the conservatively estimated 242,000 rural units which lack formal credit. It therefore appears that the dearth of credit has placed real constraints on agricultural production. The Government recognized this in its RD$25.0 million bond issue for the Agricultural Bank. The Bank itself retained Arthur D. Little, Inc. to undertake a comprehensive study of its operations to help it increase its capacity to service the sector. That report is quite critical of the Bank's operations (see Section B, 1, b. below).

Since institutional credit now serves the most commercially viable farm units through commercial banks and the

regular Agricultural Bank portfolio, the IAD, the Cooperative Credit and Development Institute (IDECOOP), and the Secretariat of State for Agriculture with Agricultural Bank cooperation, are concentrating on subsistence level units. Thus the scarcity of institutional credit appears to weigh most heavily on the middle-sized units (up to 50 acres) with potential, but untapped, commercial productive capacity. This potential must be stimulated if Dominican agriculture is to continue its advance. The most effective stimuli are, of course, economic incentives, i.e., profitable markets, credit and technical assistance.

5. Technology

a. Research and Technical Services - Dominican agriculture boasts a small group of capable technicians who carry out problem-oriented research in country. The leadership of this group has been USAID-sponsored, university-level participants, backed by a small group of foreign technicians. Rice research is conducted primarily at the Secretariat of Agriculture's Juma Research Station with Taiwanese assistance in plant breeding and varietal selection to produce varieties adapted to the Dominican Republic. Juma rice varieties are in widespread use and demand throughout the country. Vegetable trials and animal feeding trials are conducted at the National Center of Agricultural Research (CNIA) in San Cristóbal, also an arm of the Secretariat. The Superior Agricultural Institute (ISA), the University of Pedro Henríquez Ureña (UNPHU) and the Autonomous University of Santo Domingo (UASD) all conduct specific types of research at the present time. Soil tests are conducted at CNIA and ISA. They have a combined capacity of about 15,000 tests annually. ISA charges RD$5.00. CNIA levies a service fee of RD$.50, patently insufficient to cover expenses. Vaccines against hog cholera, newcastle disease, and brucellosis are made at CNIA and distributed through the seven regional research and extension facilities of the Secretariat as a part of its disease control campaigns. Most farmers are unaware of the availability of these services, but the production is not even sufficient for present requirements.

b. Technical assistance to farmers is given primarily by the Secretariat of Agriculture through its regional extension offices which have over 100 people with some technical background. Small extension staffs exist within IDECOOP and IAD as well, but are generally not coordinated with that of the Secretariat. Extension has been hampered by lack of trained

personnel, low pay and inadequate operating budgets. Under the present Secretary, however, a major effort is underway to upgrade personnel standards and ensure appropriate support. Agriculturists are now being produced by universities and high-schools. Including veterinarians, these will total 320 graduates in 1973 and 1974. From this pool and from returning graduates of foreign universities the Secretariat is obtaining improved professional staff and increasing the number of extensionists relative to other personnel. This process is being encouraged by the Integrated Program for Development of Agriculture and Livestock (PIDAGRO) loan but will require more support if adequate technical assistance is to be available to most farmers. Coordinating extension activities with university participation is another means of spreading technology which should be encouraged.

The magnitude of the deficit in capable extension personnel is elusive, given present information. Certainly the roughly 200 personnel dedicated solely to spreading technical information is inadequate, and given the lack of coordination between service entities, their efforts are not rationed systematically on the whole. As a general rule of thumb, it is assumed that technical assistance to farmers tends to follow credit allocations. The farmers with the knowledge to seek and obtain credit are likely to be able to garner some technical information sources in addition. Institutions in the business of managing farmer groups, notably IAD and IDECOOP, insert elements of technical advice and assistance along with credit. Therefore, the approximately 26,000 land reform farmers probably have some marginal contact with extension workers as do the 8,000 farmer cooperative members associated with IDECOOP. The effectiveness of the extensionists is not known; it is presumed to be low but improving with the introduction of better prepared personnel. Certain production programs which are tangentially associated with credit programs also carry technical assistance to farmer groups. The Secretariat's Coffee and Cacao Production programs are examples of such efforts. This assistance tends to disappear as priorities change however, and the prospect for long-term gains is weakened. If credit reaches 60,000 farmers it may be reasonable to assume that a somewhat larger number has, at some time, been reached by technical assistance, perhaps as many as 100,000, mostly at the bottom and the top of the scale.

c. Seed and Plant Materials - With the possible exception of rice, corn, and cacao, improved plant

materials are generally in short supply in relation to their acceptability. Outside the severely limited facilities of public institutions there are virtually no distribution systems for seed and plant materials. At the direction of the President, the Secretariat has begun to develop its recommendations for a certified rice seed law which could be applied in principle to other commodities as well. In addition, an 80 acre plant bank, designed to provide a basic supply of improved plant material primarily for tree crops, is under construction at Azua.

The knowledge required to import or produce improved seed and plant material is available in country, assuming a modest level of outside technical assistance. The receptivity of Dominican farmers to improved plant materials is generally judged to be high and it would appear that numerous commercial opportunities are available in their production and distribution. Government regulation and licensing systems as well as credit and technical assistance may be required to produce entrepreneurial interest and participation, but the potential economic and social returns would far outweigh an investment in this area.

d. Foundation Livestock - Importation of improved breeding stock began in the 1930's and has been maintained to the present day. In 1972, live swine, cattle and horse imports totaled 1,504 animals. Dairy cattle importations far outnumbered other classes. The advanced state of knowledge about artificial insemination reduces the need for further live animal importation to near zero. However, the systems and methodology needed for the maintenance of genetic records are almost totally lacking. Improved genetic lines tend to degenerate rapidly under these conditions. Moreover, with current management practices, genetic advantages are often lost because of inefficient handling, particularly in the dairy and swine industries.

e. Machinery and Equipment - Farm units of 16 acres or less constitute about 88 percent of the total number of Dominican farms but comprise approximately 20 percent of the farm acreage. Farm size, insufficient credit and other constraints make it extremely difficult for these smaller farms to mechanize their operations. Most of these farmers have little or no previous experience with agricultural equipment but many would probably like to increase the mechanization of their operations.

Approximately 55% of all agricultural machinery and equipment is used in the sugar industry and 11% in the rice industry. Other significant users are the plantain, peanut, coffee, bean and banana industries. Few small plot tractors are in use in the country although their employment on very small farms or small farm groupings may be economic. On commercial farms up to 20 or 30 acres (mostly too small to own their own equipment) there is a real need for the services of good custom machinery operators. The private sector should and undoubtedly would fill this need except for two serious constraints: One, there is little medium or long-term credit available to establish such enterprises and two, there is no institution presently offering the kind of training that would be a prerequisite to success in this business.

Despite present problems and limitations the need for and the importation of agricultural machinery and equipment will continue to grow. It is estimated that it will reach RD$6.0 million annually by 1976 from the RD$4.3 million imported in 1971. Changes in priorities that would place additional emphasis on agricultural processing and agriculturally related industry, if adopted, would tend to increase these imports substantially.

The basic problem of mechanization in an underdeveloped country has not been addressed in the Dominican Republic. That is, what level of mechanization is desirable in the light of high unemployment, particularly in rural areas? This should be a major consideration in long-term planning.

6. Forests - Forest resources of the Dominican Republic are administered by the Armed Forces with direct guidance from the Executive authority under a modification of Law 206 of 1967.

The valuable forests which once covered much of the island have been reduced to about 2.5 million acres, first by direct exploitation and more recently by slash and burn farming techniques and forest fires. Much of the land thus cleared is not suitable for agriculture and should be returned to forests. A 1965 evaluation indicated that 1,250,000 acres of the Cordillera Central should be replanted to forests. The Armed Forces reforestation effort may have reached 30,000 acres by 1971, assuming that the 12,000,000 trees reportedly planted were disbursed at the recommended density of 400/acre.

Exploitation of forest resources is now illegal, although the degree of enforcement is not known. The absolute prohibition of logging, coupled with poor forestry management has increased the incidence of fires through a higher density of dead and fallen trees.

As indicated by the FAO inventory of forest resources, the country could extract 100,000 to 150,000 cubic meters of lumber per year (about half of total annual demand) for the next 10 years and, assuming proper reforestation and management, could meet all local requirements for cut lumber and pulp from 1980 to the end of the century.

FAO has recommended legislation and a complete program for proper exploitation of forest resources. The legislation is under consideration by the Government.

7. Fisheries - No reliable data on domestic fish production are available. Imports of dried and canned fish were valued at $5.1 million in 1970 and presumably have risen with the population and per capita income.

The ocean fishing potential of the Dominican Republic has not been investigated. There are few skilled fishermen and little modern equipment is used. A 1965 United Nations Caribbean Fishery Mission report indicated that ocean fishing for such varieties as blackfin tuna, albacore, yellowfin tuna, bonito and other open sea (pelagic) varieties could be tried with moderate assurance of success, assuming an investment in equipment and training of about $2.0 million financed by nine Caribbean governments. An annual commercial return for this investment was estimated at $250,000. Investments in coastal fishing were not deemed advisable for the West Indies in general because of low coastal fish populations. The recommended regional project never came to fruition. However, through IDB, the Dominican Republic has secured financing for a RD$2.0 million project to upgrade fishing fleets and improve marketing. This is a high risk venture with the possibilities for financial returns not well-defined.

Inland fish raising is an unexplored possibility for the country, particularly in view of the results now being obtained in the southern United States with such species as catfish and telapia, where feed/meat conversion ratios of 1.1:1 have been achieved. Net dollar returns per acre of tanks or

ponds of RD$450 are possible even with relatively inefficient production methods.

Coastal culturing of lobster and oysters is also possible, if government regulatory systems could be established to conserve and rationally exploit these species. Inland shrimp raising in marshy coastal areas could also offer benefits and may merit investigation.

B. Institutional Base

The rise of functioning institutions in the agricultural sector is a relatively recent phenomenon in the Dominican Republic. New public and private institutions and institutional reforms came largely after 1961, as the Dominican Republic attempted to respond to the needs of its much neglected and most important sector. The most important of these are described below.

1. Public Institutions

a. The Secretariat of State for Agriculture was created by the Constitution of 1854 and has become the agency of the Executive authority legally charged with formulating and directing the agricultural policy of the country, administration of essential components of modern agriculture, and coordination with associated decentralized agencies on virtually all aspects of the agricultural sector. The most important working components of the Secretariat are the Sub-Secretary groupings of Production and Marketing, Research and Extension, the Livestock Department, and lately, the Planning Office. The Secretariat's primary assets are the CNIA and seven regional research and extension stations with their sub-stations. It performs essential services -- research, extension, market news, statistics, having 1,700 of the approximately 6,000 public sector employees in agriculture. But, the number of suitably-trained agriculturalists employed by the Secretariat is estimated at not more than 200. Salaries remain low (about half those in the private sector for equal capability) and inadequate funding still hampers many operations. Under the leadership of the present Secretary, the Secretariat has begun a climb to professionalization and service orientation. Qualified professionals have been placed in many key positions and increasing coordination is evident throughout the organization. Despite problems of low qualifications at middle and lower levels, lack of field experience, and too large

a number of non-professional pork-barrel positions, the Secretariat is asserting increasing leadership in the sector. Assuming that the present Secretary will remain in office long enough to accomplish his objectives, the Secretariat will become a real force for constructive change.

b. The Agricultural Bank was founded in 1945 as an autonomous institution created to increase agricultural production through loans to farmers and agriculturally-oriented businesses. Following the death of Trujillo, major reorganizational changes were made by the Agricultural Bank in an effort to restore its autonomy and divest itself of many business operations not related to the functions of a development bank.

The Bank has 20 branches located throughout the country, with the central office located in the capital. Total employees number 901, of which 78 are classified as professionally-trained in some phase of agriculture, such as agronomy, veterinary medicine, extension, and animal husbandry.

The Bank works in conjunction with overall agricultural production goals of the Secretariat, IAD and IDECOOP and has participating loan programs with all three agencies. In addition to direct government subsidies, the Bank administers various loan programs with IDB and AID.

This institution is not as vigorous as might be hoped, though its position vis-á-vis the IDB loan is crucial. It is attempting some changes and has employed Arthur D. Little, Inc., to review its operations and recommend improvements. The preliminary report of the review team was quite critical of the Bank's operations. The principal shortcomings cited were (1) the underutilization of financial resources, (2) a "great poverty" of qualified personnel, and (3) the impractical organization of the Bank which is aggravated by unqualified personnel. Changes in the Bank are expected to be in line with the final recommendations of the Arthur D. Little, Inc. report.

From a financial point of view the Bank is not profitable because of high operating costs. It suffers, in addition, from a pronounced deficit of qualified personnel, lacking, as it does, the necessary mechanisms to administer personnel effectively. In addition, one evaluator observed that the Bank lacked any mechanism for the inter-institutional coordination or programming so vital to its responsibility.

c. The Agrarian Reform Institute was established by Law 5781 in 1962, as the semi-autonomous agency with a broad set of responsibilities and powers related to agrarian reform. It has approximately 450 permanent employees in Santo Domingo and 250 distributed throughout the countryside. In addition, 818 provisional employees appeared on the rolls in 1972, the bulk of which were outside Santo Domingo. In the administration of some 150 agrarian reform projects, IAD performs public works, irrigation, extension and credit functions. The present agrarian reform model has, in reality, institutionalized dependency of the farmer on IAD. The administrative and financial burden placed on this organization is well beyond its efficient capacity with no relief in sight, as the number of people and projects continues to mount. Furthermore, IAD is probably the most unmanageable of all national institutions. Quite possibly the best solution to IAD's problems would be a complete change of institutional character, i.e., divestiture of much of its functions in favor of the Secretariat of Agriculture, the Office of Community Development (ODC) and others. The important residual function would be as a Land Affairs Commission which could formulate land policy and supervise its execution, largely through other agencies. In view of the limited amount of land that could be made available for distribution, the present emphasis on IAD is probably not well-founded in economic terms.

d. The Institute of Development and Cooperative Credit was established as an autonomous agency in October of 1963. Its primary purpose was to administer cooperative activities in the Dominican Republic. IDECOOP presently serves 236 cooperatives of which 46 are agriculturally-oriented. Total membership is 53,021, which includes 8,086 members in the agricultural cooperatives. IDECOOP's activities are largely in the agricultural sector, however, since major credit blocks have been made available for that purpose.

Total employees in IDECOOP and its eight regional offices number 250 of which 16 can be classified as professionally-trained agriculturalists. Additionally, IDECOOP receives technical assistance from the Secretariat of Agriculture. Some personnel of the latter are assigned to IDECOOP's regional offices.

Even though major improvements have been made in IDECOOP's organizational structure over the past two years,

it still lacks sufficient operating funds and personnel to be responsive to the sector.

The primary source of IDECOOP loan funds for agriculture, has been AID, with Dominican governmental funds meeting operational expenses. The serious lack of trained personnel has been somewhat overcome by a series of in-country training programs, started in 1972 and financed by the USAID Mission, under a component of Loan 517-L-020.

e. The Dominican Center for the Promotion of Exports (CEDOPEX) was created by Decree 137 in April 1971, and became the single agency responsible for seeking foreign markets and servicing the export industry in September 1972. Its basic departments are Special Studies, Assistance and Promotion, and Finance and Information. The CEDOPEX staff is among the best in terms of technical preparation but still lacks experience. With the Dominican Exporters Association (ADOEXPO), a private group, CEDOPEX has begun publication of a professional magazine to provide general information on export opportunities. It has established a technical reference library on markets, prices, grades and standards for the use of exporters and planners. CEDOPEX also publishes up-to-date export data. Its real effectiveness cannot be evaluated at present, because of its very recent formation. However, the general consensus is that they have performed well. CEDOPEX's potential as an effective export promoter is also believed to be high.

f. The Price Stabilization Institute (INESPRE) came into being under Law 526 of 1969, and assumed the price stabilization functions of the Agricultural Bank. In pursuit of its basic mandate to assure fair prices to consumers and producers in basic commodities, INESPRE is authorized capital of RD$25.0 million. Its employees number approximately 200 operational, administrative and management personnel. The Institute has the physical capacity to dry, grade, store and maintain nearly 800 thousand cwt. of paddy rice (about 2 months supply), 850 thousand cwt. of corn and 270 thousand cwt. of beans. This capacity is being expanded by construction of four silos in key rice areas and off-loading facilities for imported grains are being planned. Initial operating capital and funding for construction of primary facilities were USAID-sponsored. The Institute has proven its financial viability and has become a real factor in the internal market. Its major weakness is common to nearly all agricultural institutions: lack of coordinated policy orientation.

g. Central Bank - As the major financial institution of the nation, the Central Bank is a force of great influence within the agricultural sector. Lines of credit are extended by this institution to INESPRE, the Agricultural Bank, and other sector agencies as well as private sector lending institutions, such as Financiera Dominicana. Through its Private Investment Fund (FIDE), the Central Bank is also able to finance commercial enterprises through private intermediate credit institutions. Between 1966 and 1972, RD$51,184,000 were loaned through this mechanism. In 1972 agriculture's share of FIDE lending represented 19% of the total. The Central Bank has taken the initiative in promotion of intensive beef and pork production because of its sensitivity to profitable foreign markets and the local requirement for meat. In this initiative the Bank, with USAID concurrence, has just arranged for the use of RD$145,000 in local currency for promotion and technical assistance. The interest of the Bank in agriculture appears therefore, to be substantial and it is developing direct linkages with the Secretariat of Agriculture and other sector institutions to facilitate its direct participation.

The Governor of the Bank has stated that his institution's priorities are now shifting toward agroindustry and labor intensive investment as a second stage of the FIDE operation. Given the weakness of the Agricultural Bank, the Central Bank appears to be moving into a partial vacuum in agricultural credit policy, a move which should probably be encouraged since its macro-orientation and well-prepared personnel place it in a position to allocate credit to specific subsectors (such as marketing), which are critical to the economic structure of the sector, but neglected in terms of purely agricultural credit. An improved Secretariat of Agriculture with direct ties to the Central Bank will no doubt prove a formidable force for development.

h. The State Sugar Council (CEA) - CEA is a wholly government-owned enterprise which administers over 640,000 acres of sugar land and all 12 government sugar mills. As such its importance to the country's economy is monumental. CEA was formed by Law 7 in 1966 to produce sugar and sugar by-products. Its RD$50,000,000 annual payroll also gives it unparalleled importance at the household level in the countryside. CEA's significance has risen with world demand for sugar and its efficiency as a profitable enterprise has grown.

As a dominant enterprise CEA has single-mindedly pursued its goal of sugar production. Although firm data are not available, it is regarded as somewhat less efficient than its private sector competitors, Vicini and La Romana Corporation, but its modernization efforts have closed the gap slightly.

CEA has also lagged behind in diversification efforts, tending to emphasize expansion of cane areas rather than concentrate on increasing unit production. Though this weakness is not now a significant factor, CEA should be prepared to divert sugar lands to other crops, should market conditions dictate.

i. The National Water Resources Institute (INDRHI) was established by Law 6 of 1965 and operates within the framework of the Water Law 5852 of 1962. INDRHI manages over 110 irrigation systems with its 635 employees. A recommendation that local water users associations be formed to serve as collection and management agents has not been adopted and INDRHI maintains nearly complete management responsibility for all systems.

The Board of Directors of INDRHI consists of the Secretary of Agriculture as President, the heads of the Planning Board, IAD and Agricultural Bank and three private sector representatives. This make-up has improved coordination but has not solved all of the problems of limits of responsibility.

Irrigation and water availability when and where needed will be extremely important to the continued growth of agriculture. The President has recognized this and it has been given top priority in the Government's assistance to the sector. A number of problems will have to be solved, however, if progress in this area is to meet the needs. The principal ones are:

- Water collection should be improved with better erosion control of the watershed areas;

- Administration and collection for existing systems should be turned over to user's associations;

- Water use at the field level must be improved in order to increase the efficiency of water utilization; and,

- The projects and programs of INDRHI must be more closely coordinated with other agricultural efforts and priorities.

2. Private Institutions

a. Santiago Development Association and the Superior Institute of Agriculture - The Santiago Development Association is a group of private sector individuals interested in promoting economic development, particularly in the Cibao. Its most notable achievement to date has been the establishment of ISA and promotion of its development into a competent agricultural secondary school. Since 1965 the Association has gained support from the Ford Foundation, OAS, USAID Mission and, more recently, FAO, to create a physical plant and faculty along with research and extension capabilities which are being used, in coordination with the Secretariat of Agriculture, to promote the crop diversification program in the Cibao. Early graduates of ISA who subsequently attended U.S. universities, are employed now as faculty and staff members. ISA is an institution of great potential influence in the Cibao.

b. The Dominican Development Foundation (FDD) was formed by a Santo Domingo businessmen's group. It operates on a project loan basis, often through groups of small farmers, though its resources are not exclusively assigned to agriculture. In 1970, RD$383,000 (42%) of its project expenditures were agricultural in nature and geared to the subsistence level farmer. The Foundation is interested in expanding its small farmer orientation and is seeking funds for that purpose.

c. Financiera Dominicana is a pioneer financial institution which is profit-oriented and interested in developing innovative agribusiness potentials. Though it too deals in non-agricultural areas, it has taken the lead in the group of entities interested in the formation of capital to provide land mortgage credit while dealing heavily in agriculture and agribusiness. Since 1968, the year of its formation, the Financiera has loaned RD$13,404,000, part of which was AID-financed. In 1972, 19% (RD$512,243) of all credit went to agriculture which

accounted for 55% of loans approved. In the first nine months of 1973, 85% of the portfolio went to agribusiness.

3. Policy Formulation, Planning and Budgetary

a. Structure of the Policy Formulation and Planning Mechanism - The National Development Commission meetings, which are chaired by the President of the Republic, has legal authority to impart general directives on the formulation and execution of development plans and to approve or disapprove plans and programs before their submission to the Presidency.

However, functionally this Council serves primarily as a forum for discussion of proposals with a view to achieving a consensus where possible. Virtually all decisions to approve policies, plans, and programs lie with the Presidency alone. Proposed policy decisions are filtered through the Technical Secretariat of the Presidency. It, too, has legal and actual authority to make and execute development programs, or to coordinate their execution and evaluate results. This office is an important conduit to the top decision makers, controls both budgetary formulations and disbursements and occasionally involves itself in execution of projects. However, once again, it normally acts in response to Presidential decisions rather than in the absence of them.

The Secretariat of State for Agriculture through its Office of Planning, Coordination and Evaluation is legally empowered to function in coordination with the National Planning Office of the Technical Secretariat to provide overall short, medium and long-term planning for the entire agricultural sector.

The National Agricultural Council is a body designed to advise the Secretary of Agriculture on matters related to policy formulation.

Decentralized institutions affiliated with the Secretariat of Agriculture, i.e., IAD, Agricultural Bank, INDRHI, IDECOOP, and INESPRE, by law maintain planning mechanisms empowered to prepare specific action plans, taking into account the overall guidance of the Secretariat's Planning Office.

The above is primarily a description of the structure envisaged by Decree 8 of 1965, together with the

provisions of the charters of the several involved entities. There is apparent variation in the degree of coordination required of each decentralized agency with the Secretariat, both legally and in practice.

b. Functioning of the Policy Formulation and Planning Structure - The Secretary of Agriculture sits as a member of the Board of Directors of each of the affiliated decentralized institutions. It is a common observation, however, that few policy matters are handled at the Board level. Below this management level there is no functional mechanism for coordination of policy plans or programs. Ad-hoc working groups composed of officials of several entities are occasionally formed to develop specific, short-term production plans and coordinate their execution but such groups tend to crumble quickly, leaving no permanent mechanism for coordination. In effect, planning is accomplished individually by each institution and the Technical Secretariat of the Presidency or as the President himself approves or disapproves programs with or without reference to the Secretary of Agriculture.

There are four basic impediments to effective policy coordination among the agricultural sector institutions. First, all tend to guard their autonomy carefully and many functions overlap. The Secretariat, Agricultural Bank, IAD and IDECOOP each have credit programs. The Secretariat, IDECOOP and IAD perform extension functions. All are engaged in statistical activities. INDRHI and IAD overlap in the area of irrigation. Second, rational long-term priorities are not well-articulated. As a result, there is no impetus toward methodical long-term planning which would encourage centralized planning mechanisms responsive to policy. Contrariwise, plans are often developed and programs executed in response to immediately perceived quasi-emergency requirements -- shortages of staple crops, for example -- or to meet anticipated foreign demand for specific commodities, i.e., sugar and beef. Third, a single dependable data base is not employed throughout the sector, so each institution depends on its own set of statistical perceptions and views fundamental sectoral problems differently. Fourth, but no less important, is the highly personalized style of the President, which places at the highest level many non-policy decisions of a project or budgetary nature.

The foregoing set of circumstances gives rise to ad-hoc inter-institutional planning in the agricultural

sector. These relationships depend primarily on the degree of trust and good will extant between the leadership of the concerned institutions, and underscore the lack of effective machinery for policy formulation and planning.

c. Budgetary Relationships - By law the Secretary of Agriculture should forward annual budget requests of all agriculture sector institutions to the National Budget Office, where the final budget is prepared. Subsequent requests for disbursements are to be similarly forwarded to the Secretary of State for Finance through the Secretariat, who must additionally approve individual expenditures made against those disbursements. This mechanism gives the Secretariat theoretical control over both the programs for which funds are budgeted and over actual expenditures. Since however, the Secretariat has traditionally lacked the machinery to analyze programs critically, the control has not been effective.

All of the decentralized institutions and the Secretariat have capital resources available which do not appear in the National Budget and can be expended solely on the authority of the head of the institution. INESPRE requires little of the National Budget since it is able to employ profit from commodity sales. IAD, IDECOOP, INDRHI, and the Agricultural Bank, for example, have all had residual funds from local currency or development loans which fit the category.

Expenditures for agricultural purposes made from the President's Special Fund may be channeled through a decentralized institution or may go directly to a private contractor without reference to the Secretariat, further undermining its influence in the sector.

In effect, the opportunity for the Secretariat to influence the nature of public investment in the agricultural sector through fiscal controls is limited by the weakness of its policy formulation and planning mechanism and the unwieldy bulk of transactions which the Secretary himself must approve by signature, usually without the benefit of staff advice.

4. Institutional Relationships and Coordination

a. Public Sector - Although inter-institutional relationships between public institutions are described by law and decree, those relationships form and disintegrate largely in

terms of personalities. As the key figure in the sector and a member of many institutional Boards of Directors, the Secretary of Agriculture is able to influence but not to direct coordination of an overall agricultural policy or plan and cannot ensure the cooperation of those institutions at any given time. Furthermore, he is unable to attend each and every one of the 22 boards where he sits as a member or as chairman. Traditionally the Secretary has had little influence in the selection of key public sector personnel, either within the Secretariat itself or in affiliated institutions. The Secretariat lacks the effective budgetary control which might be used to elicit closer coordination and, despite the provisions of the law, has usually been passive in the planning, execution and evaluation of the programs of other sector institutions.

Despite the foregoing there have been several specific instances within the recent past when public institutions have cooperated effectively on specific programs, such as IAD's rice production effort on redistributed land, the Secretariat/Agricultural Bank Cacao Improvement and Coffee Production Programs, and the cooperation of several institutions in the Secretariat's statistical project (a USAID cooperative activity). These examples, though certainly not representative, are indicative of a growing realization among sector leaders of the need to utilize available assets more efficiently.

The Secretary of Agriculture is now engaged in a generalized campaign to unify sector efforts by reactivating the National Agricultural Council, composed of key public officials and private agriculturalists to advise him on policy, and by assigning to his Planning Office the personnel needed to fulfill the functions assigned to it by law. This was dormant for several years,but was reactivated by the current Secretary with the President as chairman. Its recent first meeting was a vigorous self-evaluation by the heads of the several agricultural agencies. Weaknesses in programs and institutions were exposed to public view and there are indications that some corrective action is in the offing.

Since January 1973 the Secretary of Agriculture has conducted a vigorous campaign to professionalize his Ministry. A focal point of this campaign is the Planning Office which is now staffed with participants returned with BS degrees from U.S., Mexican and Argentine universities. The new staff is fully aware of its legal mandate in planning and coordination of

agricultural programs and is beginning to establish the inter-institutional relationships envisaged by the 1965 legislation. This group has been a real force in the recognition of the requirement segment for the development of a sectoral approach in agricultural development, and is seeking experienced assistance, through the Secretary, to establish and institutionalize the analytical planning capability required of it. This office offers a real opportunity to assist the country to utilize all of its agricultural resources more efficiently through the development of a sound planning matrix.

Application of the provisions of Decree 8 would alleviate policy formulation and planning problems without necessarily changing existing institutional structures. The Decree, however, assumes a competence within the Planning Office that is only now being developed. When that Office begins to function as a policy formulation, planning, evaluation and coordination mechanism, as is now planned by the Secretariat, the relationships and structure of Decree 8 will be functional. The degree of success will depend on the quality of the policy -- plans -- programs -- budgetary and evaluation cycle set up by that office and the extent to which the Secretariat can gain control of the fiscal mechanism of the decentralized institutions. Its officers are young, well prepared and aware of the failings of policy to date. At the same time they lack experience and need expert assistance for a substantial period while the operations of the office are being completely institutionalized.

b. Public, Semi-Private and Private Institutions

1) Educational - Traditionally there has been little contact or consultation between educational institutions -- public or private -- and the public agencies of the agricultural sector. There are processes underway at the present time which are slowly changing that situation. National University of Pedro Henríquez Ureña figures significantly in the PIDAGRO scheme as a leader in livestock research and extension. The Instituto Superior de Agricultura is cooperating with the Secretariat on the agricultural diversification plan for the Cibao valley. Government technicians are involved in the FAO sponsored animal health project of the Autonomous University and several returned B.S. level participants are employed both by the Government and by UNPHU. Other points of contact and cooperation are developing. Much remains to be done, particularly

to integrate research and extension functions of educational institutions with those of the public sector.

2) Commercial - With the growth in competence of technicians available to the public sector, contact between the Government's agricultural technicians and private commercial interests has increased. The poultry industry relied heavily upon the Secretariat for guidance in its development and the same phenomenon is apparent as the beef industry expands. CEDOPEX is drawing more interest from the private sector as its technical capacity and services expand. During 1973 the policy of the Secretariat of Agriculture has been to engender closer cooperation with the private sector with regard to production and spread of technology to small farmers. This gave rise to rapid growth in the number of small farmers producing under contracts with processing firms with technical assistance from public agencies.

c. General Observation - The relationships outlined by Decree 8 of 1965 have not functioned according to plan to produce a unified agricultural development effort. The decentralization did, however produce a basic institutional base and its components have prospered. The need now is to overcome some of the decentralizing effects of institution-building and draw institutions closer together organizationally and functionally. This has just begun to happen under the present Secretary. In the long-run, however, a major realignment of agencies should be undertaken to integrate and professionalize agricultural services.

C. Production and Marketing

1. General - Dramatic increases in demand for agricultural commodities are being generated by the rapidly growing population, urbanization, expanding exports and the increasing demand for primary materials for the growth of the industrial sector. Agriculture has been providing approximately 22% of the gross domestic product which has achieved a growth, in real terms, of about 10% annually during 1969-1972. Manufacturing contributed another 16% of GDP, much of it through agriculturally related industry.

Production of agricultural products in total showed little improvement between 1960 and 1968. Food production failed to keep pace with population growth and per capita production declined almost 25% during this period (Fig. 1, Annex I). Only rice, potatoes and some types of livestock

showed clear patterns of increased production. The year 1968 marked a definite take-off point for the agricultural sector in several aspects and the main output stimulus to the economy has come from agriculture in recent years. Food production from 1968 to the present gained rapidly on total population with the index of food production moving from 114 (based on 1957-1959 = 100) in 1968 to 147 in 1972. Total value of agricultural production (in constant 1962 prices) increased at an average annual rate of more than 7% (7.18) during the same period. (See Figures 2 and 3, Annex I.)

Despite rapid increased in total agricultural production over the past five years, these increases have not always been in the areas of need. Production increases in a freely functioning sector would usually come in response to increased demand as indicated by higher prices at the production level. Response does not always follow apparent "incentive" in the Dominican Republic. The result is ocassional shortages of key food items, crash programs with heavy allocation of resources and somewhat of a "feast and famine" or "crisis to crisis" type of attention or assistance to the sector, often resulting more in confusion and problems than solutions.

It is difficult to identify clearly the reasons for the failure of producers to respond to need in any given situation. Price controls, shortage of credit or other inputs, inefficiencies in the marketing system and any number of other problems could be contributing factors. In general, however, it could probably be agreed that the greatest overall problem is limited resources. This would include limited credit and technical assistance at the farm level, insufficient depth of capable personnel in the planning, implementation and evaluation of agricultural programs, inadequate performance (and higher costs) in the private sector marketing system and/or a lack of adequate support in the form of infrastructural or ancillary services, e.g., health, education and transportation.

In the face of all the foregoing problems, however, the sector has done a reasonably good job of meeting the effective demand of a rapidly growing population and increasing exports. The country is blessed with several advantages that should contribute significantly to meeting its need and objectives over both the short-and long-term. It has rich soils and favorable climate, including a wide range of micro-climate areas, situated in a uniquely advantageous location with respect

to markets. Traditional markets for principal crops such as sugar, coffee, cacao, etc., provide a reasonably reliable source of foreign exchange. The technological base for sector development, although admittedly shallow, is relatively broad and quite sound and there is presently sufficient under-utilization of land to permit significant production increases if these lands are properly managed. In order to continue to increase agricultural output at the present rate, the Government's efforts must overcome (a) problems in production of major export crops, (b) a more pervasive problem of low productivity in both export and domestic agriculture, and (c) a distortion that favors investment in highly-protected industry rather than agriculture.

2. Production - Many crops or commodities fall into two or more groups in any classification system. For purposes of this presentation they are grouped as industrial, oil and food crops.

Industrial crops have been the basic agricultural commodities in the Dominican Republic for several years and those which have received priority attention. As a group they are labor intensive and require some processing prior to marketing. They cannot readily be consumed in the quantities produced and thus depend on external markets and they yield foreign exchange.

Sugar production for 1973 was forecast to be about 12% higher than the previous year, which would be a new record for sugar output for the third consecutive year. (See Fig. 4 in Annex I.) Export targets were about 4% higher than 1972. In view of the recent drought, however, these increases appear to be somewhat optimistic.

It is presently estimated that approximately 625,000 acres were planted to sugar cane in 1973. Acreage has been increasing about 2 to 4% per year despite emphasis on increasing the per unit production on lands most suitable for sugar production. Sugar cane plantings have in the past been limited by legislation but these limits have not been closely enforced. In 1972 government action authorized increases in sugar cane plantings under certain circumstances and set a total sugar production goal for 1973 of 1,400,000 short tons. Assignments are made to individual mills on quantities that may be sold in export and in domestic markets.

In the last few years considerable discussion has taken place concerning the need for a diversification program that would change to a more productive use those lands less suitable for sugar. To release these lands to other uses and still maintain present levels of production would require significantly greater production on the better lands through a more capital intensive and probably less labor intensive operation. A few have suggested gradual transfer of land to other uses with an equivalent reduction in total sugar production. Exports in 1972 were 1,221,444 short tons with 741,230 tons going to the United States and 480,214 tons to the world market. A drop in sugar sales back to the 400,000 ton quota level would certainly be devastating. The world price of sugar, however, is presently between 10 and 12 cents per pound and quotas under the agreement do not begin to apply until world prices drop to 5.25 cents per pound. The outlook, therefore, is for several more years of a very favorable market situation.

Decisions on the sugar industry are of paramount importance. Nearly any conceivable Dominican Government would maintain that sugar production must continue to increase, both for internal and external demand. Increases can be achieved by adding various factors of production, particularly land or capital. With the current level of production technology, labor is of primary importance. The basic trade-off however, is this: by intensifying capital inputs, e.g., tractors, mechanical harvesters and loaders, manual labor requirements can be reduced. Capital expenditures for improved cane varieties, irrigation works and fertilizers can increase production per unit and reduce land requirements. Little accurate data is available on unskilled labor resources applied to sugar production. It is estimated however, that well over half of the field work force is of Haitian origin since cane cutting is regarded as the most denigrating employment possible in the Dominican culture. Substantial reduction of the work force in sugar could be accomplished with few, if any, ill effects in the rural economy if marginal sugar lands were efficiently shifted to other labor intensive activities such as dairying. Given the importance of sugar to the balance of payments situation, any reduction in sugar exports during this period would probably be most unwise. Increased attention should certainly be given to diversification of sugar lands implemented so that production is not interrupted. Diversification of agricultural production as a whole, which can be done without disturbing present exports, should receive a high priority.

Coffee production in the Dominican Republic is meeting domestic consumption needs and providing about twenty-five million dollars in exports annually. Over the past few years there has been no noticeable trend in coffee production. Exports have varied only slightly. Many of the coffee plantings are old and relatively unproductive. Technology in the country has not kept pace with that of the principal coffee producing countries. Both yields and quality could be increased by increasing the level of technology. Production sufficient to meet potential domestic and foreign demands could thus be obtained from a smaller land base or increased demand could be met from the present area.

Some processing of coffee is done in the country but almost ninety percent of the exports is in green coffee. There is no soluble coffee production in the Dominican Republic and there are no known plans to produce this commodity. Some increased employment and significantly greater foreign exchange earnings might be generated by a move to more and better processing in the country.

Coffee exports are somewhat controlled on a worldwide basis. The Dominican Republic is a signatory to the Geneva Coffee Agreement. The presence of coffee rust in Brazil, the probability of this disease reaching Colombia and the possibility that it will not reach this country because of its isolation from South America, would make coffee appear to be a crop with excellent long-term prospects which may deserve special attention because of its employment potential for a large number of the poorer rural population.

Cacao production is centered in the Cibao valley where the crop is raised mostly on small farms. Little attention is given the trees except at harvest time. As with the coffee, plantings tend to be over-age but otherwise in good condition. Little fertilization, herbicides or fungicides are used. A long, gradual decline in the annual production of cacao beans was checked in 1969 through USAID-sponsored efforts of the Secretariat of Agriculture. Since then, production has varied widely from about 26,000 tons to 40,000 tons depending on the season. (See Fig. 5, Annex I.)

Cacao is usually third in value among agricultural exports. As with coffee, most sales are in the form of beans as little processing is done in the country. The United

States is the principal market since most of the European requirement is for high quality, partially processed cacao. At one time processed cacao products comprised a substantial part of Dominican exports but have more recently been of little significance. In 1972 some processing activity was revived and more than 10% of cacao exports was in a processed form -- up from almost zero the previous year.

Improved cacao varieties were brought into the country (by the USAID Mission) beginning in 1966. This material is presently being distributed. A Cacao Improvement Program -- 1972-1976 is in the early stages of implementation and is being given a high priority. This crop offers significant potential as an earner of foreign exchange and conditions are excellent for cacao production. It also is a good generator of employment and income to marginal rural families.

Tobacco is becoming more important both as an export and import substitution crop. In 1972 tobacco was second only to sugar in value of exports in agriculture. Considerable improvement can be made in the type and quality of the tobacco produced in Dominican Republic that would continue to increase the value of both export and domestic sales.

The levels of technology used in tobacco production vary widely but could be somewhat improved. Greatest attention should be given to varietal improvement and to expanding the amount of processing carried out in the country prior to export. A recently imposed special tax on domestically produced blond tobacco, presumably a means of maintaining import levels, should be reviewed. Tobacco is one of the most labor intensive of all crops and thus merits some priority attention but the nutritional requirements of the population will have to weigh in the balance since tobacco lands compete with other food crops.

Oil Crops (peanuts, coconuts, soybeans and others) - The production of edible vegetable oils has increased each year for several years but has not kept pace with increased consumption. The principal oil crop is peanuts. Consumers have a high preference for peanut oil but the acceptance of coconut oil is increasing as a result of INESPRE information efforts. Imports of edible oils have been rising but are expected to decline slightly in 1973 because large carryover stocks were available at the beginning of the year.

Both peanut acreages and yields have been increasing. (See Fig. 5, Annex I.) Continued production increases can be obtained from further expansion and higher peanut yields but other crops should be given more attention. The potential for coconut oil production is very great in areas that are less suitable for the production of other crops. New disease resistant varieties have been introduced here and are ready to provide the seed necessary for expansion. In addition, small trials of African oil palm were established in about 1967-1968 and are ready for evaluation. If this crop is found to be suited to the Dominican Republic, it should be given high priority as it is the most efficient producer of edible oil in appropriate climates.

Soybeans are being grown in some areas of the country. It is doubtful, however, if they can be fully competitive with more efficient oil crops here except in special circumstances, e.g., a rotation crop with tomatoes in the Azua area.

In a development sense policy makers and planners have been concerned with oil crops individually and separately. There is a need to consider edible oil crops as a group and to develop plans and programs for the entire group to most quickly and efficiently meet the growing edible oil requirements of the country.

Food Crops (rice, plantain, beans, corn, root crops, fruits and vegetables) - Rice and wheat are the staple food grains in the Dominican Republic, the latter being an imported commodity. Corn and sorghum are used mainly as animal feed. Plantain, sweet potatoes, casava and potatoes are also important sources of starchy foods for people. Rice, beans and pigeon peas are principal protein sources, especially in lower income families.

Rice production has, until 1973, kept pace with the growing demand for several years. (See Fig. 5, Annex I.) It is presently estimated, however, that over 20,000 M.T. of rice will have been imported in 1973 as a result of stronger demand, stemming in part from greater prosperity and in part from a shortage of starchy root crops due to a drought. Marketing irregularities also magnify the disparity between supply and demand as millers and wholesalers tend to group together to influence prices. INESPRE has been reasonably successful in

skewing prices in favor of consumers and has maintained a fair market price for producers. Nevertheless, rice production and marketing is a sensitive political issue which concerns nearly all public institutions associated with agriculture.

As more data become available, the country will be better able to formulate policy with regard to rice and its relationship to starchy root crops and plantains. Land use patterns show that much land devoted to rice could better produce alternative crops. Unused marshy lands ideally suited to rice culture (and little else) have not been fully developed. As more rice lands are assigned to IAD and its marginal farmers, an extension program of great magnitude will be indispensable to satisfactory rice production. In the long-run, however, the Dominican Republic must arrive at a policy of optimum, not maximum, rice production and hope to achieve a balance wherein the country produces all the rice it can efficiently produce, imports the required balance and pays for the deficit by producing other commodities efficiently.

Beans are a basic protein source for most Dominican families. Over the years production has varied widely depending upon input availabilities, market prices and the prevailing weather. Production programs have had only marginal success in the face of serious marketing and distribution problems.

Dominicans are increasingly aware of the short and long-range possibilities for fruit and vegetable production. There is a critical need to improve the nutritional balance of Dominican diets as well as a broad market for fruit and vegetable exports. Puerto Rico, the United States and Europe are excellent markets for a wide variety of products, especially during the winter months. Efforts are being made to enter these markets with reasonable success being achieved with a few selected commodities. In this agricultural area potential returns appear to be available but the problems and complexities are extremely difficult to overcome. Timely and low cost transportation is a principal obstacle and one that is critical to success. Technological levels required and the quality demands of foreign markets are difficult for the inexperienced producer to meet. In addition, many of the fruits and nuts for which there is a keen demand take several years to grow to production and thus require long-term credit or capital investment.

Some of the more stringent quality standards placed on fruits and vegetables are somewhat less critical if commodities are processed prior to export. Some significant progress has been made in the past two or three years in increasing the exportation of processed agricultural commodities. Examples worthy of mention are leather products, canned fruits and fruit nectars and pastes, canned pigeon peas, canned mushrooms and platano chips. This processing not only can simplify the transport problem but also generates additional employment and income. It is important to note that many of the agricultural commodities that are high value commodities and require a high employment input in the production stage also generate a high level of employment in the processing or manufacturing stage. Special attention should be given to this fact when planning programs and setting priorities in the agricultural sector.

Livestock and Livestock Products - The Dominican Republic has always had enough beef to satisfy effective local demand. Meat exports became important after 1931 and Dominican beef was widely-shipped live throughout the Caribbean. In the early 1960's Government policies and the tax structure resulted in a virtual collapse of the meat production and marketing system. Poultry, dairy and swine production declined and beef remained an extensive, no-input operation. Beef exports to the United States and Puerto Rico ceased temporarily and revived in the late 1960's when poultry production began to satisfy local demand for meat.

The prospects for expanding the profitable livestock industry in the Dominican Republic are good. It is estimated that 35 to 50% of the land in farms is better suited for grazing than for any other purpose and more intensive livestock production should be encouraged on these lands if food needs could be adequately met through production or import. However, the coefficient of total employment generation, direct (on farm) and indirect (in marketing and processing) varies widely depending upon the enterprise and the extent of processing. Beef production generates only 2.2 cents of direct employment per dollar of output but when marketing and processing are included this increases to 13.9 cents of employment per dollar of output. Milk production and marketing (direct and indirect employment) generates 31.3 cents of employment per dollar of output. The direct and indirect effects of swine and poultry fall between beef and dairy as employment generators.

By comparison sugar (direct and indirect) is the second highest employment generator with 57.5 cents of employment per dollar of output.

Modernization of the livestock industry is beginning to take hold at the production level. It appears that ample livestock credit is available for the immediate future and interest in increasing production is high.

Dairy and Beef - Dairy and beef production (Fig. 5, Annex I), must be considered together at the present time because they are not clearly identifiable separately. Approximately 40% of the cattle in the country are considered dairy and about 25% beef. The remainder (35%) are dual purpose animals. Until recently beef production was not regarded as sufficiently profitable to compete with other agricultural alternatives. Changes in policies affecting meat production and marketing coupled with rising domestic and world prices have since become strong incentives for expanding the industry. As average levels of income continue to rise the domestic effective demand will undoubtedly continue to increase and there is no reduction in sight, even in the long-range, of the demand in the export market.

There is no foot-and-mouth disease present in the Dominican Republic so this country is one of the few in the world that can export fresh beef and pork to the United States and Puerto Rico. Meat exports began to increase in 1967 and have attained respectable levels. In 1972 they amounted to more than RD$6.5 million. There is ample room to expand beef and dairy production. Considerable increase can be achieved through improving management practices alone. Even greater increases could come from more intensive production based upon locally available supplements.

Milk production is barely sufficient to meet consumer demands. Most of this production is consumed as raw milk, about 20% is converted to cheese and butter and probably less than 10% is pasteurized and homogenized. Many milk products are imported for human consumption.

Price controls on some milk products have definitely influenced the growth of the dairy industry. This is partially due to the inefficiency of milk production. Average production per cow is very low and herd performance in

terms of fertility rate and death loss is even lower. Improvement of the dairy industry will very likely be contingent upon increasing the efficiency of production within the present price structure which is sufficiently high to assure a moderately efficient producer a fair margin of profit. The undependability of the feed grain supply and the consequent wide fluctuations in grain prices are a key constraint to the growth of the dairy industry. The insecurity of the feed supply and the limited profit margins imposed by price controls will tend to move the inefficient dairyman into the beef business as long as meat prices maintain present levels.

Swine - Traditionally, modern management practices have not been applied to swine raising even though pork has long been an important source of meat in the domestic market. Since 1969 pork production has increased rapidly (see Fig. 4, Annex I), but is only beginning to satisfy effective domestic demand at relatively high prices. Almost no pork products are exported but there is a real demand for these products in Puerto Rico that could be filled by the Dominican Republic were production to exceed domestic demand.

Swine production has only recently moved into the category of a "commercial enterprise". It is most likely that it will develop to a position of importance only through an intensive enterprise system with high levels of management required. The problems in the Dominican situation are manifold. The incidence of disease and internal parasites is high. Good quality breeding stock is limited and production costs are extremely high. In any event, a primary requirement for the continued development of the swine industry will be the availability of an adequate and dependable feed grain supply.

Poultry - Domestic poultry production has virtually eliminated the need to import poultry meat and eggs for local consumption even though the effective demand for poultry meat would probably increase at least 50% if competitively-priced supplies could be made constantly available without interruption in a competitive market situation. There are still occasional shortages and interruptions in the importation of hatching eggs. Production presently rests in the hands of a diminishing number of very large producers. This situation could, in the long-term, hamper the development of a viable poultry industry.

Poultry provides the most efficient conversion of feed to meat. It has the added advantage of having the shortest production time requirement and thus can respond more quickly to market demands. Sufficient know-how, facilities and labor are available to expand the industry. Such an expansion, increasing the availability of high quality poultry on a more regular basis would undoubtedly increase poultry consumption at the expense of beef, permitting increased availability of beef for sale in the export market. It would also permit the local consumer to purchase his meat protein at a lower per unit cost.

Future trends in the livestock industry are greatly dependent upon a few key factors. Government policies with respect to the importation of hatching eggs and chicks will quickly affect the poultry industry. Expanded technical assistance to livestock producers can increase numbers and efficiency. In the final analysis, however, the most important factor is the availability of a dependable feed supply. In the case of poultry, dairy, swine and high quality beef this means the availability of feeds in quantity and on a regular basis.

With regard to the latter factor, the Government's policy has been responsive within the strictures of limited resources. Exports of feed ingredients such as peanut and coconut meal have been almost eliminated. Grain production has received priority attention, albeit with limited success, and greatly expanded imports of grain have been allowed.

3. Marketing

a. Domestic - Much of the domestic marketing of agricultural commodities is of a traditional nature although the marketing of some items (notably poultry and refrigerated foods) has improved rapidly. On the whole the road and transport system is fairly good and access to the market is not a serious constraint in most areas; but there remain pockets of limited access, including much of the frontier area.

The farmer's assurance of a market for his product has a production-push effect in some commodities. Many private and quasi-government manufacturing or processing industries provide credit, technical assistance, inputs or marketing contracts to farmers in order to assure minimum levels of production for specific commodities, (such as tomatoes, pigeon peas, tobacco, peanuts, etc.). INESPRE, the government price stabilization organization, gives a price guarantee (floor) and assures a market outlet for rice, beans and feed grains.

Market demand is not presently a problem and is not likely to become one. Rather the opposite is more probable. Production efficiencies are rather low in most cases. Population is growing rapidly as is the average annual cash income per family (Fig. 6, Annex I), thus assuring an expanding internal demand. Export crops are competitive with production for the domestic market and the land base is extremely limited. In order to meet increasing demands in the medium and long-term it is imperative that the efficiency of agricultural production be increased. This means that additional investment in the sector will be required, which should come principally from the private sector. However, the internal price system now favors private investment in industry and urban commerce further limiting investment in the rural sector.

b. Export - Traditionally, agriculture has provided about 80% of total Dominican exports with sugar contributing almost 50% of this total (Fig. 7, Annex I). These exports have varied widely from 400,000 tons to 1,221,444 tons primarily as a result of weather conditions and of adjustments in the allotments (basic and supplementary) under the United States sugar quota. Coffee, cacao and tobacco have been other important exports. With the Falconbridge plant having reached full production, ferronickel will remain the second most important export. Non-traditional agricultural products and especially processed agricultural commodities (industrial) such as canned meats, roasted coffee, canned fruits and vegetables, cocoa butter, etc., are rapidly growing in importance.

In the medium to long-term it appears that 75% of future exports will be agricultural products. Export performance will, therefore, be subject to weather conditions, sugar allotments and coffee quotas. Much improvement and subsequent reduction in risk could be made in the export picture by broadening the export base, concentrating on a wider variety of products and giving increased attention to the in-country processing of these commodities. Such a move would also reduce the risk of developing an industrial structure based upon imported primary materials and further complicating the balance of payments situation.

D. Economic and Social Constraints

1. Employment - Agriculture provides about 22% of the gross domestic product and employs approximately 60% of the

labor force directly in production. A large portion of agricultural jobs are in the sugar industry which provides extremely low income jobs for the most part. Paradoxically a large number of the cane-cutting jobs are done by imported Haitian labor because, even though unemployment is high, the Dominican worker normally refuses to accept that job. In part this is because pay offered is low but perhaps even more, it is a culture block, i.e., cane-cutting is for Haitians but not Dominicans. Although no reliable data are available concerning rural income levels, the nature of many of the jobs and the wide difference between per-capita income in Santo Domingo and in the country as a whole convincingly imply that income levels in agriculture are much lower than in other sectors. This is a contributing factor to the rapid rural to urban migration since 1968.

There is an excess of labor in the agricultural sector. One indicator is that there is only .18 Ha. (less than half an acre) of cultivated area per person on the basis of total rural and urban population. Another indicator shows that 48% of the farm owners and two-thirds of the squatters farm their landholdings by themselves. When the numbers of owner, tenant and squatter families are included as a part of the labor force, about 90% of the total labor requirements are filled. Hired labor plays only a minor role in meeting total farm labor needs although this role is critical in some key crops such as sugar. Obviously the rural labor supply is not an inhibiting factor in agricultural production. Much of the agricultural labor force, perhaps more than 50%, is marginal to rural labor requirements and could be withdrawn from the sector without substantially reducing output.

2. Income Distribution - The only reliable information available concerning income distribution is the "Estudio sobre Presupuestos Familiares" (Study of the Family Budget) done by the Central Bank and the Statistical Office in 1969. This study covered only Santo Domingo. Some of the maladjustments shown in the study, however, are most likely indicative of the situation in rural areas and some implications can be drawn therefrom.

Income distribution in Santo Domingo in 1969 was extremely skewed with the poorest 40% of the population receiving only 14% of the income and the richest 20% receiving 55% of the income. At that time the average annual income for the top 20% was almost eight and one-half times as great as was that for

the poorest 20%. There was a wide variation of average incomes between one urban sub-sector and another with the average for Government and public utilities employees being almost 50% higher than that for transport employees and four times as high as that for construction employees. The average per capita income in 1969 for all workers in the study was RD$585.00 per year. The significant difference between this and the much lower per capita income of RD$295.00 at that time for the country as a whole would strongly imply a very low average income for rural people. This implication is further supported by the fact that almost 60% of the farms in the country are five acres or less. The economic and social importance of this becomes more meaningful when one considers that each farm unit must provide a living for families of from five to ten persons. At present levels of production this illustrates the difficulty of incorporating this level of farmer into the economy. As population grows, increased productivity will be necessary simply to maintain the present level of living.

3. Land Tenure - Large units under extensive, inefficient utilization and uneconomically small units dominate the land distribution picture in the Dominican Republic. Farms under 15 acres comprise 88% of the number of farms but occupy only about 20% of the farm land. Land, as an element of production, has never been provided the stimulus required for it to find its most economic use. The inefficient use of land is clearly a major fundamental constraint to development. Since 1962 the Government's agrarian reform program has affected 26,000 families in distribution of nearly 300,000 acres. This effort is accelerating and 10,000 settlements should be accomplished this year. It is estimated however, that 20,000 new rural families come into existance each year and remain in the rural labor force, seeking land or employment. In 1972 IAD's waiting list for settlement contained 57,000 names. It is clear, therefore that land redistribution can have little impact under present conditions. Furthermore, settlements involve conditional sales contracts but with no assurance that the terms will be met. Distribution has never placed negotiable titles in the hands of more than a few individuals. To date, therefore, distribution efforts have served only to exacerbate and confuse the following problems:

a. Much land is prevented from entering the market because clear titles do not exist. In 1968, 21% of farmers claiming ownership could neither produce a title nor

identify the type of title claimed. An additional 23% were admitted squatters. Since then about 20,000 provisional purchase contracts have been issued to agrarian reform farmers and none of these has been kept up-to-date. No new owners with clear titles have been produced.

b. There is no tax on land and therefore no incentive to make the land produce.

c. Long-term mortgage credit is virtually non-existent for agricultural property. As a result of this deficiency, land transfers are difficult, even when clear titles and incentives to sell exist.

Truly efficient agriculture will be more difficult to achieve without resolution of the three major issues described above. A citizens' group has been formed to attempt to organize a land transfer mortgage system. This group should be encouraged even though success will depend on long-range resolution of the titling and taxation problems.

4. Population/Migration - Population projections made by the National Council of Population and Family (CNP) in November 1968 indicate that, even with a declining rate of population increase[1/] total population is still expected to grow from 4,314,000 in 1970 to 10,360,000 in the year 2000. No projections are made concerning the location of this population but it is logical to assume that almost all of the increase will end up in the two or three major cities unless more effective efforts are made to increase employment opportunities in the rural areas. These population projections do not differ appreciably from those of the United States Bureau of the Census.

Between 1960 and 1970 Santo Domingo's population grew at the rate of 6.2% per annum compared with a national rate of 2.8%. Expectations of higher incomes, better health facilities and the large recent government expenditures on

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1/ The declining rate of population growth was calculated on the basis of a 3.39% annual increase in 1965-1970 and adjustments for each 5 years period ending with a 2.53% annual increase for 1995-2000.

housing and other urban services, together with the neglect of many rural areas, seem to be the main factors attracting rural migrants to Santo Domingo. Despite considerable public expenditure on employment intensive projects and a significant increase in the new industries established (mostly highly capital intensive), there appears to have been no real reduction of unemployment levels in Santo Domingo.

According to one study[2/] the principal reasons motivating rural-to-urban migration were economic, i.e., "to get a job". Sixty-two percent of the migrants gave this reason. A majority of the migrants were young with 78% less than twenty-six years of age. Very few persons left their home communities if they had not done so by age thirty.

The educational level of migrants was very low. Thirteen percent had no schooling and more than 60% had four years of schooling or less. Only 6% had education beyond the eighth grade. This low educational level is one of the problems that contributes to the complexity of the migration situation.

5. Human Development - Basic skills such as carpentry, mechanics, machinery operation, metalwork and farm management are generally lacking in the rural population. As described previously, functional illiteracy is prevalent in the countryside and likely to grow as the more skilled of this group migrate to the cities. The paucity of skills applicable to modern agriculture is undoubtedly a basic cause of low per capita production and contributes significantly to the high percentage of unskilled, unemployed migrants moving into the cities. A real need exists, then, to create a system to meet vocational education requirements which would impart basic skills to rural people -- skills both applicable to agriculture and to the urban setting. Such a system should by-pass formal educational processes and concentrate on transfering practical ability to large numbers of pupils as rapidly as possible. A reasonable size target group would probably be equivalent to the number of working age persons who migrate to cities each year.

2/ Badenhop and Rodríguez, "Land Tenure in the Dominican Republic", University of Tennessee, 1972.

6. Attitudes - One of the most important factors contributing to the possibility of successfully carrying to completion a development program is the positive and optimistic attitude of those responsible for its implementation. This is especially true in the agricultural sector. A major reason for this has been the large increase in the number of technically trained and competent technicians and professionals working in the sector. Over the past eight years a large contingent has received formal degree training and/or informal short-term training in the United States and third countries. This higher degree of skill and competence has contributed not only to the ability to do the job and confidence in that ability but in most cases, a close association with U.S. personnel and institutions has resulted in an increased desire and willingness to better utilize foreign financial and technical assistance toward the accomplishment of development goals. In addition, increased and improved in-country training has made available larger numbers of up-to-date technicians confident of their ability, although their assimilation into action organizations is slow.

Many of those not touched by any meaningful assistance are apparently not very hopeful of improving their present situation. Most of these are low-income, small-farm families. Despite the fact that this group is viewed by various entities as a "problem group" a "target audience" or as the "ultimate objective" of one or another program, very little is known about it. Virtually no reliable data exists concerning the group's income situation, health and education problems, employment patterns, skills, productivity, etc. The Secretariat of Agriculture is aware of this deficit and is taking some steps to start the compilation of the more critical information. Even without good information we can make some sound assumptions. With almost 267,000 farm families (57% of the total) living on five acres or less and the average per capita income of RD$368.00 (1972) and much lower in the rural areas, it is obvious that serious problems do exist and that their solutions will not be found easily.

E. Response to Economic and Social Problems

1. Government of the Dominican Republic

a. Policies and Priorities - Since early in the development effort government priorities have clearly reflected dependence upon agriculture. Top priority has long

been given to the production of a few key crops for export. In recent years more attention has been given to production for local consumption and the Government has developed goals and plans on a national scale to meet these needs. Many of these special programs, however, have been more a response to pressure or demonstration of the government's interest in a given situation than an effective approach to the solution of the problem. It can probably be quite fairly stated that, despite various written plans and priority statements, the real priorities for the agricultural sector are (1) to protect and give continued emphasis to the traditional export crops (sugar, tobacco, coffee and cacao) upon which the balance of payments is so heavily dependent; (2) to meet domestic food needs and perhaps generate some nontraditional exports with technical, financial and other support to dependable, more efficient (and larger) producers; and, (3) to maintain peace and stability within the agricultural sector through widely publicized but often inadequate responses to economic and social problems that result in pressures too great to ignore.

Planning on a sector-wide basis in agriculture was attempted in 1965-1966, but it was too soon as adequate capability did not then exist to assure its success. In 1970 the National Planning Office of the Technical Secretariat of the Presidency, in coordination with the Secretariat of Agriculture and the National Agricultural Council, prepared "El Primer Plan Nacional de Desarrollo Agropecuario" (The First National Plan of Agricultural Development). This plan stated goals for the sector and quantified them for principal commodities by year from 1970 through 1974. The goals as stated were:

(1) To meet internal consumption needs especially in rice, food legumes, beans, root and tuber crops, plantains and other fruits and vegetables. (Quantitive calculations of consumption were based on historic trends, considering income projections and (desired) improvements in the diets of the population.)

(2) To increase exports. The need to increase exports is important to obtain sufficient external financing to meet development needs.

The "Plan Integrado de Desarrollo Agropecuario" (The Integrated Plan for Agricultural Development) (PIDAGRO), the most recent Government plan for agricultural development, is

agricultural programs and is beginning to establish the inter-institutional relationships envisaged by the 1965 legislation. This group has been a real force in the recognition of the requirement segment for the development of a sectoral approach in agricultural development, and is seeking experienced assistance, through the Secretary, to establish and institutionalize the analytical planning capability required of it. This office offers a real opportunity to assist the country to utilize all of its agricultural resources more efficiently through the development of a sound planning matrix.

Application of the provisions of Decree 8 would alleviate policy formulation and planning problems without necessarily changing existing institutional structures. The Decree, however, assumes a competence within the Planning Office that is only now being developed. When that Office begins to function as a policy formulation, planning, evaluation and coordination mechanism, as is now planned by the Secretariat, the relationships and structure of Decree 8 will be functional. The degree of success will depend on the quality of the policy -- plans -- programs -- budgetary and evaluation cycle set up by that office and the extent to which the Secretariat can gain control of the fiscal mechanism of the decentralized institutions. Its officers are young, well prepared and aware of the failings of policy to date. At the same time they lack experience and need expert assistance for a substantial period while the operations of the office are being completely institutionalized.

b. Public, Semi-Private and Private Institutions

1) Educational - Traditionally there has been little contact or consultation between educational institutions -- public or private -- and the public agencies of the agricultural sector. There are processes underway at the present time which are slowly changing that situation. National University of Pedro Henríquez Ureña figures significantly in the PIDAGRO scheme as a leader in livestock research and extension. The Instituto Superior de Agricultura is cooperating with the Secretariat on the agricultural diversification plan for the Cibao valley. Government technicians are involved in the FAO sponsored animal health project of the Autonomous University and several returned B.S. level participants are employed both by the Government and by UNPHU. Other points of contact and cooperation are developing. Much remains to be done, particularly

to integrate research and extension functions of educational institutions with those of the public sector.

2) Commercial - With the growth in competence of technicians available to the public sector, contact between the Government's agricultural technicians and private commercial interests has increased. The poultry industry relied heavily upon the Secretariat for guidance in its development and the same phenomenon is apparent as the beef industry expands. CEDOPEX is drawing more interest from the private sector as its technical capacity and services expand. During 1973 the policy of the Secretariat of Agriculture has been to engender closer cooperation with the private sector with regard to production and spread of technology to small farmers. This gave rise to rapid growth in the number of small farmers producing under contracts with processing firms with technical assistance from public agencies.

c. General Observation - The relationships outlined by Decree 8 of 1965 have not functioned according to plan to produce a unified agricultural development effort. The decentralization did, however produce a basic institutional base and its components have prospered. The need now is to overcome some of the decentralizing effects of institution-building and draw institutions closer together organizationally and functionally. This has just begun to happen under the present Secretary. In the long-run, however, a major realignment of agencies should be undertaken to integrate and professionalize agricultural services.

C. Production and Marketing

1. General - Dramatic increases in demand for agricultural commodities are being generated by the rapidly growing population, urbanization, expanding exports and the increasing demand for primary materials for the growth of the industrial sector. Agriculture has been providing approximately 22% of the gross domestic product which has achieved a growth, in real terms, of about 10% annually during 1969-1972. Manufacturing contributed another 16% of GDP, much of it through agriculturally related industry.

Production of agricultural products in total showed little improvement between 1960 and 1968. Food production failed to keep pace with population growth and per capita production declined almost 25% during this period (Fig. 1, Annex I). Only rice, potatoes and some types of livestock

showed clear patterns of increased production. The year 1968 marked a definite take-off point for the agricultural sector in several aspects and the main output stimulus to the economy has come from agriculture in recent years. Food production from 1968 to the present gained rapidly on total population with the index of food production moving from 114 (based on 1957-1959 = 100) in 1968 to 147 in 1972. Total value of agricultural production (in constant 1962 prices) increased at an average annual rate of more than 7% (7.18) during the same period. (See Figures 2 and 3, Annex I.)

Despite rapid increased in total agricultural production over the past five years, these increases have not always been in the areas of need. Production increases in a freely functioning sector would usually come in response to increased demand as indicated by higher prices at the production level. Response does not always follow apparent "incentive" in the Dominican Republic. The result is ocassional shortages of key food items, crash programs with heavy allocation of resources and somewhat of a "feast and famine" or "crisis to crisis" type of attention or assistance to the sector, often resulting more in confusion and problems than solutions.

It is difficult to identify clearly the reasons for the failure of producers to respond to need in any given situation. Price controls, shortage of credit or other inputs, inefficiencies in the marketing system and any number of other problems could be contributing factors. In general, however, it could probably be agreed that the greatest overall problem is limited resources. This would include limited credit and technical assistance at the farm level, insufficient depth of capable personnel in the planning, implementation and evaluation of agricultural programs, inadequate performance (and higher costs) in the private sector marketing system and/or a lack of adequate support in the form of infrastructural or ancillary services, e.g., health, education and transportation.

In the face of all the foregoing problems, however, the sector has done a reasonably good job of meeting the effective demand of a rapidly growing population and increasing exports. The country is blessed with several advantages that should contribute significantly to meeting its need and objectives over both the short-and long-term. It has rich soils and favorable climate, including a wide range of micro-climate areas, situated in a uniquely advantageous location with respect

to markets. Traditional markets for principal crops such as sugar, coffee, cacao, etc., provide a reasonably reliable source of foreign exchange. The technological base for sector development, although admittedly shallow, is relatively broad and quite sound and there is presently sufficient under-utilization of land to permit significant production increases if these lands are properly managed. In order to continue to increase agricultural output at the present rate, the Government's efforts must overcome (a) problems in production of major export crops, (b) a more pervasive problem of low productivity in both export and domestic agriculture, and (c) a distortion that favors investment in highly-protected industry rather than agriculture.

2. Production - Many crops or commodities fall into two or more groups in any classification system. For purposes of this presentation they are grouped as industrial, oil and food crops.

Industrial crops have been the basic agricultural commodities in the Dominican Republic for several years and those which have received priority attention. As a group they are labor intensive and require some processing prior to marketing. They cannot readily be consumed in the quantities produced and thus depend on external markets and they yield foreign exchange.

Sugar production for 1973 was forecast to be about 12% higher than the previous year, which would be a new record for sugar output for the third consecutive year. (See Fig. 4 in Annex I.) Export targets were about 4% higher than 1972. In view of the recent drought, however, these increases appear to be somewhat optimistic.

It is presently estimated that approximately 625,000 acres were planted to sugar cane in 1973. Acreage has been increasing about 2 to 4% per year despite emphasis on increasing the per unit production on lands most suitable for sugar production. Sugar cane plantings have in the past been limited by legislation but these limits have not been closely enforced. In 1972 government action authorized increases in sugar cane plantings under certain circumstances and set a total sugar production goal for 1973 of 1,400,000 short tons. Assignments are made to individual mills on quantities that may be sold in export and in domestic markets.

In the last few years considerable discussion has taken place concerning the need for a diversification program that would change to a more productive use those lands less suitable for sugar. To release these lands to other uses and still maintain present levels of production would require significantly greater production on the better lands through a more capital intensive and probably less labor intensive operation. A few have suggested gradual transfer of land to other uses with an equivalent reduction in total sugar production. Exports in 1972 were 1,221,444 short tons with 741,230 tons going to the United States and 480,214 tons to the world market. A drop in sugar sales back to the 400,000 ton quota level would certainly be devastating. The world price of sugar, however, is presently between 10 and 12 cents per pound and quotas under the agreement do not begin to apply until world prices drop to 5.25 cents per pound. The outlook, therefore, is for several more years of a very favorable market situation.

Decisions on the sugar industry are of paramount importance. Nearly any conceivable Dominican Government would maintain that sugar production must continue to increase, both for internal and external demand. Increases can be achieved by adding various factors of production, particularly land or capital. With the current level of production technology, labor is of primary importance. The basic trade-off however, is this: by intensifying capital inputs, e.g., tractors, mechanical harvesters and loaders, manual labor requirements can be reduced. Capital expenditures for improved cane varieties, irrigation works and fertilizers can increase production per unit and reduce land requirements. Little accurate data is available on unskilled labor resources applied to sugar production. It is estimated however, that well over half of the field work force is of Haitian origin since cane cutting is regarded as the most denigrating employment possible in the Dominican culture. Substantial reduction of the work force in sugar could be accomplished with few, if any, ill effects in the rural economy if marginal sugar lands were efficiently shifted to other labor intensive activities such as dairying. Given the importance of sugar to the balance of payments situation, any reduction in sugar exports during this period would probably be most unwise. Increased attention should certainly be given to diversification of sugar lands implemented so that production is not interrupted. Diversification of agricultural production as a whole, which can be done without disturbing present exports, should receive a high priority.

Coffee production in the Dominican Republic is meeting domestic consumption needs and providing about twenty-five million dollars in exports annually. Over the past few years there has been no noticeable trend in coffee production. Exports have varied only slightly. Many of the coffee plantings are old and relatively unproductive. Technology in the country has not kept pace with that of the principal coffee producing countries. Both yields and quality could be increased by increasing the level of technology. Production sufficient to meet potential domestic and foreign demands could thus be obtained from a smaller land base or increased demand could be met from the present area.

Some processing of coffee is done in the country but almost ninety percent of the exports is in green coffee. There is no soluble coffee production in the Dominican Republic and there are no known plans to produce this commodity. Some increased employment and significantly greater foreign exchange earnings might be generated by a move to more and better processing in the country.

Coffee exports are somewhat controlled on a worldwide basis. The Dominican Republic is a signatory to the Geneva Coffee Agreement. The presence of coffee rust in Brazil, the probability of this disease reaching Colombia and the possibility that it will not reach this country because of its isolation from South America, would make coffee appear to be a crop with excellent long-term prospects which may deserve special attention because of its employment potential for a large number of the poorer rural population.

Cacao production is centered in the Cibao valley where the crop is raised mostly on small farms. Little attention is given the trees except at harvest time. As with the coffee, plantings tend to be over-age but otherwise in good condition. Little fertilization, herbicides or fungicides are used. A long, gradual decline in the annual production of cacao beans was checked in 1969 through USAID-sponsored efforts of the Secretariat of Agriculture. Since then, production has varied widely from about 26,000 tons to 40,000 tons depending on the season. (See Fig. 5, Annex I.)

Cacao is usually third in value among agricultural exports. As with coffee, most sales are in the form of beans as little processing is done in the country. The United

States is the principal market since most of the European requirement is for high quality, partially processed cacao. At one time processed cacao products comprised a substantial part of Dominican exports but have more recently been of little significance. In 1972 some processing activity was revived and more than 10% of cacao exports was in a processed form -- up from almost zero the previous year.

Improved cacao varieties were brought into the country (by the USAID Mission) beginning in 1966. This material is presently being distributed. A Cacao Improvement Program -- 1972-1976 is in the early stages of implementation and is being given a high priority. This crop offers significant potential as an earner of foreign exchange and conditions are excellent for cacao production. It also is a good generator of employment and income to marginal rural families.

Tobacco is becoming more important both as an export and import substitution crop. In 1972 tobacco was second only to sugar in value of exports in agriculture. Considerable improvement can be made in the type and quality of the tobacco produced in Dominican Republic that would continue to increase the value of both export and domestic sales.

The levels of technology used in tobacco production vary widely but could be somewhat improved. Greatest attention should be given to varietal improvement and to expanding the amount of processing carried out in the country prior to export. A recently imposed special tax on domestically produced blond tobacco, presumably a means of maintaining import levels, should be reviewed. Tobacco is one of the most labor intensive of all crops and thus merits some priority attention but the nutritional requirements of the population will have to weigh in the balance since tobacco lands compete with other food crops.

Oil Crops (peanuts, coconuts, soybeans and others) - The production of edible vegetable oils has increased each year for several years but has not kept pace with increased consumption. The principal oil crop is peanuts. Consumers have a high preference for peanut oil but the acceptance of coconut oil is increasing as a result of INESPRE information efforts. Imports of edible oils have been rising but are expected to decline slightly in 1973 because large carryover stocks were available at the beginning of the year.

Both peanut acreages and yields have been increasing. (See Fig. 5, Annex I.) Continued production increases can be obtained from further expansion and higher peanut yields but other crops should be given more attention. The potential for coconut oil production is very great in areas that are less suitable for the production of other crops. New disease resistant varieties have been introduced here and are ready to provide the seed necessary for expansion. In addition, small trials of African oil palm were established in about 1967-1968 and are ready for evaluation. If this crop is found to be suited to the Dominican Republic, it should be given high priority as it is the most efficient producer of edible oil in appropriate climates.

Soybeans are being grown in some areas of the country. It is doubtful, however, if they can be fully competitive with more efficient oil crops here except in special circumstances, e.g., a rotation crop with tomatoes in the Azua area.

In a development sense policy makers and planners have been concerned with oil crops individually and separately. There is a need to consider edible oil crops as a group and to develop plans and programs for the entire group to most quickly and efficiently meet the growing edible oil requirements of the country.

Food Crops (rice, plantain, beans, corn, root crops, fruits and vegetables) - Rice and wheat are the staple food grains in the Dominican Republic, the latter being an imported commodity. Corn and sorghum are used mainly as animal feed. Plantain, sweet potatoes, casava and potatoes are also important sources of starchy foods for people. Rice, beans and pigeon peas are principal protein sources, especially in lower income families.

Rice production has, until 1973, kept pace with the growing demand for several years. (See Fig. 5, Annex I.) It is presently estimated, however, that over 20,000 M.T. of rice will have been imported in 1973 as a result of stronger demand, stemming in part from greater prosperity and in part from a shortage of starchy root crops due to a drought. Marketing irregularities also magnify the disparity between supply and demand as millers and wholesalers tend to group together to influence prices. INESPRE has been reasonably successful in

skewing prices in favor of consumers and has maintained a fair market price for producers. Nevertheless, rice production and marketing is a sensitive political issue which concerns nearly all public institutions associated with agriculture.

As more data become available, the country will be better able to formulate policy with regard to rice and its relationship to starchy root crops and plantains. Land use patterns show that much land devoted to rice could better produce alternative crops. Unused marshy lands ideally suited to rice culture (and little else) have not been fully developed. As more rice lands are assigned to IAD and its marginal farmers, an extension program of great magnitude will be indispensable to satisfactory rice production. In the long-run, however, the Dominican Republic must arrive at a policy of optimum, not maximum, rice production and hope to achieve a balance wherein the country produces all the rice it can efficiently produce, imports the required balance and pays for the deficit by producing other commodities efficiently.

Beans are a basic protein source for most Dominican families. Over the years production has varied widely depending upon input availabilities, market prices and the prevailing weather. Production programs have had only marginal success in the face of serious marketing and distribution problems.

Dominicans are increasingly aware of the short and long-range possibilities for fruit and vegetable production. There is a critical need to improve the nutritional balance of Dominican diets as well as a broad market for fruit and vegetable exports. Puerto Rico, the United States and Europe are excellent markets for a wide variety of products, especially during the winter months. Efforts are being made to enter these markets with reasonable success being achieved with a few selected commodities. In this agricultural area potential returns appear to be available but the problems and complexities are extremely difficult to overcome. Timely and low cost transportation is a principal obstacle and one that is critical to success. Technological levels required and the quality demands of foreign markets are difficult for the inexperienced producer to meet. In addition, many of the fruits and nuts for which there is a keen demand take several years to grow to production and thus require long-term credit or capital investment.

Some of the more stringent quality standards placed on fruits and vegetables are somewhat less critical if commodities are processed prior to export. Some significant progress has been made in the past two or three years in increasing the exportation of processed agricultural commodities. Examples worthy of mention are leather products, canned fruits and fruit nectars and pastes, canned pigeon peas, canned mushrooms and platano chips. This processing not only can simplify the transport problem but also generates additional employment and income. It is important to note that many of the agricultural commodities that are high value commodities and require a high employment input in the production stage also generate a high level of employment in the processing or manufacturing stage. Special attention should be given to this fact when planning programs and setting priorities in the agricultural sector.

Livestock and Livestock Products - The Dominican Republic has always had enough beef to satisfy effective local demand. Meat exports became important after 1931 and Dominican beef was widely-shipped live throughout the Caribbean. In the early 1960's Government policies and the tax structure resulted in a virtual collapse of the meat production and marketing system. Poultry, dairy and swine production declined and beef remained an extensive, no-input operation. Beef exports to the United States and Puerto Rico ceased temporarily and revived in the late 1960's when poultry production began to satisfy local demand for meat.

The prospects for expanding the profitable livestock industry in the Dominican Republic are good. It is estimated that 35 to 50% of the land in farms is better suited for grazing than for any other purpose and more intensive livestock production should be encouraged on these lands if food needs could be adequately met through production or import. However, the coefficient of total employment generation, direct (on farm) and indirect (in marketing and processing) varies widely depending upon the enterprise and the extent of processing. Beef production generates only 2.2 cents of direct employment per dollar of output but when marketing and processing are included this increases to 13.9 cents of employment per dollar of output. Milk production and marketing (direct and indirect employment) generates 31.3 cents of employment per dollar of output. The direct and indirect effects of swine and poultry fall between beef and dairy as employment generators.

more or less a metamorphosis of the Plan discussed above. The PIDAGRO is financed principally through an IDB loan of RD$24.8 million with a second equivalent amount scheduled to follow successful implementation of the first phase. (For an assessment of the PIDAGRO, see the section on Other Donors below.)

Policy formulation operates under very real political constraints. Consumer demand is rising incrementally but obvious political necessity dictates against the corresponding price increases which would reflect demand back to the producer. By the same token, pressures are brought to bear from the rural sector for a fair return to the producer, for improved land distribution and increased services to farmers. Further, rising aspirations in all sectors result in additional demands for increased participation in the social and economic benefits of an expanding economy. These socio-economic considerations are increasingly influential in policy making, as exemplified by the renewed emphasis on agrarian reform. The pressures to maintain high levels of exports and a favorable balance of payments situation, however, have lost no importance despite these other concerns.

As previously mentioned, past policies, priorities and programs have resulted in a number of problems affecting agricultural development efforts. Low productivity, low educational level, wide disparity of income and high unemployment are important considerations facing decision makers. A sector highly-oriented to a few export and food crops, agro-industry narrowly and inadequately developed and widely scattered responsibility for sector development will make immediate progress difficult to achieve. The existence of a fairly adequate infrastructure, a shallow but greatly improved technical capability and a legally-constituted institutional structure that could be adjusted to do the development task, are definite advantages that could weigh quite heavily toward success in the implementation of an agricultural development effort. In some areas such as livestock production, Government policy has already been responsive within existing limitations. Exports of oil cake have been virtually eliminated to reserve these products for domestic use, mostly in animal feeds at this time. Grain production has received priority attention, albeit with limited success, and expanded imports of grain have been allowed.

b. Budgetary Support - In assessing the Government's budgetary support for its social and economic

aspirations in the rural sector, purely agricultural expenditures cannot readily be separated from allocations for social programs such as agrarian reform, housing, potable water, and penetration roads. Also, the nature of the budget structure makes it extremely difficult to identify all transfers into or out of the sector and to determine the actual allocation of some significant expenditures.

Verifiable public sector expenditures for agriculture, including irrigation, increased slightly from 1968 to 1972[1/] but decreased slightly as a percentage of total outlays during the same period. Expenditures in the agricultural sector from all public sources include those from the Central Government budget, transfers, external financing and from resources belonging to the different public sector entities in the agricultural sector. The trend and level of these expenditures are as follows:

Public Sector Expenditures in Agriculture *

(Million of Dollars)

	1968	1969	1970	1971	1972 **
Total Government	246.9	283.1	316.7	363.1	422.7
Total Agriculture	26.6	26.7	31.3	34.9	40.4
Agr. as % of Government	10.77%	9.43%	9.88%	9.61%	9.56%

* Includes all decentralized agricultural agencies.
** Estimated expenditures based on budget.

Source - USAID

1/ Actual expenditures were not available at the time of the most recent expenditure analysis. The 1972 figures used, therefore, were budget figures and may be somewhat higher than actual expenditures.

In addition to the above expenditures the Government has committed itself over the long-term to other obligations that will have an important effect upon the sector. These include RD$25.0 million in government bonds for agricultural credit expansion (RD$20.0 million of which has already been received by the Agricultural Bank) and the amortization of government bonds for land acquisition under agrarian reform. Cash transfers for land purchases, totaling over RD$10,000,000 may also appear as unbudgeted expenditures at the end of 1973.

With the growth of technical competence in agriculture there have been some indications of increasing government interest in the sector. To date, however, financial support, proportional to the over-all developmental importance of the sector, has not been forthcoming. Agriculture during the past five years has produced between 75% and 85% of the value of total exports and between 21% and 25% of the gross domestic product without counting its contribution as a supplier of primary materials to industry. Considering the present level ot its development and its key importance with respect to meeting growing food, export and industrial needs, significantly greater financial support will be required, public and private, to fulfill these demands.

2. Private Sector - Since 1966 private sector investment in the country as a whole has been growing at an increasingly rapid rate. Some large investments such as those in oil refining and ferronickel production have already resulted in improvements in the balance of payments position and relieved some of the concentration on agricultural exports. Although impossible to enumerate, there has been significant expansion of private investment in a wide range of physical facilities serving agriculture (such as milk processing, transportation, vegetable oil and fruit and vegetable processing). In addition, many private companies have increased their interest and participation in all phases of production and marketing of specific products. The vegetable oil company, for example, provides some credit, improved seed, technical assistance, custom machine work, and other services to contract producers. Other companies producing soap, milk products, canned fruits and juices and tobacco products, are similarly involved with their producers. This type of participation by the private sector has increased rapidly as confidence in long-term stability has grown and as government policies have become more conducive to increased private investment.

There has been a notable lack of response in the form of expanded distribution and marketing of agricultural inputs. Input suppliers are not effectively reaching many of the small and medium producers. It is likely that insufficient credit and perhaps a lack of technical knowledge on the part of these producers may be a serious constraint, although a marketing study may reveal others as well.

The private sector could and should further increase its financial and technical participation in agricultural sector development, especially in agriculturally-related industry. The Financiera Dominicana has increased its lending to agriculture with emphasis on agribusiness. It is widely recognized that increased fiscal support for agriculture, from all sources, is essential to the sound development of the total economy. In order to attract this increased fiscal participation by the private sector, industrial policies should be changed to reduce emphasis on import substitution and capital intensive operations and encourage increased emphasis on employment intensive agricultural and export enterprises and industries.

One suggestion is that reserve requirements be made less stringent with respect to agricultural and agribusiness lending. It is quite likely that private banks would welcome an opportunity to employ unused assets and would increase agricultural lending activities correspondingly. Some bankers have indicated a willingness to expand their technical services to farmers if the incentive to expand agricultural lending is provided.

3. Other Donors[1/]

a. Inter-American Development Bank (IDB) - The IDB has attracted interest in the Dominican Republic because it is a real and potential source of considerable financing on concessional terms across the board in agriculture, tourism, hydroelectric power, irrigation, and fisheries development.

1) PIDAGRO - In agriculture (and hydroelectric development) the IDB entered the recent picture through its important role in the construction of Tavera Dam. This

1/ A schematic presentation of donor activities appears in Annex II, Fig. 2.

effort was accompanied by the negotiations which eventually led to the signing of an RD$24.8 million loan in support of the Plan Integrado de Desarrollo Agropecuario (PIDAGRO). The Government is committed to fund the remainder of the RD$37.2 million plan. This four-year project was designed to bolster Dominican capabilities in several key areas of agricultural development including agrarian reform, research, extension, credit, livestock development, cadastre and training. Negotiations and planning for this loan were underway in 1970. By the end of 1972 the loan was signed and construction of the basic mechanism for its administration was begun. In effect a new agency, Fund for Agricultural Development (FEDA), was established to administer the program. This agency, with a superstructure leading to the Presidency, was designed to handle development programs as a kind of clearing house seeking external financing and handling funds for an integrated agricultural development effort. To date, FEDA has not functioned in that capacity but has concentrated on building a staff, drawn largely from sector institutions, to meet the requirements of the IDB with regard to disbursements. The anticipated flow of funds for project initiation has been slow; however, an initial disbursement has been made.

Three basic elements of PIDAGRO have much merit in terms of immediate confrontation of fundamental problems. These are credit, cadastre and training, although certain adjustments and changes of emphasis, such as those described below, may have to be made if maximum results are to be achieved.

Credit - The RD$17,488,000 block earmarked for credit under the loan is beneficial. More credit is needed in agriculture at all levels. Technical assistance to farmers receiving this credit will be supplied by the Secretariat of Agriculture under agreements with the Agricultural Bank. This credit sub-project is to provide, over a four-year period, RD$6,165,000 for livestock development; RD$4,936,000 for crop production through oriented credit; and a credit line for agrarian reform projects of RD$3,448,000 for livestock and RD$2,496,000 for general agriculture. About 6,000 small farms in specific regions are targeted to receive credit to produce livestock and selected food, feed and oil crops on approximately 150,000 acres. Though this sub-project of PIDAGRO has attracted attention as a significant credit program, it obviously doesn't fully meet needs either in terms of credit required in the sector

as a whole or in targeting groups which heretofore may have lacked the financing to increase production.

Training - The training segment of PIDAGRO contemplates expenditures of RD$2.5 million to train mid-level technicians in the disciplines necessary for them to be effective in the execution of other PIDAGRO segments. Approximately 1,027 professionals will receive training through this fund through scholarships to study outside the country and in-country courses. A National Training Center is also contemplated though its position within the present educational structure is not clearly stated. IDB has prevailed upon the Educational Credit Foundation to conduct a preliminary human resource requirements study before this project segment is fully-funded. Since the parameters of PIDAGRO are firmly established however, it would appear that some foreign training should be initiated immediately to serve the needs of the project.

Cadastre - This portion of PIDAGRO is intended to build upon the 1969 OAS Natural Resources Study and map the property lines and soil capacity of the entire country through the Directorate for National Cadastre. Technically the project is sound. The RD$2.2 million allocated to the cadastre will be well spent if attention is paid to transformation of the National Cadastre Directorate into a modern, functioning entity and if eventually a system, such as annual land taxation, is adopted to maintain property records up to date and to fund the system providing that service. A 1967 estimate stated that RD$11,000,000 in revenues could be generated through a simple system of real property taxation. Such a system could have far reaching spin-off benefits as described earlier. The single weakness of the PIDAGRO Cadastre is that it is non-institutionalizing. Unless remedied its long-term effect could correspondingly be weakened.

Other PIDAGRO Segments - The remaining elements of PIDAGRO need review as discrete projects with a view to making them better. The Animal Health and Reproduction Center portions represent a total investment of RD$7.8 million. The central problem in Dominican livestock development -- improper management -- is not dealt with. Old agrarian reform projects will absorb some RD$7.0 million, primarily for infrastructural improvements or rehabilitation of existing infrastructure under the segment entitled "Consolidation of Farmer Settlements".

This leaves the social and institutional structure of agrarian reform intact and puts aside the fundamental issues.

The feature of PIDAGRO which can cause most concern centers on the mistaken notion that it represents a comprehensive and integrated national agricultural development plan based on analysis of rationally-selected choices. Upon examination, it is found to be a series of important but very loosely interrelated projects. The criticism that its potential long-range impact is limited by failure to target fundamental policy and institutional problems is probably justified.

2) Other Projects - IDB has mapped out other possibilities for a sizable investment in Dominican agriculture, (including fisheries). A RD$2.0 million loan signed this year will provide high risk credit for cooperative fishing enterprises. It is not possible to estimate the potential benefits of this project at present because of uncertainties as to fish populations, human resources and other factors.

The future $16.0 million IDB loan for irrigation on the Yaque del Norte (near the Tavera-Bao irrigation district) seems assured and will be worthwhile.

Other IDB investments may include telecommunications, feeder roads and vocational education. Plans in these areas are not known and are presumed to be embryonic at this time. A second stage of PIDAGRO is contemplated but, given the present rate of implementation, the outline of the second stage is not yet clear.

b. United Nations Development Program (UNDP)/FAO - The UNDP has expressed a desire to be supportive of PIDAGRO but in its "Program for Technical Assistance, 1972-1977", recognized that implementation of that plan may be held back and set forth a series of projects which were themselves justified as discrete areas of activity, as follows:

1) The program for Diversification and Increased Agricultural Production in the Cibao valley is a five-year program due to terminate in July 1974. Its first phase included research on diversification of crop production, soil fertility, irrigation, and rural administration. This phase is nearly complete. The second (extension) is about to begin in cooperation with the Diversification Fund of the International

Coffee Organization, which is investing RD$700,000 in the effort. The project includes 108 man-months of scholarships at the university level outside the country. The project is centered at ISA and one FAO agriculturist will remain on site after June 1974.

2) A Cacao Development project was initiated in 1971 in cooperation with the Secretariat of Agriculture and the USAID Mission. FAO's contribution is an expert in processing.

3) FAO is involved in a RD$93,000 Veterinary Medicine program designed to upgrade diagnostic capabilities as a sequel of the earlier Animal Production and Veterinary Teaching program which terminated in February 1973. The present program will end in April, 1974.

4) A RD$100,000 FAO project for Training and Demonstration in Health and Animal Production is underway with three permanent technicians working in conjunction with the UASD faculty on poultry disease, clinical medicine and artificial insemination. In livestock also, FAO is involved in a RD$30,000 project in molasses feeding experimentation.

5) A five-year RD$647,000 project entitled "Development of Pastures and Livestock" will begin under FAO auspices in 1975. This program will be aimed at greater production efficiencies.

Generally, FAO's agricultural efforts are discrete projects with measurable returns which are very well staffed from the technical point of view.

c. World Bank (IDA) - An IDA Cattle Credit loan administered by the Central Bank is now being disbursed. Initially this loan appeared to have implementation problems because of its requirements that substantial portions of sub-loans be used for capital improvements. This has not proven to be a serious obstacle, however, because the demand pull on beef has spread the realization that such investment will prove profitable.

IDA is slated to be involved in about one-third (RD$13.0 million) of the additional financing required to complete the Yaque del Norte Project and related irrigation works.

Another RD$5.0 million tranch of IDA capital may flow to a road repair and maintenance loan in the future.

Other World Bank areas of interest are tourism and primary and secondary education.

d. Micro-Donors - The OAS, IICA and other regional organizations have small developmental programs in the Dominican Republic. Bilateral assistance is afforded by Israel, Taiwan and Germany, on a permanent basis and by several other countries on a short-term basis.

The effectiveness of USAID and Other Donor assistance to the Dominican agricultural sector over time has been somewhat less than optimal. Conflicts on objectives and serious overlapping of efforts have been avoided but there have been only cursory attempts in the past to coordinate the efforts of the different international agencies toward common objectives. Given the nature of the Government's policy, planning and evaluation systems in agriculture, donor agencies for the most part, have responded to the empirically-perceived requirements of specific program areas. This has resulted in a broad array of externally-financed activities which, together, have not made the maximum contribution to overall agricultural development. The donor group has not attempted to tackle the problem of institutional development which would have influence beyond the needs of specific projects. Other important areas also, have been left without the needed attention or support which has reduced considerably the effectiveness of assistance.

There are two requirements basic to increasing the effectiveness of donor participation. These are (1) a single Dominican focal point for overall agricultural policy and planning, and (2) strengthened coordination of efforts among and between donors which will increase program effectiveness over the long-term. These two requirements are not mutually exclusive; rather they are mutually-reinforcing. A stronger, more capable Office of Planning, Coordination and Evaluation in the Secretariat of Agriculture would undoubtedly help to meet both requirements.

II. POLICY CONSIDERATIONS

As a result of policies, priorities and programs affecting the agricultural sector over the years, a number of significant problems have developed. Some of these have been within the scope of responsibility of the agricultural sector and some have not. All will bear heavily upon future development efforts. These include:

- A generally very low educational level of a large part of the population, especially the rural population;
- A generally very low level of productivity on most farms and for all crops and livestock;
- An agricultural sector highly oriented to a few export crops and one or two food crops;
- A wide disparity of income and land distribution;
- Very high unemployment and underemployment;
- Agriculturally-related industry narrowly and inadequately developed; and,
- Responsibilities for development of the sector widely scattered among many institutions and poorly coordinated.

Some of the advantages that have accrued from past policies and priorities will make significantly beneficial contributions to agricultural sector development. The principal ones are:

- The technical level of personnel involved with agricultural development, although still very shallow in most disciplines, is greatly improved and attitudes toward achieving significant social and economic development are extremely positive;
- The existing infrastructure (roads, suppliers, marketing services, etc.) is adequate to meet the requirements of a significantly expanded agricultural production, though inadequate in the longer term;

- The institutional structure, although not presently functioning as intended (under Decree 8 of 1965), could be "adjusted" to do the development job; and,

- A plan presently exists under PIDAGRO to begin a broad development program. Although this plan has some serious weaknesses, it provides a building base, and the program envisioned is scheduled for financing.

Assuming that conservative population projections are correct and that the estimates of a present food deficit are nearly accurate, the Dominican Republic must triple its physical production of agricultural commodities within the next 27 years in order to assure a level of per capita consumption near the minimum requirement while maintaining exports at a level proportional to the present. This is indeed a monumental task and one that would challenge agriculturalists in almost any nation. If these assumptions are correct or nearly so, the implications for the Government are quite clear. Production targets must be set by commodity based upon what and how much the people should eat (instead of on what the people now eat), and the level of exports desired. Plans and programs must be developed for reaching these targets. Financial requirements must be quantified and identified, not only to meet the production targets but for the ancillary actions that will be required to develop the necessary base for success. Human resource requirements must be estimated far enough in advance of need to permit the necessary training and development. Weaknesses in the overall production and marketing structure must be identified and corrected.

All of these things must be accomplished on a priority basis, always bearing in mind other social objectives such as employment generation, income redistribution and an improved quality of life for all Dominicans.

Many things influence the rate and the shape of agricultural development. In an economy such as exists in the Dominican Republic, the policy decisions of the Government as well as how these policies are applied is probably the paramount influence on development progress. A logical sequence for policy review is to identify the goals of the agricultural development process and then consider policy alternatives within the framework of these goals.

The goals of the Government in agriculture, as stated in the First National Development Plan[1/] are sufficient as a basis for policy formulation. To date, however, those goals have not been articulated in terms of policy. The manner in which present policy is expressed is a manifestation of the political style of the Government -- treating the problems of specific regions, producers and interest groups as particular problems without formulating general or specific policies which might serve to avoid similar problems in the future. This style is a carryover from earlier times when agricultural production was taken for granted, population pressures were relatively low and the modernization process had not yet begun. This system, as a way of allocating resources, may have been reasonably effective in the past when nearly any project or program represented a step forward. However, in a more complex setting, with accelerating population and food pressures, a high degree of urgency and very limited resources, improved management of resource use is essential to the timely accomplishment of the desired objectives.

At present, in the agricultural sector, several phenomena indicate a movement toward a more rational system of policy formulation and implementation. The professionalization of the Secretariat of Agriculture and its effort to develop policy and planning capabilities, the appearance of the Central Bank on the agricultural scene in an active role, the Agricultural Bank recapitalization and attempts at rational self-examination, increased coordination among all sector institutions within the present framework and the revitalization of the National Agricultural Council, are all actions that should contribute positively to improved policy formulation. These steps are largely the result of increasing professional capability within the sector in which the Executive authority has apparently placed substantial credence. This professionalization and rationalization of the sector, a long-sought goal of the USAID Mission, is not yet complete and deserves full support as the first among key policy issues.

Given the rising population, greater demands for agricultural products by a more affluent society and the relatively more favorable financial position of the country resulting from greatly increased foreign and domestic investment and political stability, the Dominican Republic has both incentive and opportunity to give greater attention to domestic requirements while maintaining a healthy balance of trade. The Government is fully

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1/ See Section I, E, 1, a.

cognizant of the need to give high priority to increasing production for domestic consumption and agricultural policies and actions clearly reflect the Government's desire to meet domestic food needs. Much of the country's land resources, however, are best suited for certain exportable commodities, and the efficient use of such resources will also be a significant goal of agricultural policy.

Judging by the heavy Dominican investment commitments to agriculture for expansion of irrigation grids, support of PIDAGRO, agrarian reform, agricultural credit and transportation networks, it is apparent that a priority objective of the Government is to increase production for local consumption and improve distribution of the increased agricultural wealth. It is also clear that some key elements have been given insufficient attention or consideration in planning and resource allocation. The more important of these are:

Nutritional Requirements

On the analytical side, little attention has been paid to global food requirements at various levels of population and structural transformation from rural to urban environments. Foods which dominate the market of staple crops and lineal production goals for food crops are stated predominately in terms of those foods which are of low nutritional value or which, taken in total, do not fulfill minimum nutritional requirements. Insufficient attention is given to providing a wider variety of the more nutritional commodities over time. Policy changes (such as emphasis on farm credit or stimulating market improvement) could bring about increased production of commodities that are required to improve nutritional balance. They could also provide incentive to the private sector to be more cognizant of basic nutritional needs in their production, marketing and processing of foods. The USAID Mission and other international agencies would undoubtedly support both the planning and financial aspects if the Government, through systematic assessment, recognizes the need to establish nutritional goals for the population and to act to accomplish those goals.

Credit Requirements

A general credit policy does not exist for Dominican agriculture. Neither has a priority been established for agricultural credit as related to industrial or commercial credit

nor has a system of values been placed on the various types of agricultural credit, i.e., crop production, livestock, agribusiness, subsistance farm credit, capital formation and other categories. Agricultural credit wasn't planned. It just happened.

The basic choices open to the Government are (1) to continue the attempt to meet agricultural credit needs primarily through public institutions or (2) to find the policy mechanisms whereby increased amounts of private institutional credit are drawn into the sector and actively seeks opportunities to promote agricultural production. The latter would permit the limited public sector credit to be allocated primarily to the less commercially viable farmers who require greater supervision. When the credit deficit is analyzed the most probable conclusion will be that public financial resources are clearly inadequate to requirements and that private capital must be mobilized. When credit policies finally emanate from analysis, it is anticipated that there will be a significant credit deficit that cannot be met from the combined public and private credit available. If so, USAID financing could play a crucial role if the Government's policies are designed to make credit available to all farm units with the ability to use it productively.

Marketing

There is little reliable or significant information on the internal marketing structure and little credit available to support it. It is well recognized and accepted that the marketing system, especially as it services the domestic market, is quite inefficient and contributes excessively to the spread between producer and consumer prices. The basic policy choices of the Government in attempting to solve marketing problems are (1) to expand the Government's role as a marketing agent in competition with the private sector, (2) to establish policies (tax, credit, regulatory and others) which will encourage increased private sector participation in marketing; or, (3) a selective combination of the previous choices whereby the Government enters the field only to stabilize prices and to assure domestic supplies of staple commodities when the private sector cannot act. The Government should analyze the marketing system in order to identify the needed improvements and the human and capital resource requirements. The USAID Mission would be prepared to support such an analysis. Consideration

would also be given to financial participation in a sound plan for improving the marketing system as a means of improving nutritional levels, increasing income to low income families and generating additional employment both in production and marketing.

Skilled Labor Requirements

The country's skilled labor requirements are not quantified at present but lack of basic skills is an obvious hindrance to development of the agricultural sector[1/] and to increased support from health, education and other sectors. While the Government's increasing expenditures for formal education and literacy is rising, little attention has been given to development of the basic skills required for economic and social progress. Development of agricultural and manual skills among semi-literate or illiterate farmers or rural laborers as a means of raising their productivity and earning capacity should be given increased priority. The USAID Mission would be prepared to consider support of the formulation of a policy related to the development of skilled labor resource requirements and consider participation in Dominican efforts to meet those requirements. This same concept of assistance may be applied to degree level agricultural education as well.

If the Government is to meet its goals of increased production, improved quality of life and social progress, it must be willing to examine critically the structure of its institutions in agriculture[2/] and to adjust them to the needs of the sector.

At present there is a definite move toward professionalization in progress in several institutions, most notably the Secretariat of Agriculture and to a lesser degree, the Agricultural Bank, IDECOOP and IAD. This process will undoubtedly improve agricultural policies and programs as increased numbers of professionals become available. The need to provide attractive compensation for professional services is acute,

1/ See Section I, A, 3.
2/ See Section I, A. Institutional Base.

however, and should be recognized and treated in order to assure the continued improvement of the staff.

A thorough assessment of the institutional structure will most likely demonstrate a need for some reorganization, a closer alignment of some of the decentralized agencies and significantly closer coordination and inter-agency cooperation.

The present ad-hoc budgetary procedures in agriculture are based, at least in part, on the lack of comprehensive policy and planning. Professionalization of institutions and the development of policy formulation and planning mechanisms competent to establish long-term priorities may serve to regularize budgetary procedures.

A relatively greater portion of total resources will probably have to be devoted to agriculture if its full potential is to be realized. Some efficiencies can most likely be achieved through improved resource allocation. Private sector participation can most certainly be stimulated through the adjustment of tax, investment, credit and other government policies. Governmental outlays should be focused on fundamental issues which cannot be handled by the private sector. The determination of the form and extent of the Government's financial participation in any accelerated agricultural development effort is an issue that will have to be decided by policy makers. The USAID would encourage maximum private sector action.

There is considerable question about the present overall land policy's[1/] having a beneficial sector-wide effect. The continuing change in the population structure from rural to urban is an irreversible trend, dictated by today's man/land ratio and the rapidly growing population. Migration could be slowed considerably, however, through increased emphasis on agricultural industries located in the rural areas and on more intensive agricultural production.

It is essential that the Government develop a comprehensive land policy and the institutional framework to administer

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1/ See Section I, C, 3. Land Tenure.

that policy. Basically the objective should be to resolve problems of titling, mortgage credit and taxation. There are some lands in the country that probably should be distributed but in the long-term the central problem of inefficient land utilization can be attacked most effectively through enforcement of land use policy. Both the Government and USAID are aware of the political realities of the land policy question and the practical limitations to achieving significant progress in this area in the short-term.

III. THE USAID MISSION APPROACH TO A DEVELOPMENT STRATEGY IN AGRICULTURE

A. General

Despite the shortcomings outlined above in policy, planning, human resource development, credit, marketing, agricultural services and other categories, the progress of the country's agriculture over the last five years is indicative of what can be done in a short period of time given a large and reasonably efficient infusion of resources. Significantly, the foundation for the next stage in Dominican agricultural development is now broader and stronger.

The financial and technical resources, both external and internal, now slated for application to Dominican agricultural developmental projects are substantial. The degree to which these assets are effectively employed is doubly important. They must be used well and husbanded carefully in consonance with the requirements of the growing population. Also if they are well used, there will be a better basis for again approaching external lenders. As noted earlier, increased concessional borrowings will be required to fuel the Dominican development effort.

There has to date been no attempt to determine what total external aid requirements would be in the next few years, much less what they would be in 10 or 20 years. Nor has anyone systematically studied the need for external assistance in agriculture, except as a somewhat hurried response to periodic commodity shortages or social disequilibria. There are now the beginnings of realization by some Dominicans who occupy key positions that the totality of problems must be examined and that they must consider what resources -- external as well as

internal -- can be mobilized to deal with these problems. Thus, attention is being directed in ways which were beyond hope or expectation five to eight years ago.

B. Proposed Scope of Assistance

While the following ideas must be tested through the analytical sectoral assessment process, our analysis to date suggests that the most effective role of U.S. assistance will be in key areas not yet receiving attention from the Government or other lenders -- either in terms of unattended general requirements or large groups of people not receiving attention. The foregoing discussion pin-pointed several critical areas, as follows:

1. Policy, Formulation and Planning - Simply stated, the most critical agricultural problem facing the country has been its failure to plan and allocate scarce resources in order to produce the agricultural commodities the country requires in the quantities needed. We would therefore assign first priority to reformation and institutionalization of the policy, planning, coordination and evaluation system of the sector in any list of developmental problems. This pivotal problem affects the role of all public and private entities engaged in agriculture and agribusiness. The need for painstaking assessment of resources and requirements and the evolution of the assessment into rational, long-range plans for agricultural development is clear. The country can no longer afford less than optimum use of available resources and maximum effort in agriculture if it is to support a population double the present size in a score of years, maintain an acceptable foreign exchange position and provide an improved level of living for its people.

The proposed USAID effort would be to actively assist the planning area of the Secretariat of Agriculture's Office of Planning, Evaluation and Coordination. The near-term caveat attached would be the assumption that the Secretary of State for Agriculture will continue his support of a sectoral approach to policy formulation, planning and coordination through this office. This is assured in the instance of the present Secretary since he has come to us with a well-articulated request and has committed himself to this concept. He intends to develop a fully institutionalized sector assessment, planning, and evaluation capability in the Secretariat's Planning Office

to serve as the focal point within the sector for overall agricultural policy and planning. This will facilitate coordination of development efforts and resource use, domestic and foreign. The consensus of local observers is that his efforts in this direction are important. The local IDB representative has, for example, endorsed the idea of U.S. assistance in this area as being both helpful to his own evaluation of needs and progress, and, as critical to Dominican agricultural development.

In terms of personnel, a team of two/three U.S. technicians is contemplated. These would probably be on contract. The team leader would be a broadly experienced agriculturist with general developmental experience in Latin America, preferably in sectoral planning. The one/two other team members would be highly qualified and experienced agriculturalists with one or more specialties, such as agricultural economics, agronomy, animal husbandry or credit. The core staff would be supplemented by short stints of other technical experts. Latin American experience would be essential as well. Should the Secretary of Agriculture desire to increase the functional capability of his Planning, Coordination and Evaluation Office, USAID would be prepared to facilitate this so that the U.S. official presence would be negligible.

The Secretariat will need to have direct assistance of personnel seconded from other institutions such as the Central Bank, the Agricultural Bank, INESPRE, etc. Persons from the private sector, where other highly qualified personnel are available, will also need to be involved. To assist the Secretariat to attract these people to the task, some RD$100,000 in local currency will be programmed so as to augment present salaries as necessary and to assure the immediate availability of adequate professional support.

In addition to the team described above, it is estimated that up to 12 man-months of short-term specialist services will be provided.

The foregoing activity would be, of course, the cornerstone of any future bilateral assistance.

2. Credit - Through the ongoing assessment and planning process described above, it will be possible to quantify what is already recognized as a major constraint to agricultural development and production, i.e., credit. An analytical examination through the sector assessment process will help to

target groups not now being reached which could be if funds were available. There will also need to be an assessment of credit institutions. Thus, bilateral cooperation will help identify, in specific terms, a group of middle and small size farm operations with commercial potential which is fettered by the lack of credit. Our preliminary examination reveals a minimum of 242,000 such units but the actual number which could benefit from access to credit (assuming also the presence of technical assistance) is not known. However, credit is a direct method of allocating resources to production of commodities of high nutritional value and employment impact while focusing on small and medium farmers and their families as action agents in meeting both production and income distribution goals.

Clearly, the bilateral program cannot and should not respond fully to the credit deficit problem; Dominican credit resources and those of other donors must also be mobilized and coordinated. There are several competent institutions other than the Agricultural Bank, through which credit resources could be transferred with assurance of reaching small and middle level farmers, either individually or in groups. Among these are the Dominican Development Foundation, the Banco Nacional de la Vivienda (which has not heretofore engaged in agricultural lending but has proposed to the Development Council that it be allowed to do so) and the Supervised Credit Department of the Secretariat of State for Agriculture (with certain modifications). The collective distributional capacity of these entities in agricultural credit could reasonably be estimated at RD$5.0 - RD$10.0 million annually, depending on the amount of additional personnel and equipment that could be made available to facilitate the expansion. Any loan would have built-in guarantees that duplication of credit efforts would be avoided and that medium and small farms would be serviced. Assuming the availability of RD$7.5 million, an average sub-loan of RD$200 would assure credit availability of 37,500 farms, roughly equivalent to the number now serviced by the Agricultural Bank. Presently 50% of the Agricultural Bank's loans are for RD$300 or less.

Other unattended needs are guarantee funds in the Land Transfer and Mortgage area. If the Central Bank could be persuaded to lower commercial bank reserve requirements on agricultural lending for these purposes, needed flexibility could be introduced into the present system of land holdings. This should be investigated in the sector analysis process. It is estimated that commercial banks

have upward of RD$60,000,000 in legal reserves and, in return for the privilege of investing part of those funds profitably, might be willing to expand agricultural services in conjunction with increased lending activities in the sector. Two million in capital for guarantee funds might be sufficient to stimulate each activity. Activity in these areas is naturally contingent upon the Government's willingness to commit resources in consonance with rationally-established priorities, along the lines indicated by competent analysis. Such analysis is likely to show, in the long-run, that Government agencies are unlikely to be able to meet the credit requirements of an expanding agricultural sector; that concessional interest rates create a dependence that increases costs geometrically and depresses production; and that graduation to private credit sources will be essential to break this cycle.

3. Credit Through Agricultural Marketing Entities - It is expected that an examination of the marketing system will demonstrate opportunities for modernization through capital formation. Capitalizing the marketing structure would provide a parallel device for reaching small farmers with, at least, production credit and technical assistance, as follows: Credit could be made available, through FIDE, Financiera Dominicana or commercial banks, for the purpose of financing labor intensive marketing infrastructure such as grading and packing facilities, refrigerated storage facilities, meat curing or processing facilities, formation or consolidation of wholesale distribution systems and the like. Many of these facilities would be located in rural areas and would depend heavily on local fruits, vegetables and other commodities as raw materials. A sub-loan to such an enterprise would include a fund to be used as production credit by the enterprise to producers of its primary materials. The enterprise would be required to provide technical assistance to producers along with the credit. The three major advantages of this concept are employment generation, credit to small farmers and improvement in the quality of and demand for agricultural products. Moreover, improved handling and increased storage facilities will tend to reduce both the periodic shortages and drastic price fluctuations now besetting consumers and producers. Without a full marketing study the funding requirements for such an undertaking cannot be fixed. This is an area which needs attention. Approximately 16 man-months of U.S. personnel (four months of work by four U.S. technicians) and five Dominican technicians would be required to complete the

necessary marketing study, given the data collection capability of the Secretariat of Agriculture. A blind estimate of financing requirements, based on 100 enterprises receiving an average loan of RD$20,000 would be $2,000,000. Covenants of any loan could be designed to maximize hand labor and production credit, while avoiding duplication of other credit efforts. Similar concepts could be applied to input industries, as well.

4. Seed and Plant Material - The production programs sponsored primarily by other donors are supported by various uncoordinated research, extension and credit programs. One element left untouched in this assemblage of efforts is that of improved seed and plant material. These are provided primarily by public agencies without benefit of a privately-based distribution system. As in other services, Government resources do not permit a program of sufficient scope to reach most farmers. The USAID Mission's past investments in this field have served short-term ends but have not produced adequate long-range benefits. The need still exists and a new approach should be tried. Changes should be made in pricing policies, importation and regulatory control that will encourage private capital to invest in the production and promotional distribution of improved seed and plant material.

The USAID Mission could start by assisting in present efforts of the Secretariat to produce a seed certification law for rice -- currently the highest priority crop -- and follow by lending whatever additional technical support may be necessary to establish a similar legal framework for other high priority commodities. Assistance here would be primarily of an advisory nature and applied to the establishment of standards, legislation and formation of regulatory entities.

Financing could be provided to businessmen interested in developing seed production and distribution enterprises under the marketing credit plan described above, or through regular commercial sources. The Secretariat could gradually divest itself of such activities except for the regulatory and licensing functions.

5. Education - In cooperation with appropriate public and private entities the USAID Mission would be willing to consider contributing to setting up a vocational training system, under the Secretariat's administration, to upgrade the skills of low income rural people. This would be along lines of the successful program of SENA in Colombia where

technical assistance could probably also be obtained. Previous discussion has already implied that a minimum of 200,000 farm families are living at subsistance levels.1/ With 20,000 new families forming each year and remaining in the rural area, it would appear that the system should serve at least 20,000 persons annually. Training could be started relatively soon in such basic skills as carpentry, mechanics, machine operation, farm management, basic farm operation tasks and others which are generally lacking in the rural population. The initial step of a phased program would probably include one training facility attached to and administered by each of the seven regional agricultural centers. Each facility would contain five or six classrooms or shops, limited administration facilities and dormitory and eating facilities for approximately 90 people. This would require a rather heavy training input in the first stage. At least fifty teachers and administrators would require training prior to initiation of the program. A rough estimate of the first year's cost for such an effort would be between RD$1.75 and RD$2.0 million including construction, equipment, teacher training, teaching salaries and operating expenses. Although this cost looks relatively high it is really quite reasonable on a per-student basis when the facilities and training costs are amortized over a period of years.

The USAID Mission could consider providing initial funding, assisting in the planning of the long-range program to assure on-going means of financial support, and assisting in organizing and carrying out the teacher training effort. An important goal would be to assure coordination between agriculture and education with sufficient flexibility to be responsive to vocational needs on a permanent basis.

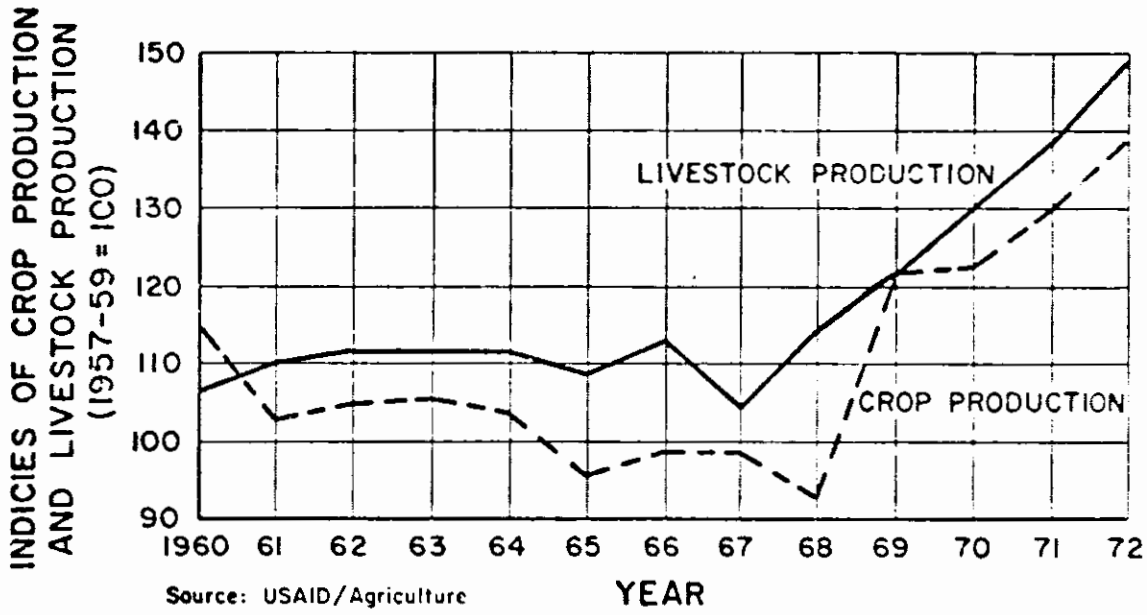
A preliminary estimate of U.S. personnel requirements is 18 man-months with intermittent visits to the country by two or three advisors over a two to three year period, as needed.

1/ See Section I, Part D.

The USAID Mission has contributed significantly to the development of trained professional agriculturalists. By the end of 1975, there will be nearly 180 agricultural graduates of U.S. universities in the Dominican agricultural sector. Perhaps 30 will have advanced degrees. IDB will sponsor some additional educational opportunities in the near future but the impact of the effort cannot be predicted.

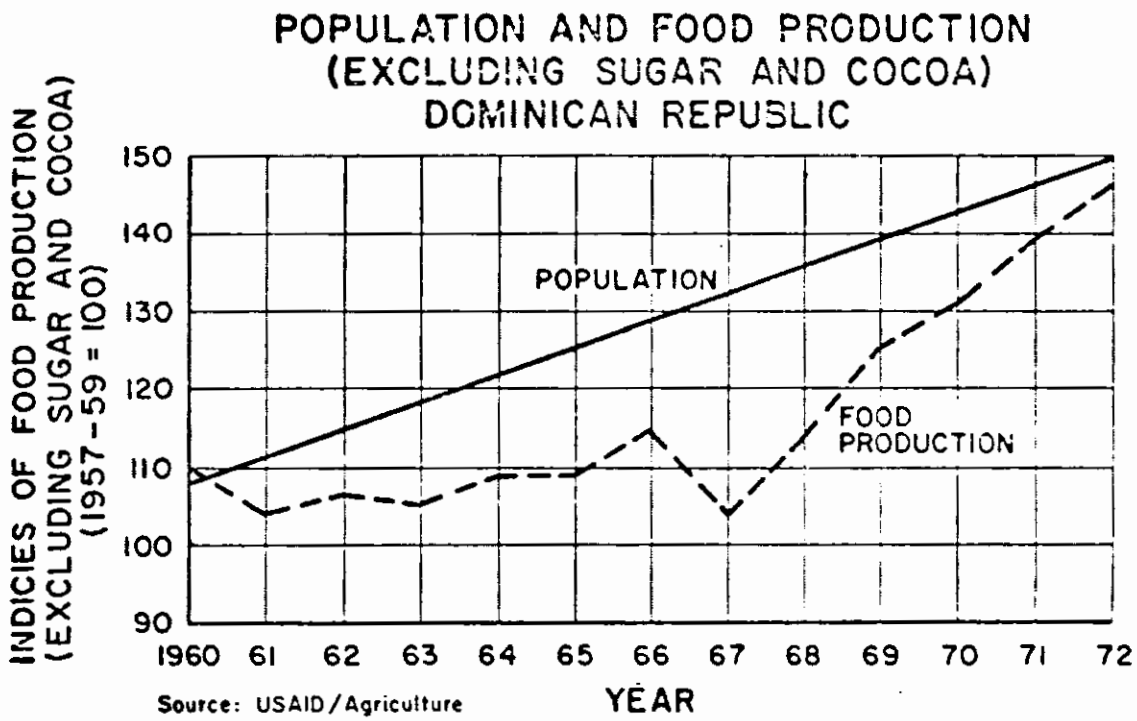
Dominican universities now prepare agriculturalists to an equivalent of two years of U.S. university education in agricultural disciplines. Faculty and curriculum development is necessary to raise that level if the Dominican Republic is to assure itself of the continued supply of agriculturalists needed for accelerated development. The USAID Mission would be prepared to consider assisting in faculty and curriculum development by sponsoring an interchange of faculty and students between Dominican institutions and a consortium of U.S. universities. Once manpower requirements were established for various disciplines, U.S. faculty members could be provided to teach appropriate courses in the Dominican Republic while Dominican faculty attended U.S. universities for additional study and limited teaching assignments. Scholarships could be granted to graduates of Dominican institutions to complete B.S. degrees or to obtain advanced degrees.

The foregoing activities do not represent, in themselves, a sector program. Rather they identify critical gaps left by the totality of other developmental efforts so that priority components of the development process can evolve in support of the whole. It is probable that a more refined set of activities will evolve from the Secretariat/USAID assessment now in progress. There may be new items. Some of the foregoing may fall by the way as the strict analytical process tests them further. Nevertheless, this preliminary review indicates that activities such as those described herein are likely to reveal themselves as important to future agricultural development during a more systematic assessment. Estimated costs and phasing appear in Annex II, Fig. 1.



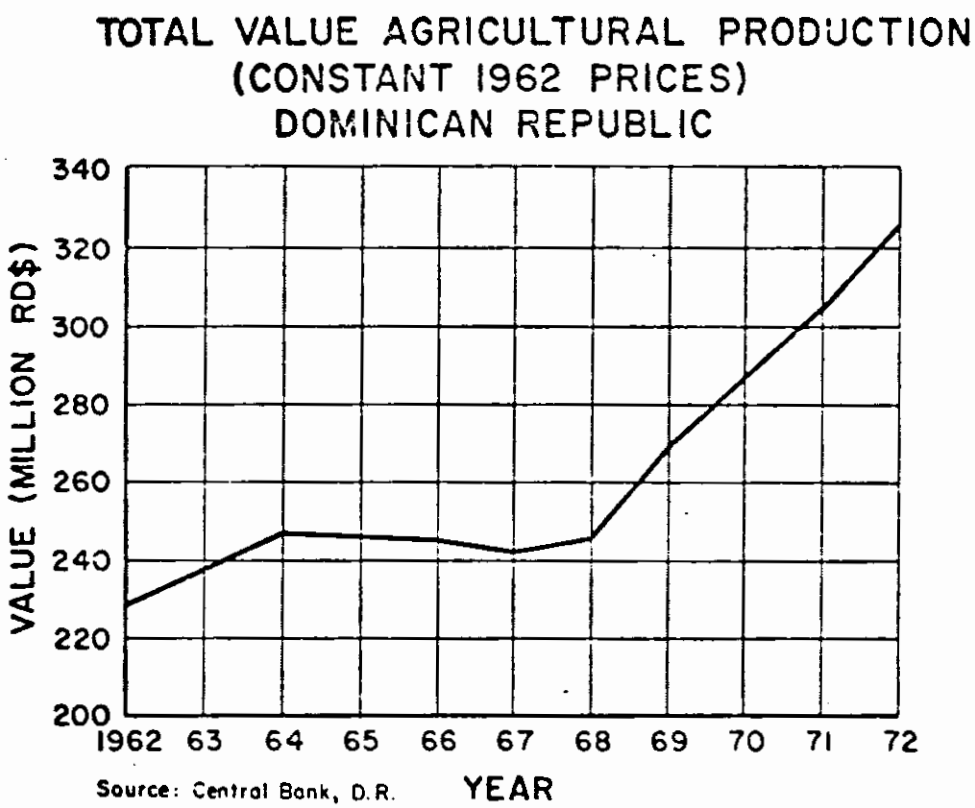
INDICIES OF CROP PRODUCTION	
1960	115
1961	103
1962	105
1963	106
1964	104
1965	96
1966	99
1967	99
1968	93
1969	122
1970	123
1971	130
1972	139

INDICIES OF LIVESTOCK PRODUCTION	
1960	107
1961	110
1962	112
1963	112
1964	112
1965	109
1966	113
1967	105
1968	115
1969	122
1970	130
1971	139
1972	149



INDEX OF POPULATION	
1960	108
1961	110
1962	114
1963	117
1964	120
1965	124
1966	128
1967	131
1968	135
1969	138
1970	143
1971	148
1972	152

INDICIES OF FOOD PRODUCTION	
1960	110
1961	104
1962	107
1963	105
1964	109
1965	109
1966	115
1967	104
1968	114
1969	126
1970	132
1971	140
1972	147



1962	228.9
1964	246.0
1966	245.0
1967	242.0
1968	245.0
1969	268.6
1970	285.4
1971	302.9
1972	324.0

AGGREGATES OF PRODUCTION AND INDICES OF AGRICULTURAL PRODUCTION, 1961 - 1971[1]

PRELIMINARY 1972, PROJECTIONS 1973

DOMINICAN REPUBLIC

ANNEX I
Fig. 4

Item	Average 1957-59	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973
AGGREGATES OF PRODUCTION (Selected Crops)					Million Dollars at Constant Prices									
Agriculture	152.0	159.8	162.7	163.9	162.0	151.0	156.3	152.7	150.9	185.5	189.5	201.8	216.3	224.5
Crops	111.2	115.0	117.2	118.4	116.2	106.5	110.3	109.7	103.7	135.5	136.9	144.8	165.4	160.4
Livestock	40.8	44.8	45.5	45.5	45.8	44.5	46.0	42.9	47.1	50.0	53.0	56.9	60.9	64.1
Food	130.1	134.6	139.7	135.9	135.3	128.5	136.6	129.7	129.4	159.0	163.0	173.6	186.4	193.8
Major Export Crops	64.6	68.5	69.5	72.2	67.0	55.4	56.2	61.5	51.6	75.2	73.8	79.3	83.0	92.5
Agriculture (excl. sugar)	120.8	128.6	130.4	134.3	130.7	128.7	129.7	124.4	128.3	152.2	151.5	161.0	172.7	172.3
Food (excl. sugar & cocoa)	87.4	91.3	93.2	91.7	95.0	95.6	100.1	91.2	99.3	110.3	115.8	122.7	128.7	132.0
Indices of Production					1957 - 59 = 100									
Agriculture	100	105	107	108	107	99	103	100	99	122	125	133	142	148
Crops	100	103	105	106	104	96	99	99	93	122	123	130	139	144
Livestock	100	110	112	112	112	109	113	105	115	122	130	139	149	157
Food	100	103	107	104	104	99	105	100	99	122	125	133	143	149
Major Export Crops	100	106	108	112	104	86	87	95	80	116	114	123	136	143
Agriculture (excl. sugar)	100	106	108	111	108	106	107	103	106	126	125	133	142	147
Food (excl. sugar & cocoa)	100	104	107	105	109	109	115	104	114	126	132	140	147	151
Indices of Production per Capita[2]					1957 - 59 = 100									
Agriculture	100	95	94	92	89	80	80	76	73	88	87	90	93	94
Food	100	93	94	89	86	80	82	76	73	88	87	90	94	95
Agriculture (excl. sugar)	100	96	95	95	90	85	84	78	78	90	87	90	94	94
Food (excl. sugar & cocoa)	100	94	94	90	90	88	90	79	84	90	92	95	96	97
Index of Population 1958 Population - 2,834,300	100.0	110.3	113.6	117.0	120.4	123.9	127.7	131.4	135.3	139.3	143.4	147.7	152.0	156.2
Population - thousands		3,127.9	3,220.4	3,315.7	3,413.8	3,510.8	3,618.8	3,725.8	3,836.0	3,949.5	4,066.3	4,186.4	4,309.8	4,428.8

[1] Selected crops representing about two-thirds of total agriculture production.

[2] Per capita indices computed using revised preliminary population series based on 1970 census.

Revised: February 15, 1973

ESTIMATED PRODUCTION FOR SELECTED CROPS[1] 1961 - 1971, PRELIMINARY 1972, PROJECTIONS 1973

DOMINICAN REPUBLIC

ANNEX I
Fig. 5

Commodity	Price Weight	Average 1957-59	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973
	Estimated Production														
	1,000 Metric Tons														
Rice, paddy	107	109	113	111	118	143	167	178	147	181	195	210	212	214	200
Corn, shelled	78	48	50	48	46	43	38	42	39	40	43	45	49	50	50
Beans, dry	220	22	19	19	19	23	23	29	23	20	26	25	28	30	30
Potatoes	56	5	6	8	8	15	16	[illegible]	20	20	23	23	24	25	25
Cassava	45	150	140	148	147	153	152	153	152	155	165	170	184	195	210
Sweet Potatoes	47	81	72	76	75	77	77	77	75	78	84	87	91	95	101
Sugarcane	4	7,621	7,811	8,087	7,402	7,784	5,544	6,638	7,056	5,655	8,331	9,570	10,260	10,900	11,800
Tobacco	309	22	29	25	31	28	19	20	19	16	22	22	26	31	34
Peanuts, in shell	144	57	44	52	48	50	45	51	45	47	[illegible]	75	78	[illegible]	85
Bananas	27	257	370	360	310	250	270	240	240	250	267	275	286	[illegible]	300
Coffee, green[2]	449	33	36	34	41	40	37	30	38	37	44	44	45	[illegible]	45
Cocoa beans[2]	356	35	34	40	41	26	30	28	29	21	43	26	29	41	41
Beef and veal	320	22	25	25	25	26	24	25	25	30	32	32	34	37	39
Pork	543	7	8	8	8	8	8	9	9	10	10	11	12	15	16
Milk	130	228	250	255	255	255	250	255	231	247	264	283	304	315	333

[1] Selected crops representing about two-thirds of total agricultural production.

[2] October-September crop year basis.

Revised: February 15, 1973

Estimated Population, Gross Domestic Product,

Value of Agricultural Production, Per Capita Domestic Income

And Inhabitants Per Square Kilometer

Dominican Republic

Year	Population (000)	Total GDP (Million Pesos)[1]	Value of Agr. Production (Million Pesos)[1]	Per Capita Income (Pesos)	Inhabitants Per Sq. Kilometer
1950	2,136	459		215	44.1
1960	3,047	713		234	62.9
1962	3,220	887	229	275	66.5
1964	3,414	988	246	289	70.5
1966	3,619	966	245	267	74.7
1968	3,836	1,040	259	271	79.2
1969	3,949	1,167	319	295	81.5
1970	4,066	1,290	326	317	83.9
1971	4,186	1,411,100	347	337	86.4
1972	4,309	1,588,100[2]	372	368	89.0

[1]Constant 1962 Prices

[2]Preliminary

Source: Central Bank
National Office of Statistics
Secretariat of Agriculture
USAID/TAMU

Revised March 15, 1973

II.2 EXPORTACIONES POR PRODUCTOS PRINCIPALES

ENERO-DICIEMBRE

(Valor FOB en RD$)

ANNEX I
Fig. 7

	1970		1971		1972*	
	Miles de Kilos	Valor	Miles de Kilos	Valor	Miles de Kilos	Valor
I. Productos Tradicionales	2,462,218.7	188,398,669	2,681,855.3	216,775,611	2,747,351.3	260,846,884
A. Azúcar y sus derivados	1,090,161.4	115,242,107	1,290,012.5	145,765,601	1,429,568.6	176,316,377
1) Azúcar sin refinar	769,454.6	103,394,803	994,197.7	131,977,468	1,098,732.3	159,691,798
2) Azúcar refinada	-	-	51.2	9,325	275.5	48,000
3) Melaza de caña	85,144.3	1,829,872	73,582.5	2,109,516	73,233.6	1,911,315
4) Sirop de azúcar	12,943.0	784,487	9,852.8	766,522	7,841.0	742,647
5) Miel final (de purga)	202,773.0	4,131,589	188,189.5	4,353,937	221,923.9	5,443,898
6) Furfural	19,846.5	5,101,356	24,138.8	6,548,833	27,562.3	8,478,719
B. Café en grano	25,034.6	24,931,442	25,658.4	22,646,849	26,271.8	25,108,438
C. Tabaco en rama	19,534.9	13,945,362	25,800.0	19,824,857	32,509.6	28,568,631
D. Bauxita	1,293,089.3	15,131,897	1,311,286.3	15,983,367	1,226,782.9	14,863,566
E. Cacao en grano	34,398.5	19,147,861	29,098.1	12,554,937	32,218.4	15,989,872
II. Productos No Tradicionales	267,534.8	20,007,124	344,630.9	21,325,398	340,926.7	78,294,261
A. Agropecuarios	47,380.8	5,830,031	51,604.5	6,757,723	62,790.0	8,122,185
1) Aguacate	1,568.3	287,546	2,046.1	397,317	2,039.7	359,436
2) Ajíes y pimientos	3,576.2	604,560	2,733.2	457,291	1,935.3	346,887
3) Algodón en rama	51.1	27,500	250.0	144,952	204.7	117,746
4) Auyama	3,849.4	349,001	3,656.8	342,661	2,489.2	255,653
5) Batata	3,507.0	353,792	4,047.7	441,452	2,607.8	287,911
6) Berenjena	173.8	23,628	329.9	41,445	207.1	25,079

7) Buen pan y panapén	171.2	23,338	426.5	58,841	593.3	80,423/
8) Bija	623.9	113,731	465.9	101,553	379.5	130,655/
9) Cilantro	31.4	14,148	138.8	58,211	154.3	69,312/
10) Coco seco	7,565.7	724,316	10,695.7	1,061,772	8,391.5	815,775\
11) Frutas cítricas (1)	144.0	13,375	198.0	20,815	305.9	29,816/
12) Guanábana	7.7	2,943	34.7	12,798	96.3	27,547/
13) Guandules frescos y secos	564.6	226,252	1,118.5	455,967	2,017.4	816,295/
14) Guireo	3,608.2	309,903	1,343.6	98,272	16,218.1	1,055,247/
15) Habichuelas	1,615.1	378,327	704.4	155,316	462.3	113,188\
16) Lechosa	68.7	13,458	459.4	30,863	709.5	93,075^
17) Limoncillos	84.9	9,320	379.2	40,244	323.4	33,442\
18) Mamey	18.7	7,335	137.3	48,683	262.6	86,179^
19) Mango	284.7	28,498	232.5	21,744	322.2	32,525^
20) Mariscos (2)	274.5	140,945	375.2	273,538	303.6	180,781\
21) Melones	0.9	47	570.5	30,361	5.4	570\
22) Miel de abeja	279.2	54,433	561.1	161,798	659.9	290,509^
23) Name	18.5	3,928	231.5	34,067	133.7	21,061\
24) Palma en bruto	18.4	9,556	271.5	26,194	311.3	33,728^
25) Pepino	416.6	36,339	265.9	19,159	135.2	7,547\
26) Pescado	93.7	57,994	120.7	70,225	373.9	257,265^
27) Plátano	3,772.2	347,553	4,278.3	380,008	3,882.7	385,105^
28) Tomate	1,093.9	138,271	2,154.7	274,688	1,688.4	281,468^
29) Yautía	7,121.7	631,653	7,576.6	697,053	9,208.4	1,006,152^
30) Yuca	4,440.4	549,267	4,539.4	570,911	5,213.8	705,604^
40) Otros	2,336.2	349,074	1,266.5	229,524	1,153.6	176,204\
B. Minerales	126,715.5	625,130	240,574.4	1,374,196	221,530.2	47,783,702
1) Ferroníquel	-	-	466.4	515,708	41,344.9	47,133,124^
2) Piedra caliza	21,943.7	82,289	60,017.3	240,063	62,901.2	235,877\
3) Sal	0.5	40	100.0	3,000	-	-\
4) Yeso	84,075.0	276,713	177,965.0	581,262	117,276.0	406,915\
10) Otros	20,696.3	266,088	2,025.7	34,163	8.1	7,786\
C. Industriales	92,503.4	13,128,143	51,489.2	12,877,755	55,432.5	21,962,236
1) Abonos químicos	30,581.2	1,241,204	19,716.9	906,424	16,772.6	994,196^
2) Aceite de coco	0.2	125	3,546.8	883,410	4,858.3	932,250^

3) Aceite de naranja y limón	33.8	264,962	37.6	270,442	40.3	294,645 ^
4) Café tostado	1,704.6	2,608,361	850.3	1,163,200	3,436.3	4,643,725 ^
5) Cal hidratada	8,201.0	34,919	1,664.6	45,138	4,728.8	142,682 ^
6) Carne de vacuno, fresca o refrigerada	3,427.9	3,390,234	3,129.4	3,010,932	6,830.8	6,733,339 ^
7) Casabe	42.7	18,495	46.7	23,103	51.6	36,541 ^
8) Cera de abeja	217.0	305,806	205.6	313,202	215.1	317,835 ^
9) Cerveza	1,248.7	247,752	708.5	136,555	426.4	83,757 v
10) Cigarros y cigarrillos	0.1	481	1.6	15,528	2.1	23,666 ^
11) Cinturones, carteras y sandalias	0.9	5,963	4.5	16,769	31.5	223,335 ^
12) Copra	1,000.0	251,650	1,500.0	348,500	-	- v
13) Chocolate	845.6	335,571	1,194.3	426,221	861.9	306,059 v
14) Dulce de guayaba	405.7	55,070	440.7	86,184	178.0	41,687 v
15) Dulce y frutas envasadas(3)	561.3	162,367	1,145.1	254,310	1,210.6	387,405 ^
16) Juguetes	-	-	-	-	3.3	37,619 ^
17) Jugos de frutas	116.0	39,272	43.8	8,139	217.1	39,743 ^
18) Guandules enlatados	2,184.9	735,143	5,115.6	1,954,299	6,308.8	2,546,668 ^
19) Manteca de cacao	14.9	15,603	16.5	17,765	1,459.7	1,712,174 ^
20) Muebles de madera	30.4	44,088	18.1	20,129	11.1	13,203 v
21) Neveras	-	-	0.4	493	55.3	64,306 ^
22) Pastas alimenticias	472.7	187,265	614.2	244,776	352.8	137,402 v
23) Pasta de tomate	-	-	67.6	34,877	18.6	8,011 v
24) Periódicos y revistas	169.7	152,395	228.6	205,265	251.4	216,873 ^
25) Picadura de tabaco (4)	399.0	486,177	450.4	875,152	207.6	274,728 v
26) Pieles y cueros	374.4	37,295	122.4	33,862	79.0	53,832 ^
27) Productos farmacéuticos	6.7	71,419	14.1	178,940	32.4	395,727 ^
28) Ropas	25.1	62,752	38.0	133,291	19.1	87,286 v
29) Torta de cacao	-	-	48.6	10,598	1,286.6	313,799 ^
30) Torta de maní	19,252.0	1,377,096	9,715.6	703,200	3,656.0	269,366 v
31) Tostones de plátano	0.9	473	59.1	54,616	198.0	173,734 ^
40) Otros	21,185.0	996,205	743.6	502,435	1,631.4	456,652 v
D. Otros	935.1	423,820	962.8	315,724	1,174.0	426,138
1) Desperdicios de metal	922.5	349,556	956.2	276,699	1,131.0	320,536 ^
9) Otros	12.6	74,264	6.6	39,025	43.0	105,602 ^

III. Reexportaciones	1,493.1	2,788,307	1,814.6	2,637,480	3,413.1	8,936,765
TOTAL GENERAL	2,731,246.6	211,194,100	3,028,300.8	240,738,489	3,091,691.1	348,077,910

* Cifras sujetas a rectificaciones.

NOTAS: (1) Incluye limones agrios y dulces, mandarina, naranjas agrias y dulces y toronjas.
(2) " camarones, colas de langostas, lambíes y ostras.
(3) " mermeladas, cascos y casquitos, con o sin azúcar, de frutas envasadas.
(4) " tabaco de otro preparado.

FUENTES: Oficina Nacional de Estadística (1970-71).
Dirección General de Aduanas (1972).

SEIS PASOS CLAVE EN LAS DECISIONES SOBRE COMERCIALIZACION

1. Definir el problema y los objetivos.
2. Averiguar cuales son las opciones principales.
3. Descubrimiento de las incertidumbres-clave.
4. Reunir los datos pertinentes.
5. Estimar el valor de las diversos opciones.
6. Optar por la mejor solución posible.

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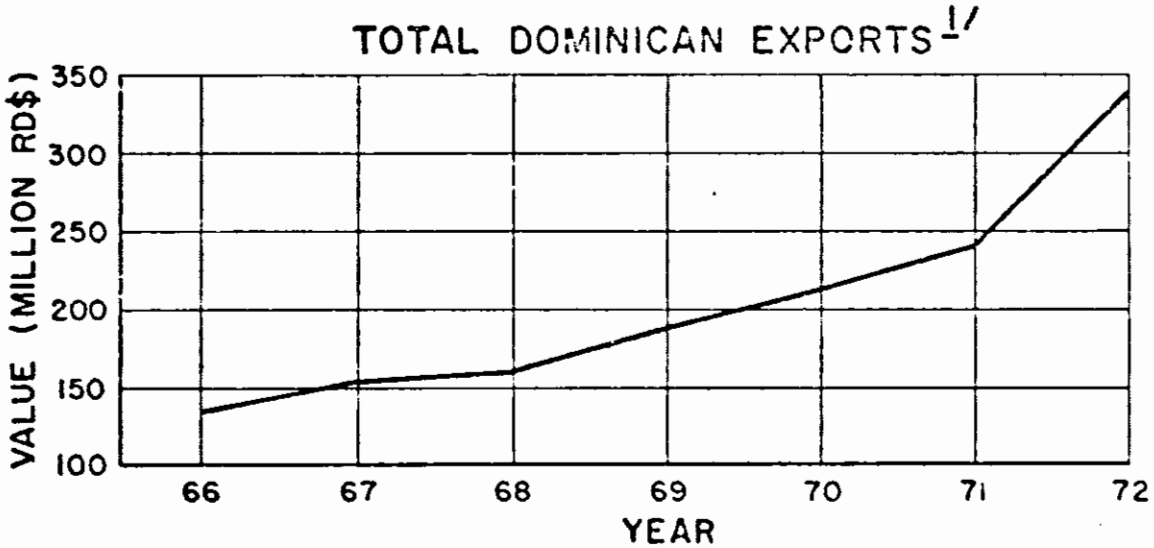

YEAR	VALUE (MILLION RD$)
1966	137.5
1967	156.6
1968	163.5
1969	184.0
1970	213.5
1971	242.6
1972	334.0

1/ December 1972 Data Incomplete, Unofficial Report of Large December Exports Could Push 1972 to Slightly Above RD$ 350,000,000.

ANNEX II

Fig. 1

ESTIMATED ASSISTANCE COST AND PHASING

		U.S. Cost
I.	ANALYSIS AND PLANNING	
	Begin 4th quarter CY 73	Personnel only
II.	SMALL FARM CREDIT	
	Begin 3rd. quarter CY 74	$5.0 - $10.0 million
III.	MARKETING/PRODUCTION CREDIT	
	Begin 1st. quarter CY 75	2.0 million
IV.	GUARANTEE FUND	
	Begin 2nd. quarter CY 75	2.0 million
V.	LAND TRANSFER/MORTGAGE CREDIT	
	Begin 2nd. quarter CY 75	2.0 million
VI.	VOCATIONAL EDUCATION	
	Begin 3rd. quarter CY 74	2.0 million
VII.	PROFESSIONAL EDUCATION	
	Begin 3rd. quarter CY 75	1.0 million
	Estimated Loan Cost 4th quarter CY 73 thru 4th quarter CY 75.	$14.0 - $19.0 million

MAJOR DONOR CURRENT ACTIVITY AREAS
(Financial and/or Technical Assistance)

	Policy, Analysis and Planning	Short/Medium Production Credit	Livestock Credit	Farm Improvement Credit	Mortgage Credit	Technical Education	Vocational Education	Marketing	Transportation	Forestry	Fisheries	Research General	Extension	Irrigation	Cadastre and Agrarian Reform
IDB			X	X			X	?		X		X	X	X	X
World Bank			X →											X	X
FAO											X		X	X	
AID			X	X											
Micro Donors													X		
Government Agencies Involved	ONAPLAN, Secretariat, Decentralized Agencies		Agr. Bank, FIDE, IAD, IDECOOP	Agr. Bank, FIDE, Financiera	Agr. Bank		UNPHU, ECF, UASD	Sec. of Education	INESPRE, CEDOPEX, Price Control Institute	Public Works Caminos Vecinales	Sec. of Defense	IDECOOP	Secretariat, ISA, UNPHU, UASD	Secretariat, IAD, Agr. Bank, IDECOOP, ODC, Banks	INDRHI, IAD, Public Works, CDE	IAD National Cadastre

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I. HEALTH, INCLUDING FAMILY PLANNING AND NUTRITION

A. Introduction and Summary

The explosive population growth of the Dominican Republic threatens to obviate all efforts at social and economic development. The country, already among the most densely populated in Latin America, faces a doubling of population in about 22 years if present trends continue. The public health system is the country's principal instrument to implement a population policy and reduce fertility. Therefore, the strengthening of the family planning program must receive highest priority in any development assistance efforts.

To have a major long-term impact on fertility, it will not be sufficient to develop an isolated network for the delivery of medical family planning services. More fundamental changes will be required. These include the substantial modification of public attitudes toward and knowledge of family planning, the general improvement of health, and the specific reduction of child mortality.

Such changes will in turn require:

a) The improvement of nutrition
b) The improvement of the environment and of hygiene practices
c) The development of a more accessible and effective system for the delivery of personal health services, which includes and integrates a forceful family planning program

By increasing the efficiency of existing services and by reallocating resources, these goals may be achieved while reducing total health expenditures. The freed resources could then be used to support additional family planning programs or other health or development efforts.

The following pages describe and analyze family planning, nutrition, and other health services in separate subsections. The artificial separation of these closely interrelated themes is only justified by the simplification of the exposition. The final paragraphs of the sectoral discussion propose a strategy for development assistance in the sector.

The Dominican Republic has made substantial progress toward implementing a family planning program which could have an impact on fertility in the foreseeable future. Official policy is reflected by the fact that the President signed the Declaration of the Chiefs of State on Population sponsored by the United Nations, and it is significant that a law enacted in 1970 decreed that contraceptives could be imported duty free. The number of government-sponsored family planning clinics rose from nine in 1968 to 60 in 1973, and an additional 32 are scheduled for completion by the end of 1974. There are, however, serious constraints on the system including continued high infant and preschool child mortality rates, an inefficient system for the delivery of health services, and the absence of a small family norm on the part of the bulk of the population.

Malnutrition has been identified as one of the major health problems in the Dominican Republic. According to a nationwide survey of middle and lower classes conducted in 1969, a large percentage of those studied are living at a dangerous nutritional level between bare subsistence and near starvation. Furthermore, there are indications that the situation is becoming worse. Nutritional status has been correlated with infant and preschool mortality and thus is considered to play a leading role in reducing fertility. Improving nutritional status involves attacking a series of problems, namely: (1) to encourage government actions to institute nutritionally-directed policies and develop coordinated government programs with adequately trained leadership; (2) to improve food practices through nutrition education; (3) to improve the quality and quantity of food availability; (4) to redirect agricultural practices to increase production of foods intended for local consumption while encouraging the increased production of nutritionally-valuable foods; (5) to train more nutrition educators to work at the "grass root level."

More than half of all deaths in the Dominican Republic occur in children less than five, and two out of five deaths with diagnosed causes are due to eradicable or reducible communicable diseases. This pattern of mortality very probably contributes to high birth rate and to poor long-term development prospects. It also indicates that the major health problem is that of child health. Other important problems are maternal and worker health. These problems all can be attacked by an effective program combining improvement of family planning (child spacing, family size limitation, etc.), nutrition, environmental sanitation, and preventive and curative medical services. Consideration of the resources available for these purposes indicates that considerable improvement could be achieved without major addition to the already significant health expenditures by increasing the efficiency and effectiveness of current institutions.

Policies already have been promulgated to permit such improvements, but the weakness of administrative systems has militated against their application. Other donor assistance plays a major role in the area of environmental sanitation and infrastructure. Outside assistance has not yet proved equal to the task of reform of the administrative structure.

The AID strategy in view of those problems and opportunities is first to promote comprehensive health planning activities, training Dominican nationals as required, to assure the validity of the above assessment and to propose detailed plans for development of the health sector. The AID role in such a development effort will be to:

a) Continue to help motivate top public-health decision makers to support needed reforms
b) Assist the Government to coordinate health and agricultural programs so as to improve the nutrition of the population
c) Help improve the planning and administrative capacity of public health institutions
d) Provide technical and financial support to the improved administrative agencies to effect the improvement of utilization, efficiency and effectiveness of existing health services
e) Invest in the development of innovative programs to resolve the fundamental problems of high birth rate, malnutrition, communicable diseases, and parasitic and diarrheal diseases
f) Coordinate our activities with other donor agencies.

B. Family Planning

Background

The population of the Dominican Republic, according to 1970 estimates of the U.S. bureau of the Census, was 4,277,000 and the country's annual rate of population growth was about 3%. This is not in accord with other estimates; however, the issue is largely academic. If one assumes that the population of the Dominican Republic in 1970 was 10% less than the figure estimated by the U.S. Bureau of the Census and the annual rate of population growth was 2.8%, the implications for the future are still grave. Given the above assumptions and the additional assumption that the Dominican Republic will sustain an annual rate of population growth of 2.8% indefinitely (which is clearly impossible), the population of the country would reach the size of the present population of the world (3-1/2 billion) in less than two centuries. Obviously, at some point birth rates must decline or death rates will rise.

If one assumes constant mortality (which may prove to be a risky assumption), and a growth rate of 3%, the size of the population will reach 13,814,000 by the Year 2000. If one assumes that a net reproduction rate of unity[1] is achieved in one decade, the size of the population will continue to grow until the Year 2040 when it will reach 10,000,000.

The GODR's awareness of the increasing population, may be reflected by the number of official family planning clinics which has risen from nine in 1969 to 60 in 1973. Thirty-two new family planning facilities and five remodeled ones are under construction. The latest official figures show that 103,644 or about 9% of all the women of fertile age (15 to 49 years), were enrolled in the program at some time. This compares with 36,000 enrollees in 1970 which represented 4% of all fertile women. As a result, the Government has reassessed its 1968 goals of reducing the birth rate from 48 per thousand to 38 per thousand in four years. It is now projecting a reduction from the current birth rate of 48 per thousand to 30 per thousand in four years (1974-1977).

It is felt that this can be accomplished by recruiting 220,000 new family planning acceptors, or 20% of all women in the fertile age groups, by 1974 when 147 family planning clinics will be in operation under the joint program of the Dominican Republic and the United Nations Fund for Population Activities (UNFPA). Whether or not recruiting 220,000 new acceptors by 1977 will achieve the reduction in the birth rate that is contemplated will depend in large measure on the overall use -- effectiveness of the contraceptive methods employed.

Government Policies, Priorities and Programs

The family planning effort does not receive as high a Government priority as do other development programs. The reasons are several. One, the President appears only recently to have become aware of the gravity of the problem. Two, traditionally funds invested in other types of development programs have been

(1) The Net Rate of Reproduction of Unity (NRR), which is normally based on the experience of women only, measures the number of daughters who would be born to a group of girl babies by the end of their child-bearing period assuming that current age-specific fertility and mortality rates continued unchanged.

viewed as providing greater returns. A closely related factor is that the President's policy has been to minimize operating costs in order to maximize funds available for capital investment. Funds required to make a more substantial effort in the family planning area involve operating costs. Three, there have been certain cultural inhibitions -- more machismo than religious. Four, there is a long-abiding concern about the population size and growth in neighboring Haiti.

The Government's current position regarding population control is that a major effort must be made immediately to reduce population growth through a comprehensive health program that focuses on the total physical, psychological, and moral well-being of the Dominican family. The Health Secretary, for example, is convinced that a program concentrating solely on limiting births would engender little or no support. Moreover, experience in other countries suggests that such a program would have little chance of success in the absence of appreciable gains in economic and social development.

Official policy towards population changed drastically in 1967 when the President signed the Declaration of the Chiefs of State on Population sponsored by the United Nations. Prior to that time the Dominican official policy towards population was eminently pronatalist as a result of Trujillo's desire to counter-balance Haitian immigration into the Dominican Republic. This was supported by the traditional Dominican Roman Catholic Church. On February 14, 1968 the Government established the National Population and Family Council (CONAPOFA) attached to the Secretariat of Health and Social Welfare (SESPAS) to carry out the official program. The President and the Secretaries of Health have publicly stated their concern about the demographic problem on repeated occasions. Family planning is widely-accepted as reflecting the official Government population policy. This policy is not likely to change in the foreseeable future.

The present Dominican family planning program reflects serious concern for the health and welfare of the nation. It contemplates a program offering nationwide, comprehensive maternal and infant care services -- including family planning -- on a free and voluntary basis with a wide choice of contraceptive methods. This comprehensive approach includes pre-nuptial, pre-natal, intrapartum and postpartum care, veneral disease control, cervical cancer detection and treatment, improved nutrition, and gynecological services, including family planning, among its major elements.

Budgetary Inputs

The Government of the Dominican Republic has given substantial support to CONAPOFA family planning activities during the past five years (see Annex A). Since its onset, the program has received increasing budgetary support which has permitted its gradual expansion. Most of these funds have been used to cover clinical field staff salaries and the central operating costs of CONAPOFA. The GODR/UNFPA multi-year plan recently negotiated establishes a firm financial commitment in support of the program by the Dominican Government during the next four years.

The Government's direct input into family planning in 1972 was RD$400,000. Since outside donors are willing to support a sizeable part of family planning efforts in the Dominican Republic, there has been a tendency on the part of the Government to limit its inputs.

Institutional Strengths and Weaknesses

The National Population and Family Council is presided over by the Secretary of Health. Its membership includes the Secretariats of Agriculture, Labor, and Education as well as the Technical Secretariat of the Presidency and the Dominican Association for Family Welfare. The everyday operations of the Council are directed by an Executive Secretary. In addition, there is a multi-disciplinary technical advisory staff to the Council.

The Council is led by a young and active Executive Secretary, who has created a sense of urgency with regard to family planning. During its five years of existence, it has made considerable progress in creating awareness of the demographic problem and in substantially increasing the number of public family planning services available.

The limited number of trained medical and ancillary personnel continues to be a limiting factor with respect to expanding the program, particularly in rural areas. The family planning program is strongly oriented toward physicians and clinics. However, midwives, malaria eradication workers and pharmacists could be used to refer women for family planning services and to distribute condoms and foam. Furthermore, an even more important role for midwives as well as for practical nurses, etc., has not yet been really considered although there is now some discussion about using them to perform simple medical techniques.

On the private sector side, the Dominican Association for Family Welfare (DAFW), a member of the International Planned Parenthood Federation (IPPF), is carrying out an effective informa-

tion, education, and communications (IEC) program. It works closely with the CONAPOFA government-sponsored program. The PAMF has sponsored an aggressive mass media program that is reaching isolated rural areas, utilizing radio, TV and press, as well as lectures, seminars, posters, bulletins, pamphlets and other literature. Intensive training courses are also held throughout the year for all medical and ancillary personnel, both private and public, involved in family planning services.

Until recently, the education program of the National Institute for Sex Education (INES) had not been as effective as anticipated. INES had over emphasized anatomy and physiology in its course content and was also hampered by a lack of trained educators. However, these problems are being overcome through technical assistance from professionals contracted with AID's help and from CONAPOFA. In regard to course content, it is interesting to note that studies from Colombia and El Salvador suggest that family planning acceptors from the lower socio-economic groups have little interest in learning about reproductive anatomy and physiology, although they are interested in contraception. The extent to which the INES program will influence future trends in fertility is at present difficult to assess.

Legislative, Manpower, Attitudinal and Technological Considerations

a. Legislative

The Government's family planning policies arise from the Presidential decree which created the Population Council in 1968. Of legislative significance is the fact that the Government passed a law in 1970 which exonerates contraceptives from import duties.

Public and private female employees enjoy, by law, 12 weeks of paid leave for maternity, but the legal provisions concerning parental support of illegitimate children are not strongly enforced. These practices promote high birth rates in all the strata of the population.

Although persons performing induced abortions are liable to criminal prosecution, incidence in the lower and middle classes has always been high, and courts have rarely convicted doctors of performing illegal abortions. Public hospital statistics on induced abortions in 1971 showed 18 to 20 abortion cases per 100 admissions, and data collected on the clinics of the family planning program indicate an average of 14 to 15 declared abortions

per 100 live births. A more thorough study on abortion is currently being conducted by the Population Council, INES, and the National University Pedro Henríquez Ureña.

b. Manpower

The family planning program is presently being carried out in 60 family planning clinics which are staffed by Secretariat of Health personnel. Expansion of the program can be adversely affected by a shortage of trained medical and ancillary personnel. As noted earlier, little consideration has yet been given to the important potential regarding manpower requirements that druggists, nurse aids, midwives, etc. might play.

c. Attitudinal

One of the most serious constraints to achieving declines in fertility is that related to attitudes and motivation. A male KAP study carried out by CONAPOFA and the National University Pedro Henríquez Ureña suggests that individuals with low incomes and low levels of educational attainment, who constitute the great majority of the Dominican population, do not perceive significant personal advantages in limiting family size. Experience in a number of countries has shown, however, that the mere existence of a family planning program, particularly one that is well publicized, does in time result in more favorable attitudes toward family planning.

Another serious problem has arisen from the fact the Secretariat of Health has been forced to abandon family planning programs in some hospitals due to pressure from the Archbishop on behalf of Spanish Roman Catholic nuns, who threatened to resign if the family planning program continued. The continued assistance of the nuns in operating the hospital was perceived as very important, and the Secretariat clearly had little choice but to comply with the Archbishop's demands. The number of potential new acceptors involved is probably relatively small. Nonetheless, this development is unfortunate since women are more likely to accept family planning in the immediate postpartum period than at any other moment in their reproductive lives. Moreover, it has been carefully documented that women who accept a method in the immediate postpartum period will continue to use the method for an appreciably greater average length of time than women who accept a method at other points in time.

d. Technological

The Dominican family planning program employs modern contraceptive methods and techniques, including vasectomy on a

limited scale. However, there have been no studies of contraceptive use-effectiveness to date, and none are contemplated in the immediate future.

In view of the immense popularity of tubal ligation in Puerto Rico and its acceptability in El Salvador, Colombia and Mexico, the feasibility of laparoscopic tubal occlusion should be explored in terms of the number of gynecologists and fixed facilities available.

Technology is not sufficiently advanced to provide an unequivocal answer to the crucial question of which delivery system will be most effective in reaching women with family planning services. This suggests that it would be of value to try various approaches on a limited scale in different geographic locations in an attempt to determine which delivery system is most effective. One approach might be utilizing druggists, another utilizing midwives, and a third utilizing clinics, the traditional system for the delivery of family planning services. Admittedly, carrying out the research just described has the disadvantage that conclusions could not be reached quickly, for the project would require two to three years of experience. Moreover, if the goal is realistically set in terms of births averted (rather than in terms of the number of new acceptors reached), evaluation would be an awesome task.

Other Donors

The United Nations Fund for Population Activities (UNFPA) is expected to assume a major role in assisting with planning, coordination, and implementing the GODR's family planning program under the joint Multi-Year Plan (1973-1976). A contribution of US$1,917,325 by the UNFPA will be matched by RD$2,158,681 from the Government of the Dominican Republic to finance this four-year program. The population Council will have responsibility for executing this project.

In the past, the UNFPA has assisted the National Statistics Office with a sample survey and with the development of family planning statistics.

The International Planned Parenthood Federation (IPPF) provides financial and commodity assistance to the Dominican Association for Family Welfare programs which were previously mentioned. Since 1970, the IPPF has provided over $325,000 in support of CONAPOFA activities.

The Family Planning International Assistance Program provides funds for the Dominican Church's Social Service Church World Service family planning program. It also assists in evaluating the effectiveness of combining family planning services with a nutrition program in the Dominican Republic.

The Population Council supports the central office of CONAPOFA, its supervision and evaluation of the government's family planning program, and research on the effectiveness of information and communication programs. It also provides fellowships in demography and related fields.

C. Food and Nutrition

Nutrition Status

A nationwide survey of the middle and lower classes conducted by the Pan American Health Organization in 1969 revealed that almost 70% of the Dominican people examined were below the recognized standards for nutritional well-being in one or more essential elements of good nutrition. Studies of the amounts and kinds of food eaten showed a 21% deficit in calories in the diets of those studied. The average individual in the study had an estimated daily protein intake approximately 82% of that recommended by the Instituto de Nutrición de Centro America y Panama (INCAP). This finding is consistent with total serum protein determinations. In the 0-5 year age group, 54% of those examined had marginal or deficient serum proteins while 23% of those over the age of 17 years had similar findings.

Widespread deficiencies of vitamins as well as iron and other minerals were also found (see Annex B). A shortage of iodine was suggested by the fact that 18% of the females over the age of 13 years had enlarged thyroids.

a. Dietary Habits

The diet of the lower economic classes consists largely of plantains and/or tuber roots which are supplemented with rice, a watery bean sauce, oil and tomatoes if available. Plantains and tuber roots are primarily carbohydrates and, for the young child relatively difficult foods to digest. As a result, not all of the available carbohydrate is utilized to meet caloric needs. Vegetables are eaten infrequently even when available, and meat, milk, and fish are consumed in very limited quantities due to economic restrictions. The problems outlined above are compounded by various taboos regarding

foods, particularly among pregnant, postpartum, and lactating women. The latter include prohibitions regarding fruit and various sources of protein, including egg white, fish, and chicken (see Annex C).

Another factor which adversely influences nutritional status, particularly of children, is the high incidence of gastroenteritis and other febrile diseases. These illnesses markedly increase caloric need, and in marginally-nourished children, these febrile disorders can rapidly precipitate frank kwashiorkor, which all too frequently terminates fatally.

b. Food Production

The problem of malnutrition is in part related to that of agricultural productivity. The latter is low; so much so that it is commonly estimated that only about a third of the potential productivity of Dominican agriculture is being tapped. Moreover, if agricultural production were tripled within the next 27 years, the Dominican Republic could not feed its people and maintain the present level of agricultural exports -- given known technology.

The best available evidence suggests that the situation with regard to food production is deteriorating. While food production has increased during the 1967-1972 period, it has not kept pace with the increase in population growth. Rice production has increased appreciably, but given increased demand, considerable importation will be required this year. Production programs for beans, a basic source of protein for many Dominican families, have had only marginal success. Presently, much of the future production of food legumes are being planned for animal feeds. However, aside from sugar, tobacco, cocoa, sisal, and coffee, almost all of the Dominican agricultural production is estimated for local consumption. Unfortunately, a large proportion of this production is in foods of low nutrition value such as plantains and tuber roots.

Government Policies, Priorities and Program

The Government of the Dominican Republic has taken no action to establish a National Food and Nutrition Policy. Similarly, it has made no effort to establish priorities for the production or distribution of food. Foreign food assistance has been very much needed and has been well received by the Government and the recipients. This is evident from the financial support given to the Voluntary Agencies. The Government has expressed no interest in the management of the P.L. 480, Title II food distribution program, and has preferred this work to be carried out by the Voluntary Agencies (See Health Section 2, P. L. 480, Title II).

The Nutrition Division in the Secretariat of Health is officially responsible for coordinating nutrition education and food distribution in the Maternal Child Health program and for promoting nutrition education. Educational efforts are primarily directed to offering short courses in nutrition to selected community leaders ("promoters") and government workers. The effect of these programs is limited since they reach very few of the people who need the instruction. Moreover, the educational approaches which have been employed seem unlikely to promote change. Courses have not been geared to the educational level of the participants and motivational techniques have not been employed. Consequently, the present government programs do not effectively address themselves to the problems of the poor.

It is hoped that the fifteen Dominican nutrition workers who have recently completed a course in applied nutrition, will constitute a basic working group to serve as a model for nutrition education programs designed for the lower classes in the Dominican Republic. Their course emphasized self-help and a problem-solving approach to nutritional education and its inter-relationship to other community development activities. Hopefully, this group may evoke sufficient interest on the part of the Government and Voluntary Agencies to develop an organized, realistic nutrition program of education.

Economic and Budgetary Factors

Monetary inputs into nutritional education activities (excluding P.L. 480, Title II) by the Dominican Government have increased slightly during the past several years. In the Central Government budget, allocations have remained at the same level, but in practice, the amount of money actually received by the Secretariat of Education's School Lunch Division has increased.

The Nutrition Division of the Secretariat of Health does not have a specific budgetary allocation for nutrition education. All requests and allocations of funds by the Division are made on a piecemeal basis. Hence, funds are not readily available for short-term nutritional training, for producing educational aids and materials, or for carrying out mass media nutrition education programs. Motivated and imaginative leadership to press successfully for increased Government input both in terms of money and manpower is lacking.

The average "poor" family in the Dominican Republic, which will have much less than one peso per day to spend on food, is not concerned with the nutrition values of foods but is concerned only with satisfying hunger. A campesino will prefer a Coca Cola, which he finds satisfies his energy needs, rather than a glass of milk. As long as meeting caloric needs is the principal concern of the poor, motivating interest in the nutritive content of foods is extremely difficult.

Institutional Strengths and Weaknesses

Through legislation related to food and nutrition, passed in 1954, the Secretariat of Health was made responsible for the development of a national nutrition program in coordination with the Secretariat of Agriculture. However, the Secretariats of Health, Education and Agriculture lack the necessary organization, the delegated authority, the manpower, the budget and the institutional and technical capability to carry out effectively an applied nutrition program.

In 1963 a National Technical Commission for Food and Nutrition was established which, among others, had the following responsibilities: 1) to study and analyze food/nutrition problems and recommend necessary action to solve them; 2) to coordinate all food/nutrition programs; and 3) to propose the necessary legislation and norms relating to food and nutrition. The Commission did not complete its work and is not functioning at this time.

The Nutrition Division attempts to carry out nutrition education on a small scale. It also maintains a close working relationship with CARE and the Church World Service/Servicio Social de Iglesias Dominicanas. The Division is designated as the primary coordinating agency for the P.L. 480, Title II, food distribution.

The Nutrition Division has not assumed the coordinating role envisaged with respect to Title II nor has it taken the initiative with respect to other aspects of the Government's nutrition activities, nor does it have the authority or prestige to formulate or promote effectively a national nutrition policy. PAHO assigned to the Secretariat of Health in 1967 a Consulting Medico/Nutriologist to provide technical assistance to the Nutrition Division of the Secretariat. PAHO has also facilitated participant training to key personnel involved in nutrition activities. While these measures have helped create an awareness, they have resulted in comparatively little action.

The Division of School Lunch Programs of the Secretariat of Education is responsible for the school lunch program and also nutrition education in the school system. It has not sought to provide leadership or guidance and, as a result, CARE runs the school lunch program.

The State Sugar Council runs an independent nutrition education program in the sugar growing areas in close coordination with the Division of Nutrition of the Secretariat of Health. It is probably the most effective Dominican governmental activity in the field of

nutrition. The Agrarian Reform Institute (IAD) also has an independent nutrition program, which is operated in coordination with CARE.

In conjunction with the Dominican CARITAS, the local counterpart of Catholic Relief Services, the Catholic Church has a community development plan in which nutrition education has a part.

Legislative, Manpower, Attitudinal and Technological Considerations

a. Legislative

Current legislation does not provide an adequate basis for dealing with the problem of nutritional deficiencies. For example, many locally-produced food products are labeled as being vitamin-mineral fortified. There are no standards, controls or inspections to ensure that labels are an accurate reflection of contents. Adulteration is regarded as a common practice. Labeling laws and quality control do not exist.

b. Manpower

There is a marked shortage of professional and ancillary personnel in the field of nutrition. Although there is no reliable information on the total number of trained people working in this field, the number is small.

It is difficult if not impossible to define manpower needs in the absence of further evaluation. Short courses emphasizing the practical application of applied nutrition programs together with other educational approaches such as the use of mass media techniques would help.

c. Technological

Increased production and utilization of locally-produced foodstuffs with a high content of protein (beans, rice, etc.) would contribute substantially to better nutrition if eaten instead of plantains and tuber roots. The feasibility of introducing new, low cost, highly nutritive food products on the market should be explored. Working in conjunction with the Government (Molinos Dominicanos), the Pan American Health Organization is attempting to develop a blend of rice, soy flour, and wheat germ. Pedro Henriquez Ureña National University is doing research on the aflatoxin content of Dominican peanuts. Other possible sources of protein such as the leaf protein extracted from dehydrated corn leaves and cereals fortified with amino acids could be altered to make more nutritious cereals available. Food processing techniques are another factor which should be studied. Some vitamin and mineral deficiencies might be eliminated or markedly ameliorated by improvements in this area.

d. Attitudinal

The plantain is the dominant staple. It is the principal source of calories, and despite its low protein content, it is also a main source of protein. It appears that mothers place an unrealistic value on the plantain and tend to feed it to their young children preferentially.

As noted earlier, many foods are not eaten because of culturally defined dietary restrictions, particularly during pregnancy and lactation. Too frequently pregnancies introduce additional stress to poorly-nourished mothers, and as a result, even breast feeding during the first six months of a child's life does not consistently assure adequate nutrition.

Traditional practices in child care influence nutritional status, particularly among young children. Proper weaning diets are not employed because of dietary restrictions, the low level of educational attainment on the part of mothers, and inadequate food availability. The local custom of using the plantain as the principal weaning food causes serious dietary problems. The practice of introducing carbohydrates that are difficult to digest to infants prior to putting them to the breast tends to decrease breast milk consumption and may cause the loss of milk.

Mention should be made of the large consumption of alcohol in the Dominican Republic. Aside from the obvious nutritional consequences of replacing food, excessive use of alcohol of course has profound social and economic consequences.

Other Donors

Until recently, the World Food Program (WFP) had a supplemental feeding program. In 1968, AID/W approved the first Title II assisted WFP project in the Dominican Republic. The project, a drought emergency assistance program, provided supplemental food to 108,000 recipients in the southern and northwestern regions for a period of 90 days. In March 1969, this project was extended to assist post-emergency self-help efforts. The program was phased out by the end of 1969.

D. Health Status and Basic Health Services

Health Status

In general there has been relatively little improvement in the health of the Dominican people during the last 10 years. What progress

has been made has not kept pace with the growth of the population during the past decade. A policy of curative rather than preventive medicine has underscored a general lack of improvement in the well-being of the populace. As a result, there has only been a nominal reduction of prevalent diseases such as gastroenteritis and hementhic infections, communicable diseases, respiratory diseases, tuberculosis, veneral diseases, early infant and childhood diseases and nutritional deficiency diseases.

Health data is seriously deficient both in quantity and quality. There is no information available as to total morbidity, and this data includes obvious biases. Mortality data is also deficient, since only some 40 to 45% of deaths have certificates. Of these nearly 40% are attributed to "ill defined causes." It is estimated that gross mortality is about 15 per 1,000 and has remained constant or possibly even increased in recent years.

From the data contained in Annexes D, E and F, it may be observed that in 1959, 36% of all registered mortality occurred in infants below the age of one year, and an additional 17% occurred in children between the ages of one and four. If full registration were attained, the proportation of preschool children would have undoubtedly been shown to be even higher.

It is also noted that 43.5% of all mortality was directly due to infectious diseases, which are either completely eliminable or sharply reducible. Moreover, these are the immediate causes of most of the mortality in preschool children.

From these data we may infer that the Dominican Republic shows an unfortunately typical pattern. The most important health problem is poor health in young children, leading to poor individual development and unnecessarily-high mortality. The further results of this poor health are obvious, and indirectly include high fertility.

The poor health is in turn a function of poor nutrition (described in the Food and Nutrition Section) and poor sanitation. The poor sanitation results in high incidence of parasitic and diarrheal disease which exacerbates the nutrition problems and takes a major toll in lives in these children with already low resistance.

The figures in Annex D also indicate high incidence of perinatal mortality and maternal mortality due to complications of pregnancy and childbirth. These combined with anecdotal evidence of high abortion rates and the lack of prenatal care indicate that maternal health is a major health problem. Obviously, maternal health and nutrition status are vital factors in the health of the newborn and lactating infant.

As is to be expected, adult mortality is far lower than child mortality, and adult health is less critical. Nonetheless, the high infant mortality is also a general indicator of general problems of hygiene and health. With the area of adult health, it appears that emphasis should be given to worker health, and in fact the creation of the Dominican Institute of Social Security indicates that this problem has been recognized. One may specifically note the lack and importance of industrial preventive-medical services. The problem is illustrated by the very high rate of adult tetanus which has not resulted in any campaign of worker innoculation.

The marked economic growth of the Dominican Republic does not appear to be affecting incomes of the poor as strongly as it affects the upper classes. Thus, we cannot assume major improvements in health to accrue automatically from the socio-economic development of the country. In fact some development policies may exacerbate health problems, e.g., extensive development of irrigation systems may increase the prevalence of schistosomiasis. It exists in the Dominican Republic and could become a major health problem. Similarly agricultural policies which emphasize growth of agricultural exports may exacerbate problems of protein-calorie malnutrition.

Health Services

The Government provides a variety of health services to ameliorate health problems with a view to improving the health of the population. These are described in the following pages in terms of a) environmental sanitation, b) preventive services and c) medical care services. Nutrition and family planning services are described separately in other sections of this document.

Environmental Services

Environmental services include the provision of water to households, disposal of sewage and solid wastes, vector control activities, and food and other sanitary inspection activities.

a. Water

Water supply systems throughout the country are inadequate, particularly in the rural areas. According to official reports, household connection to water supplies is presently available to 25.9% of the total population (53.9% of the urban and 4.7% of the rural population). Minimal treatment of drinking water is limited to urban areas. There has been no systematic effort apparent to upgrade the level of treatment where treatment is used.

During the 1950s, Government efforts to improve the nation's water supply systems were significant. The two largest urban cities of Santo Domingo and Santiago as well as San Cristobal had their water supply systems modernized. Water was made available to many rural areas by a system of windmills.

In the early 1960s, there was a marked deterioration of the existing facilities. In the middle 1960s there was renewed governmental interest and support for rehabilitation of antiquated facilities and for the building of new ones.

Clear official policy on the improvement of the water supply for the country at large does not exist. However, some programs have been formulated in response to the actual needs of the urban and rural areas. There are now two major programs: the "Plan Nacional de Acueductos Urbanos" and the "Plan Nacional de Acueductos Rurales". These have increased the availability of potable water. Under the former, since 1966, 14 towns (excluding Santo Domingo) with a total of 172,800 inhabitants have benefitted from remodeling and expansion of the existing water supply systems. Under the latter, 85 rural systems have already been built benefitting about 107,000 users. The rural program, however, will not be sufficient as presently conceived to keep up with rural population growth.

For the cities of Santo Domingo and Santiago, there are Government programs, prepared by private consultants, aimed at satisfying their needs both in potable water supply and sewage disposal for the next 20 years. IDB is implementing a Master Plan prepared by Boyle Engineering of the water resources development in the vicinity of Santo Domingo, part of which deals with the supply and treatment of potable water for the City of Santo Domingo.

b. Sanitary Facilities

Systems for collection, partial treatment, and disposal of sewage exist in the nine principal cities in the country. In 1968 only three cities had such systems. Concern over such sanitary facilities has been confined to urban centers. There is a trend to improve the existing facilities and provide additional ones in five additional major cities. Nevertheless, the collection and treatment of sewage barely meet minimum sanitation standards, and coastal cities still dispose of sewage in the ocean without any appropriate treatment.

A clear and coordinated official policy in regard to sanitary facilities has not been developed. From the effort expended to solve this problem in the principal cities, one can see that there is merely a tendency to upgrade the services for the disposal of sewage on the basis of the most urgent need.

c. Vector Control Activities

There is a national direct campaign organization for the control of malaria. The campaign has been successful and few Dominican cases of malaria were reported last year. However, the vector still exists, and a significant number of cases of malaria are discovered each year among Haitian migrant laborers who enter the Dominican Republic. Thus, there is a continuing need for malaria control activity. The importance of Haiti as a source of infection for the Dominican Republic suggeststhat there should be a joint or Hispaniola regional program for vector control.

The Aedes Agypti mosquito is wide spread in this country and dengue is endemic.

There is no selvatic source of yellow fever. There have been no reported cases in many years; thus, the vector is not considered to be an important public health hazard.

d. Food Sanitation

The Secretariat of Health has responsibility for food inspection but the program is weak. There are various zootic diseases of high prevalence including brucellosis (in an estimated 12% of cattle). Milk pasteurization and meat control are poor. As of 1965, there were only three veterinarians and 300 largely untrained sanitary inspectors who worked without adequate sanitation norms. To illustrate the problem, in that same year, 80% of all human tapeworm was caused by bovine tapeworm.

Preventive Services

The emphasis of the Secretariat is on curative rather than preventive services. Thus, neonatal tetanus is a major cause of mortality and there appears to be no program of prenatal innoculation. Diphtheria and whooping cough are significant causes of mortality and DPT vaccine coverage was estimated at only 22% of the child population in 1970. (Annex G.) A similar situation existed with respect to tuberculosis, and the situation was worse with respect to measles. In the case of polio, a coverage of 56% was obtained, but this too is inadequate in view of the repeated outbreaks of polio that result from lack of maintenance of the program. Moreover, anecdotal evidence suggests that this coverage is overestimated due to poor administrative practices.

Programs of epidemiological surveillance are also deficient, as is illustrated by the fact that the Dominican Republic has a very high incidence of veneral disease.

Medical Care

The medical care system in the Dominican Republic is physician-based. The Secretariat has an extensive system including 88 hospitals, and a large number of outpatient facilities to provide medical care. These facilities also provide some services to private patients. The public sector also includes the Dominican Institute of Social Security (IDSS), the Red Cross, and specialized services for the Armed Forces. The IDSS is estimated to cover 300,000 workers. There also exists a number of health units within industrial organizations providing services to their workers. Finally, there exists a relatively extensive private medical system.

As of 1970, the Secretariat of Health was providing 136,000 hospitalizations per year and the IDSS some 33,000. No estimates are available for the private sector.

The Secretariat was estimated to have provided 1,500,000 outpatient visits in 1972. This is equivalent to one visit every other year on the average for the majority of the population -- a very inadequate coverage. No figures are available for other systems, but it may be assumed that workers are better covered than the majority of the population.

There is almost no statistical data relative to the utilization, efficiency or quality of medical services, a fact which is itself indicative of the nature of the problems to be encountered. In fact, utilization of public facilities is very high. This is due in large part to gross inefficiency. In Darío Contreras Hospital in Santo Domingo, for example, average length of stay for acute disease patients is one month. Such typically long stays are due to the poor organization of services. The problem is further exacerbated by the fact that laboratory and other diagnostic services are not available to charity patients on an outpatient basis. Thus, an ambulatory patient may be subjected to long hospitalization merely to receive basic diagnostic services.

The lack of diagnostic services and the recurrent unavailability of drugs and supplies is indicative of major failings in the quality of services. Thus, one may suggest that inefficient use of somewhat inadequate resources results in gross inadequacy of both availability and quality of medical care.

There are estimated to be some 6000 midwives in the Dominican Republic. At least half of the births are attended in the home, and it is to be presumed that most of these are attended by "professional midwives" rather than by members of the family. Only about 10% of

these midwives have had formal training in midwifery, and little is known about their practice. Curanderos also practice in the Dominican Republic, but no information was obtained relative to them.

There are 714 pharmacists in the Dominican Republic. There are also 856 licensed pharmacies, of which 444 (52%) are concentrated in the capital, Santo Domingo. Thus, the network of these private pharmacies is far more extensive than the network of public health facilities. The value of drug imports to the Dominican Republic was $29,531,272 for 1971. In that same year, Dominican domestic drug manufacturing volume totaled $2,419,907. (Drug exports were $5,471.) While retail value would have been higher, the consumption of pharmaceutical products thus represents a health activity economically as important as the total budgeted activity of the Secretariat of Health.

Since duties are charged on drugs, and since commercial imported products would be presumed to be in large part nongeneric and expensive, expansion of domestic drug manufacturing activity might eventually prove attractive. Such a program might substitute domestic for foreign products saving foreign exchange, result in lower drug prices to consumers, and thereby increase the beneficial use of pharmaceutical products.

Health Attitudes

The predominantly rural population of the Dominican Republic retains some of the traditional attitudes toward health. Superstitions related to health, nutrition, and procreation are common. There are still segments of the population that prefer traditional medical services provided by curanderos and comadronas to modern medical services, even when these are available. It is probable, however, that more modern attitudes will become increasingly common in the future with increased urbanization, education and economic growth. At this point, in spite of such attitudes, demand for health services far exceeds their availability.

The providers of health services have been suggested to lack the "medical mystique." Thus, physicians congregate in urban areas and exploit opportunities to maximize their income, rather than sacrificing their comfort and income to provide service to those most in need. Further, the medical profession and the middle class seem to be encouraging the extension of medical education.

Health planners and health administrators in the Dominican Republic seem to be oriented toward curative, physician-based care.

rather than toward preventive care and delegation of medical functions. Moreover, they appear reluctant to take the initiative preferring a cautious compliance with orders from superiors. This, of course, is understandable in view of the extreme centralization of authority.

Institutional Constraints and Resources

a. Health Service Agencies

In the following paragraphs, the principal health service agencies are identified, and their strength and weaknesses are briefly considered.

(1) The Secretariat of Public Health and Social Assistance. The principal agency in the Health Sector is the Secretariat of Public Health (SESPAS). The Secretariat was organized in 1927 and reorganized under the 1956 Public Health Code. Subsequent reorganizations within the Secretariat have taken place on a periodic basis. (See Annex H.)

The Secretariat is directed by a Secretary of State, who is assisted by two Sub-Secretaries and is advised by a Technical Council consisting of the Secretariat's division chiefs as well as international advisors from the Pan American Health Organization.

Health matters come under the jurisdiction of the Sub-Secretary of Health and are mainly handled through the National Health Services (NHS), which is directed by a public health physician. The NHS consists of 11 divisions: Hospitals (including all public and private in-patient facilities except those of the Dominican Institute of Social Security); Public Health Centers and Subcenters; Epidemiology; Nursing; Environmental Sanitation; Maternal-Infant Care; Nutrition; Health Education; Statistics; Laboratory; and Pharmacy.

In broad outline, the organization structure of the Secretariat is a serviceable one and could be made to function well. The internal communication system within and between divisions is burdensome and obviates against smooth, efficient working relationships while weighing down the decision-making machinery. A considerable proliferation of departments and units occurs at the lower levels of the organization structure.

Job descriptions, personnel requirements and qualifications and operational policies and guidelines exist but are not observed. Sound uniform personnel administration procedures do not exist. There

is little delegation of authority, delayed decision-making, lessening of individual initiative, and over-separation of decisions from the sources of effective action.

The weakness of this staff is a crucial problem in the Dominican health system. Theoretically, the Secretariat should both operate an effective system of preventive and charitable curative services and provide the guidance and leadership to the otherwise-fragmented decentralized and private institutions. In fact, the staff has not been able to effect the reform of the health services much less provide effective leadership to the remainder of the health system. Thus, a major strengthening of this system is a prerequisite and first step to the overall improvement of the health system.

(2) The National Institute of Potable Water (INAPA) can be considered a well-managed and efficient institution. Operations of those areas where INAPA has been able to take over, have proved to be efficient and competent and generally the services have been measurably improved. Art. 11 of Law 5994 delegates to INAPA the ownership, operation, management and future expansion of all water and sewer systems in the country. This has not been applied to some of the major urban centers, including Santo Domingo and Santiago.

(3) The Water and Sewage Disposal Corporation for Santo Domingo (CAASD) has been created by law but will not begin to function until January 1, 1974. A loan with the IDB is being negotiated to finance this entity which will be responsible for operation and maintenance of all sanitary operations in Santo Domingo.

(4) The Instituto Dominicano de Seguros Sociales operates with a highly centralized administrative pattern having a fairly wide network of ambulatory dispensaries and a few hospitals in selected areas. In general these facilities are poorly staffed and offer sub-standard medical services.

(5) The Armed Forces operate seven hospitals. The availability of financial resources and superior personnel enable these hospitals to provide services which are generally above average.

The Armed Forces also operate a civic action program which has proven to be useful in health campaign activities such as immunization, environmental health etc. This program has brought about the construction of small health facilities in remote localities where the local Armed Services personnel have stimulated the citizens to participate in self-help community action projects.

(6) The State Sugar Council (CEA) has promoted an active preventive health program including nutrition and family planning. Highly motivated leadership at the policy level and the availability of adequate financial resources have made it possible for this agency to carry out a fairly active preventive health program without the usual limitations in other GDR agencies. CEA has started family planning in a few "ingenios" in the eastern part of the country and in Barahona. The family planning and nutrition activities have been efficiently coordinated with CONAPOFA, CAME, and the Nutrition Division of the Secretariat of Health. (Although CEA coordinates its work with the Secretariat its financial resources and programs are unrelated.)

(7) The National Malaria Campaign was started in 1958. It has in the past been operated jointly by PAHO and the Government of the Dominican Republic. At the inception of the program almost all of the Dominican Republic suffered from endemic malaria. In 1961, due to the introduction of mosquitos resistant to previously used sprays, an outbreak resulted in more than 16,000 new cases. Renewed attack has essentially resolved the problem and in 1972 PAHO reported 90.4% of the country in the maintenance phase and 7.1% in the consolidation phase. Malaria essentially remains a serious problem only along the Haitian frontier where immigrants continue to introduce the disease.

The success of the program argues that the quality of the program must be high. Experience in other countries, however, indicates the need for special support of malaria control in a situation where the threat of reintroduction of epidemics remains high, but due to low incidence, malaria ceases to be of high priority to the public. Suggested approaches of extending the duties of malaria workers to include family planning and other preventive and health education measures may be seriously considered in such situations. The existing effective organization may prove cost-efficient for such services, and the additional programs may help to sustain malaria control efforts.

b. Human Resources

The health system in the Dominican Republic is oriented toward the provision of physician services. Estimates run from 1,868 to 2,400 for the number of physicians currently practicing in the country (about 5 per 10,000 population). This implies, however, that perhaps one-third of Dominican trained physicians have emigrated. Two medical schools are now functioning and two more are to begin producing physicians -- so that the production of physicians should pass 120 per year. This represents approximately one-quarter of the

higher education in the country. The majority of physicians live and work in the urban areas -- more than 50% in Santo Domingo. The majority of physicians are employed by the Government, although such employment is generally for 20 hours per week. Ten percent of the staff of the Secretariat of Health are physicians.

Dentists, pharmacists, and veterinarians are members of the professional health team whose production needs to be increased and present shortage has to be overcome. The two dental schools are expanding their training programs but the two schools of pharmacy are still behind in terms of production.

In 1972 there were 317 registered nurses compared with 200 in 1960. Registered nurses are trained in two schools: The National School of Nursing under the auspices of the Secretariat offering a diploma course, and the baccalaureate degree School of Nursing of UCMM which graduated its first class in 1970. The output of registered nurses has increased from 15 a year in the second half of the decade 1960-70 to 35 to 40 in 1972.

There are presently an estimated 2,742 auxiliary and practical nurses (Annex I). Auxiliary nurses are trained at the two Government centers located in Puerto Plata and Santo Domingo. The present output is commensurate with the demand. These centers may be expanded to meet the health needs without overtaxing the training capacity of the two institutions. While the proportion of trained to untrained auxiliary nurses has increased markedly in past years, the "empirical" auxiliaries still form the majority.

Graduates in medical technology have decreased from 68 in 1963 to 22 in 1968. One hundred sixty-five laboratory technicians were trained between 1963 and 1968, yet the Secretariat of Health recruited only 48 of these technicians.

Demographers, social workers, and psychologists are beginning to be incorporated in the health team, but in the meantime, statisticians, social aides, and undergraduate sociologists are performing their tasks. Physical and occupational therapists, dieticians and nutritionists are presently foreign trained but very few are available for the health services.

The area of health services administration at all levels has been unduly neglected and the discharge of these duties is frequently vested in untrained personnel who seem unable to articulate their goals and objectives.

The pattern described is biased. The bias is due in part to the failure of many of the Government's health and education officials to make the best use of the staff they have. The effect of this personnel pattern is obvious. The number of trained nurses is too few to administer nursing and medical services. Auxiliary nurses are in short supply and in the main part inadequately trained. Physicians, who would otherwise exist in sufficient numbers are, therefore, required to devote a large part of their time to sub-professional tasks. Finally, there are lacks of trained technical, dental, veterinary and administrative personnel. The current training pattern seems to be oriented to maintain this inefficient balance of health service personnel.

c. Physical Resources

During the past ten years the Government has constructed ten new hospitals, only one of which is in Santo Domingo. There are now 88 hospitals, many of which are small, with a total capacity of 8,121 beds. The trend, insofar as public facilities are concerned, is toward the construction of rural clinics and subcenters in small towns giving emphasis to ambulatory care.

The Government is presently allocating an average of $1.0 million per year for the construction of health facilities, whereas during the early 1960's the budgetary allocations for such construction did not reach $200,000 per year.

The role of the Secretariat of Health as the responsible agency for the planning and programming of the health infrastructure is marginal. The decisions on geographic distribution of the health facilities, their size and the scope of the services to be offered in them is not always vested in the Secretariat. There is no official national health facilities construction plan nor does there appear to be any Dominican agency responsible for carrying out such planning effort.

The relative importance of the Secretariat versus other agencies of the health system is illustrated in Annex J, which presents data from 1970. At that time nearly 60% of all hospital beds belonged to the Secretariat, and 23% were in the private sector. Total availability was 2.8 beds per 1000 population. This number in fact appears adequate, if the beds were used to maximum efficiency. Under current usage patterns they would appear quite inadequate for the population. The equipment of these institutions appears to be poorly distributed and in many cases inadequate.

d. Financial Resources

The expenditures of the Secretariat of Health in 1972 were 33.4 million pesos. This was the third largest expenditure in the Central Government budget, and represents 10% of the total.

Annex K indicates that the expenditures of the Secretariat have been growing consistently since 1966. It should also be noted, however, that the proportion of the budget devoted to the Secretariat peaked in the 1968-1970 period (averaging 11.1%) and has decreased slightly since that period. Health activities of the Secretariat are entirely financed by the Government, and are provided free.

The Secretariat of Health which receives the bulk of health expenditures (RD$18.4 million in 1972), spends 95% of its resources for salaries and operating expenditures. The Presidency has gradually taken over all the capital investment portion of the sector's budget (RD$10.4 million in 1972). This authority, exercised by the Presidency through the budgetary process, acts as a constraint on rational development of health sector investment. As a practical matter, however, it may not be much worse than if administered by the Secretariat of Health under present conditions.

Decentralized health agencies of the Government are budgeted separately. Annex M shows recent expenditures for the most important of these agencies. The Social Security (IDSS) expenditures amount to more than half of the budget of the Secretariat. These expenditures are financed principally by prepaid contributions from beneficiary workers and employers. Of course, both the budget of the IDSS and of the Secretariat include funds used for pensions and welfare, as well as for health services.

While the private sector will certainly absorb a major portion of the public's health expenditures, especially in payment for drugs and private medical services, inadequate data are available for estimating these amounts.

Annexes N and O provide program budget information for the Secretariat of Health. The jump of budgeted expenditures in 1972 over actual (and approximated) expenditures in 1970 and 1971 is an artifact of the Dominican practice of inflating budgets beyond the financial capacity. The three figures are provided to allow trends in the composition of the budget to be observed.

It will be noted that the vital function of supervision of the health sector has been abdicated by the Secretariat, and only 3-4% of the budget is devoted to "Higher Administration." The bulk of the budget goes to hospital attention (health recuperation), with only 4% going to outpatient services ("General Health Services"). There does appear to be a tendency to slightly reduce the portion of the budget going to hospitalization. Preventive services ("Basic Services" and "Health Attention") account for no more than 5% of total budget. The increase in "Health Attention," which is the most marked trend over the three years, is correlated with the new emphasis on its family

planning component although this still represents a small fraction of total expenses.

AID and Other Donor Programs

a. AID MIC Loan

In February 1968 the Secretariat of Health adopted a regional Health Services Plan which proposed an expanded program of maternal/infant care services, including family planning, for the five public health regions of the Dominican Republic. The proposed program included a system of base hospitals, subcenters and rural clinics to decentralize and extend services within the regions.

Based on an intensive review of the Government's proposal, the USAID agreed to finance a $7.1 million Maternal Infant Care Loan which was signed on April 15, 1969 to assist in providing the facilities and institutional capabilities needed for the proposed program. The loan contemplated using approximately $3.6 million for new construction and remodeling of facilities; $1.9 million for equipment; $1.0 million for education/training programs of medical and para-medical personnel; $0.4 million for technical assistance; and about $0.2 million for special studies and mass media programs.

The overall implementation of the loan has proceeded slower than anticipated because of Dominican institutional and management weaknesses and the extensive and inherent difficulties in carrying out a large and complex construction program in an environment not accustomed to such a massive single effort. Although problems still exist and considerable delay has been experienced in the construction phase of the program due to a lack of cement allocation, as of October 1, 1973, approximately 48% of the loan had been disbursed. The program is now scheduled to be completed by the end of 1975.

b. The Pan American Health Organization (PAHO), operating under a basic agreement with the Government, assists the Secretariat of Health in a consulting capacity in a wide range of activities, including but not limited to basic health services, disease control, maternal/child care, nutrition, environmental health, nursing, regional organization, and water supply. PAHO is currently engaged in a jointly financed latrine construction campaign with the Secretariat covering most of the south and southwest regions of the country.

The PAHO is also presently guiding the Secretariat in the preparation of a 10-year Activity Implementation Plan (1970-1980) which will provide the blue print for new policy and budget planning for the rest of the decade.

Working relationships between PAHO and the Government are good but they are limited partly because of PAHO's reluctance to become involved in policy decisions but more importantly, because of a tendency to assume health programs as its own rather than concentrating on making the advisory relationship work.

PAHO's Directing Council's recent action of withdrawing the Dominican voting rights, due to the Government's failure to pay dues, may have some consequences for this relationship.

c. The Medical Assistance Program (MAP), a U.S. charitable organization with home offices in Winston, Illinois, is sponsored in the Dominican Republic by the Baptist Church of the Dominican Republic. MAP allocates approximately 120 tons of medical supplies and equipment yearly valued at approximately $60,000 for charitable distribution through some 40 private health centers located throughout the country. These attend economically-disadvantaged sectors of the population. Their impact on the poor has been positive particularly in view of the high cost of medicines.

MAP is currently initiating, with the Government's approval, the in-country manufacture of essential medicines as a means of phasing out the foreign donation program. The program is administered locally.

MAP in the past has provided direct medical assistance to state operated hospitals and clinics through its program, where volunteer specialists are invited to perform short-term practical training exercises and consult with Dominican colleagues.

d. Inter-American Development Bank (IDB)

Besides AID, the only other donor that has shown interest in infrastructure and water and sewage systems has been the IDB.

The IDB loan for rural water supply for RD$6.8 million has been designed to provide water to 650 communities with a total population of 550,000. Of this total, 85 rural systems for a total of $2.5 million have already been built benefitting about 107,000 users. Additional funds have been spent from the Dominican national budget and AID funds in the amount of RD$3.6 million to build seven new systems to serve 35 rural and semi-urban communities.

Another IDB loan to expand the Tavera Dam project will incorporate provision for ample water supply for the City of Santiago and nearby communities.

Also, a loan request is currently being reviewed by IDB to provide the Water and Sewage Disposal Corporation for Santo Domingo the capital and technical assistance necessary to handle water treatment and distribution, as well as sewage disposal for the capital city.

Both of the above measures can be considered logical and well planned since they are following recommendations contained in feasibility studies conducted by recognized competent technical entities.

e. The United Nations Development Program and World Food Program has considered several proposals for utilization of U.S. Title II food assistance with several Dominican Secretariats. To date, the only approved project has been the rural aqueduct construction project with INAPA which was initiated in late 1969 for a 21-month period. This project has been extended into a second phase, scheduled to terminate in April 1974. The U.S. Title II assistance has amounted to 2,612 million tons valued at $446,857 and was to benefit 126,000 persons during the construction (by voluntary labor) of 90 rural aqueducts.

As other donor institutions have not developed a clear cut division of responsibilities nor a high degree of specialization, there is some confusion as to which institutions should be approached for specific types of assistance. This may result in some duplication of effort or suboptimal programming, i.e., several small projects carried out by several institutions instead of one large project carried out by one institution. While the problem can be partially resolved by donor coordination at the country level, additional efforts at the international level are indispensable.

Summary Statement of Problems in Health Status and Health Services

The most important health problems in the Dominican Republic are the poor health of children less than the age of five, of mothers, and of workers. The negative repercussions of these health problems are manifold. In addition to an excessively high birth rate and poor nutrition, these health problems are due to poor environmental sanitation and hygiene, to the inadequacy of preventive health services, and to the lack of effectiveness and availability of simple curative medical services. These service delivery problems in turn stem not so much from inadequate resources for health services, as from their poor allocation and inefficient utilization. Policies have repeatedly been promulgated from the Dominican executive level that would tend to correct these problems, but these

policies have not been implemented. We must then attribute this root cause of the problems of health and health services to the incapacity of the Secretariat of Health and other Dominican institutions to program and administer the required major reforms of the health system. The extent that this may be correctable must await further analysis. Finally, this institutional debility must be related to lack of trained managerial personnel, lack of motivation in these personnel to really effect reforms, and legal and organizational structural constraints.

E. The USAID Mission Approach to a Development Strategy in Health

In order to assist the Dominican Government in its endeavor to effect a significant reduction in fertility, and at the same time to complement rather than duplicate the activities of the other international agencies engaged in family planning directly and distribution of birth control materials, the Mission is of the view (for a variety of reasons, not excluding political considerations) that its efforts would be best directed toward helping the Government create an appropriate environment in which an effective birth control program could be carried out. Thus, we would seek to direct our efforts to strengthening the existing institutional health service structure, both in the Secretariat and in the country as a whole, with the objective of improving the health of the populace generally and especially to reducing infant and child mortality -- a necessary precondition, we are convinced, to lowering fertility rates. The precise methodology to be employed must await a more thorough analytical sector assessment.

The immediate steps to be taken would be to encourage comprehensive health planning and to help build that analytic foundation on which better planning can begin. A synerisis study of Dominican health by HEW is in preparation. The USAID Mission plans that this should be expanded upon and complemented early next year by a health sector assessment. To prepare for such an assessment, Dominican personnel should be selected and trained to provide a cadre of national personnel to collaborate in the continuing sector analysis process. The costs need not be underwritten by the USAID Mission if Dominican or other external sources can be tapped.

Subject to confirmation through the analytical process, the approach to be followed in achieving the health objectives of the Dominican Republic would be as follows: (1) make top health decision makers aware of issues and the possibilities for resolution; (2) help improve planning and administrative capacity of higher echelon professional health officials through technical assistance and training; (3) help train health service personnel to meet manpower needs as these needs are determined; (4) help

improve health services through technical assistance and advice on better and more efficient utilization of existing health facilities; (5) assist in developing and testing innovative programs to overcome fundamental problems of family size, malnutrition, communicable diseases, and parasitic and diarrheal diseases -- particularly as these factors adversely affect infants and children. To the extent that external assistance is available or can be provided by other institutions, the USAID Mission would not propose to duplicate efforts or to take preclusive action. Nevertheless there is ample evidence that even the obvious needs are not now being met adequately.

A key element in the foregoing approach will almost certainly be that the Dominicans undertake development of a low-cost outreach system of medical care and health education for poor rural and urban populations. This system must take into account the inability of the Government of the Dominican Republic to spend much on a per capita basis. Such a system should be integrated into the existing regionalized medical care infrastructure which to be most effective should emphasize preventive rather than curative health measures. As a minimum there must be nutritional, educational, preventive health measures and family planning services widely available.

The analytical process will be used to confirm or reject the assumptions of this paper. Particular attention will be given to how to strengthen the process of institution-building and to provide a detailed plan for future action. The present health structure appears to be too weak to carry out its current mandate and corrective action is thus urgent. The Secretary of Health senses the need and wants technical help. The high priority of family planning and health has been confirmed by the President.

Major reform of the health system requires reaffirmation of policy direction by the President and his senior health officials, accompanied by action measures, the underpinning of policy by having a thorough analysis of existing capabilities and by considering specific action choices which could be undertaken, and finally the execution of approved plans by a corps of dedicated and competent Dominican health professionals. Anything less will not assist the Dominican's desire for continued growth and development which after-all is the fundamental goal. Furthermore, anything less would not even maintain the current low levels of health services, given the problem of expanding population.

In the past when forward looking policies have been promulgated, the Dominican health system has been incapable of carrying them out. Thus, policy alone is not enough. To the extent that such programs

can be implemented through external help of the Pan-American Health Organization or other agencies so much the better. There will be less burden on bilateral undertakings.

In the case of nutritional improvement, other institutional reforms will be required. These include, for example, the nutrition coordinating committee idea advanced by the Mission in earlier messages, or, to add this function to the National Population and Family Council. The latter is the USAID Mission's preference.

(1) Family Planning. Family Planning is an area of special concern to us. Significant external help is in the offing. The Government is cooperating with the United Nations Fund for Population Activities in a $4 million progress to be expended over four years, of which just over one-half will be borne by the Government. The World Bank is also considering additional support. Nevertheless, critical areas which do not now seem adequately covered and where an AID input may be useful include:

(a) Planning.- Supporting the development of an analytical capacity.

(b) Evaluation.- The evaluation process should be initiated immediately. Otherwise there will be no objective basis for measuring success -- or failure -- of the expanded family planning efforts. This could be accomplished perhaps by financing a university contract to provide evaluation services. North Carolina, Michigan and Columbia come to mind. In this connection, it might be useful to undertake sociological research on motivation and other factors since, as we are learning, family planning is a complex business and the factor of motivation is not yet nearly understood.

(c) Training.- Improving Dominican technical capacity by supporting training of technical personnel in Puerto Rico and third countries, e.g., Colombia.

(2) Nutrition. The major effort for nutritional improvement will, of course, fall on agricultural and commercial systems. The agricultural and commercial sectors should assure that food appropriate in quantity, nutritional value and cost is available -- consistent with the public's being educated to make the appropriate dietary adjustments. The role of the Government will be to set the policies, provide the incentives and to educate the public. The education role of the Government will be critical since much of the

nutritional problem is cultural. The DAP agricultural sector assessment assumes the development of a national nutrition policy which will affect agriculture, credit, and marketing policies. A health sector analysis should attempt to reach some judgments about:

a) Title II foods and Dominican substitute nutritional supplements to be adopted gradually during any program phase over.
b) Legislation to assure the food additives (vitamins, iron, iodizing, etc., are correctly labeled and used as required in the Dominican Republic.
c) Nutrition education to be provided to the public so as to improve their nutritional knowledge, attitude and practices.
d) What information on nutritional status is available so as to aid, for example, the agricultural planners. Attention will need to be given to see whether bilateral AID activity is needed and wanted.

(3) Other Programs. The major thrust of an environmental sanitation program -- the provision of water -- is partially funded by the IDB through its $6.8 million loan. This seems to be an appropriate level considering the current capacity of Dominican institutions. There appears no current reason why this should be part of any bilateral U.S. activity. Other environmental sanitation measures -- vector control, food inspection, occupational safety -- are already part of the Dominican program. While these may be inadequately funded, some reallocation of the Government's funds could result in a more satisfactory effort.

Preventive medicine, while also of key importance, would also seem to require a reorientation of expenditures, particularly for improved performance in planning for and administering vaccination and other epidemiological programs.

These other programs would seem to be of lower priority insofar as bilateral AID activity is concerned.

(4) Low Cost Delivery Systems. The current health delivery system based on large numbers of highly-trained and highly-salaried physicians and small numbers of auxiliary personnel does not seem to be appropriate to Dominican requirements. Rather, a preventive health approach should be designed which utilizes a system, based on the lowest cost required to adequately perform required tasks. Such a system can be based on the regionalized system of medical facilities and services in which patients can be referred

to the least cost facility capable of providing services of adequate quality and specialization. Moreover, such approach would involve substantial delegation of functions currently performed by physicians to other less costly personnel. Such system can likewise be used to reach the same groups in areas of population, family planning and nutrition education.

Potential subject to be investigated in health sector assessment would thus include:

a) Training of health promoters and institutionalization of a system of supervised home health education and visiting.
b) Training of health auxiliaries, and institutionalization of a system of primary medical care through a system of medically supervised auxiliaires in (satellite) outpatient facilities.
c) Retraining of traditional and empirical practitioners such as midwives and curanderos, and institutionalization of systems of supervision and incentives for such personnel (e.g., payment to midwives for referral of postnatal patients accepting IUD's).
d) Training of pharmacists to provide adequate health advice and/or subsidizing specific drug sales (e.g., training pharmacists to provide family planning information).

A low-cost health service which could possibly be encouraged by AID would include at the least nutrition education, family planning, preventive medical services, and health education within a framework of comprehensive maternal and child care. Considerable investment might be made in this area in training, development of training institutions and materials, pilot projects, evaluations, provision of basic equipment required. Operation costs should in all cases be paid by the Government. Considerable emphasis should be directed at assuring that facility usage patterns are modified to accommodate the very ill identified by these outreach services that would otherwise not have received hospital care.

(5) Conclusion. As has been stated, the above description is general, and details will have to be defined through the analytical sector assessment process. The assessment staff should include enough Dominican personnel and be closely enough linked to Dominican institutions to ensure that any plan is in the first and final instance theirs. A good health service elaborated along the foregoing lines should:

a) Reduce population growth through improved Government and private family planning services.

b) Indirectly reduce population growth through reduction of child mortality.

c) Improve health particularly of infants and children by providing better nutrition, environmental sanitation, preventive medical services, and the availability of curative medical services.

d) Improve socio-economic growth by directly increasing employment, and indirectly increasing the productivity of the people.

e) The above improvements could be effected by increasing efficiency and reallocating resources so that requirements for additional financing of the health sector could be minimized.

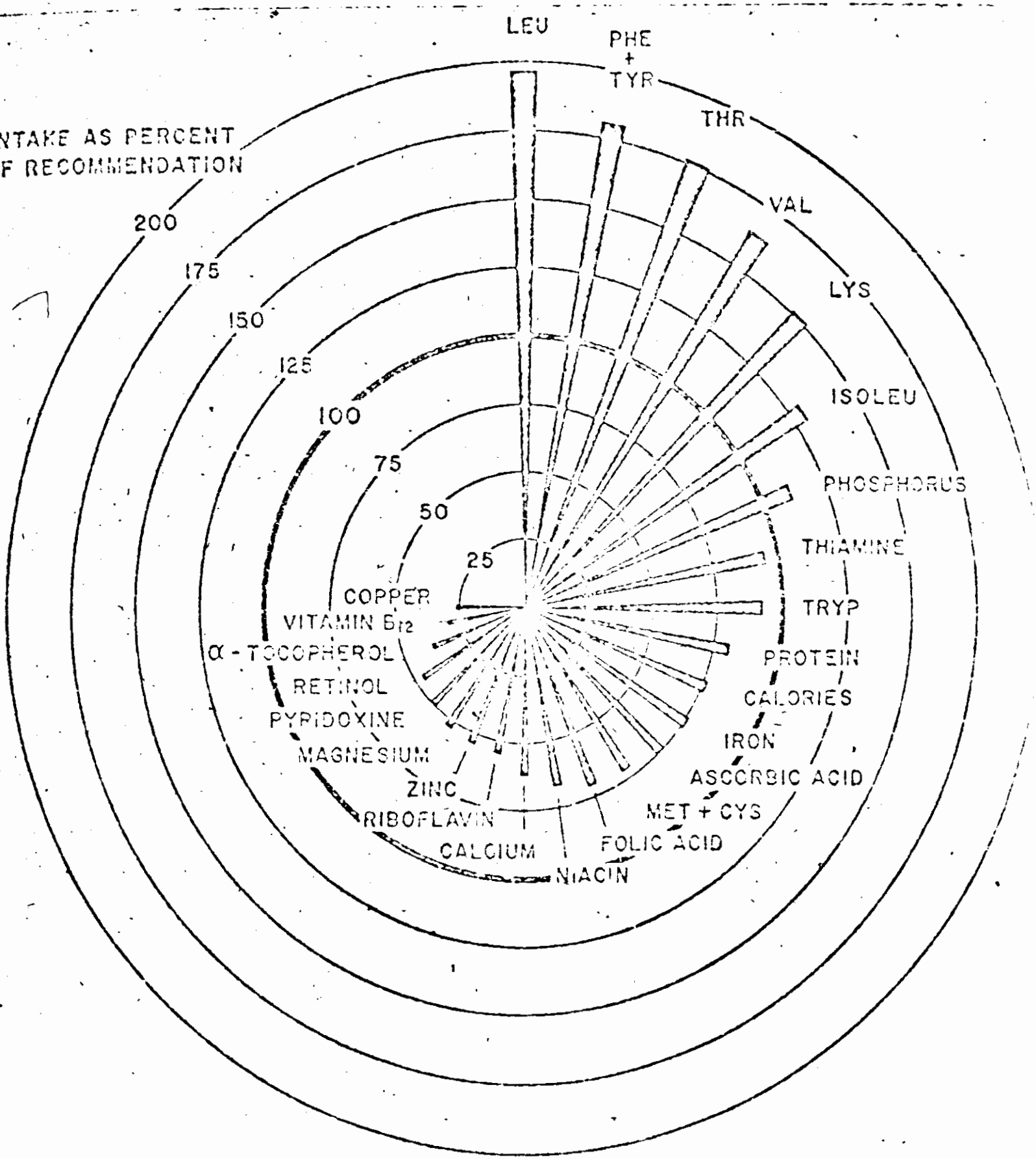
ANNEX A

FINANCIAL SUPPORT TO CONAPOFA

AGENCY	1970	1971	1972	Total
U.S. PL 480	91,749	103,600	15,600	210,949
Pop. Council	75,200	97,800	72,300	245,300
IPPF	57,697	89,530	180,840	328,067
Pathfinder	-0-	1,440	-0-	1,440
UK	90,000	-0-	-0-	90,000
GODR	108,687	216,547*	397,980**	723,214
TOTAL	423,333	508,917	666,720	1,598,970

* Includes $15,400 for CONAPOFA operations.

** Includes $80,000 for CONAPOFA operations.



Submitted by: Dr. W. Henry Sebrell

ANNEX C

BELIEFS DURING PREGNANCY

Do not eat soursop because it produces frenzy.

Do not eat hardened rice because the placenta stays attached.

Do not eat eggwhite because it produces albumin.

Do not eat sugar cane, or banana because it gives phlegm to the newborn child.

Drink milk of magnesia and eat cashew because they whiten the skin.

BELIEFS DURING POST-PARTUM

Do not eat herring during lactancy because it gives colics to the child.

Do not eat cashew seeds because the matrix decends.

The "yautía" and the herring harm the matrix.

Do not eat lemon because the childbirth goes up to their heads.

Do not eat any fruit because they are very cold and harm the matrix.

Do not eat fish, seafood or chicken because they are cold and harm the matrix. Eat hen.

BELIEFS RELATED TO LACTANCY AND THE NEWBORN CHILD

During lactancy if the mother eats something indigestible it does harm to the baby.

Do not eat okra because it is very cold and it does harm to the baby, neither avocado because it gives gases to the baby.

4300 Estructura de la mortalidad . Año 1969

4301 Número de defunciones por grupos de causas y edad (Octava Revisión de la Clasificación Internacional de Enfermedades)

Grupos de causas	Todas las edades		Grupos de edad en años						
	Número	Porcentaje*	Menos de 1	1-4	5-14	15-44	45-64	65 y más	No consta edad
Total	27.065		9594	4611	1114	3075	2891	5278	502
Grupo F									
Síntomas y estados mal definidos (780-796)	12.354		4062	2181	429	1008	1237	3237	210
Total excluyendo Grupo F	14.711	100	5532	2430	685	2067	1654	2041	292
Grupo A	6.391	43.5	3318	1695	274	351	253	357	143
A.1	1.216	8.3	500	237	84	174	91	54	36
Tuberculosis (010-019)	262	1.8	2	15	6	132	65	38	4
Difteria (032)	127	0.9	27	93	5	3	1	2	2
Tos ferina (033)	27	0.2	12	13	3	2	-	-	-
Tétanos (037)	559	3.8	476	33	42	24	25	13	23
Poliomielitis aguda (040-043)	9	0.06	2	1	4	-1	-	-	1
Viruela (050)	-	-	-	-	-	-	-	-	-
Sarampión (055)	232	1.6	51	147	26	2	-	1	5
A.2	3.227	21.9	2035	903	76	55	43	83	62
Fiebre tifoidea (001)	42	0.3	5	7	9	14	2	4	1
Paratifoidea y otras salmonelosis (002, 003)	12	0.08	3	4	1	3	1	-	-
Disentería bacilar y amebiasis (004, 006)	6	0.04	-	1	-	2	2	1	-
Enteritis y otras enfermedades diarreicas (008, 009)	3.165	21.5	1997	891	66	36	38	76	61
Peste (020)	-	-	-	-	-	-	-	-	-
Fiebre amarilla (060)	-		-	-	-	-	-	-	-
Rabia (071)	-	-	-	-	-	-	-	-	-
Tifus y otras rickettsiosis (080-083)	-		-	-	-	-	-	-	-
Paludismo (084)	2	0.01	557	420	73	91	100	195	37
A.3	1.473	10.0	-	-	-	-	-	2	-
Influenza (470-474)	159	1.0	55	36	5	20	7	31	5
Pneumonía (480-486)	689	4.7	258	193	40	40	53	90	15
Bronquitis, enfisema y asma (490-493)	625	4.2	244	169	28	31	40	74	19

*Porcentaje de todas las causas excluyendo Grupo F., causas mal definidas, etc.

4301 (Continuación)

Grupos de causas	Todas las edades		Grupos de edad en años						
	Número	Porcentaje*	Menos de 1	1-4	5-14	15-44	45-64	65 y más	No especificadas
A.4	475	3.2	256	95	41	31	19	25	8
Sífilis y sus secuelas (090-097)	83	0.6	62	4	4	4	5	3	1
Escarlatina y angina estreptocócica (034)	1	0.01	-	-	-	-	-	-	1
Infecciones meningocócicas (036)	1	0.01	1						
Lepra (030)	3	0.01				1	2		
Las demás enfermedades infecciosas y parasitarias(000, 005, 007,021-027, 031, 035, 038, 039, 044-046, 051-054, 056, 057,061-070,072-079,085-089,098-136)	387	2.6	193	91	37	26	12	22	6
Grupo B	1345	9.1	1345						
Causas de mortalidad perinatal (760-779)	1345	9.1	1345						
Grupo C	832	5.6	6	17	24	177	305	293	10
Tumores malignos (140-209)	775	5.3	2	13	14	162	292	282	10
Tumores benignos y de naturaleza no especificada (210-239)	57	0.4	4	4	10	15	13	11	-
Grupo D	1632	11.1	26	24	40	273	514	727	28
Fiebre reumática activa (390-392)	8	0.05	5	-	1	-	1	1	-
Enfermedades reumáticas crónicas del corazón (393-398)	51	0.3	-	-	8	26	8	8	1
Enfermedades hipertensivas (400-404)	229	1.6	-	1	1	35	78	112	2
Enfermedades isquémicas del corazón (410-414)	410	2.8	2	1	2	71	146	180	8
Otras formas de enfermedad del corazón (420-429)	301	2.0	13	9	18	51	76	129	5
Enfermedades cerebrovasculares (430-438)	582	4.0	5	12	6	70	191	286	12
Otras enfermedades del aparato circulatorio(440-458)	51	0.3	1	1	4	20	14	11	-
Grupo E	4511	30.7	837	694	347	1266	582	664	121
E.1	1089	7.4	334	393	73	73	85	113	18
Bocio no tóxico y tirotoxicosis (240-242)									
Diabetes (250)	138	0.9			7	27	54	47	3
Avitaminosis y otras deficiencias nutricionales (260-269)	695	4.7	284	306	44	12	11	27	11
Anemias (280-285)	256	1.7	50	57	22	34	20	33	-

*Porcentaje de todas las causas excluyendo Grupo F., causas mal definidas, etc.

4301 (Continuación)

Grupos de causas	Todas las edades		Grupos de edad en años						
	Número	Porcentaje*	Menos de 1	1-4	5-14	15-44	45-64	65 y más	No especificada
E.2	295	2.0	3	7	8	66	114	92	5
Cirrosis hepática (571)	295	2.0	3	7	8	66	114	92	5
E.3	176	1.2				169	5		2
Complicaciones del embarazo, del parto y del puerperio (630-678)	176	1.2				169	5		2
E.4	211	1.4	187	5	3	8	3	3	2
Anomalías congénitas (740-759)	211	1.4	187	5	3	8	3	3	2
E.5	685	4.6	19	92	125	288	67	54	32
Accidentes de vehículos de motor (E810-E823)	286	1.9	3	18	44	143	42	18	18
Los demás accidentes (E800-E807, E825-E949)	389	2.7	16	74	81	155	25	36	12
E.6	553	3.8	2	11	28	370	71	41	32
Suicidio (E950-E959)	106	0.7			2	67	16	13	8
Homicidio, etc. (E960-E999)	447	3.0	2	11	26	303	55	28	23
E.7	1502	10.2	292	186	112	282	237	361	34
Meningitis (320)	263	1.8	136	84	27	7	5		4
Otras enfermedades del aparato respiratorio (460-466, 500-519)	197	1.3	18	23	11	52	26	50	17
Ulcera péptica (531-533)	73	0.5	1	1		20	30	20	1
Apendicitis (540-543)	9	0.6	-	1	1	4	2	-	1
Obstrucción intestinal y hernia (550-553, 560)	99	0.7	32	5	7	17	18	19	1
Otras enfermedades del aparato digestivo (520-530, 534-537, 561-570, 572-577)	277	1.8	80	17	19	64	52	42	3
Nefritis y nefrosis (580-584)	118	0.8	4	16	21	25	18	32	2
Otras enfermedades del aparato genitourinario (590-629)	82	0.6	6	10	2	14	15	34	1
Las demás enfermedades definidas (el resto)	384	2.6	15	29	22	79	71	164	4

*Porcentaje de todas las causas excluyendo Grupo F., causas mal definidas, etc.

Fuente: Secretaría de Salud Pública. División de Esstadística.

Comentarios:

4302 Proporción de defunciones en determinados grupos

Año 1969

G R U P O S	Defunciones Número	%
TOTAL GENERAL	27.065	100.
Con certificación médica	13.974	51.6
Sin certificación médica	13.091	48.4
De menores de 5 años	14.208	52.5
De 50 años y más	7.610	28.1
Del resto	5.250	19.4
Por causas desconocidas y mal definidas (Grupo F)	12.354	45.6
Por todas las causas excluyendo las del Grupo F		100.
Por causas en Grupo A	6.391	43.5
Por causas en Grupo B	1.335	9.1
Por causas en Grupo C	832	5.6
Por causas en Grupo D	1.632	11.1
Por causas en Grupo E	4.511	30.7

Fuentes: División Estadística, Secretaría de Salud Pública.

Comentarios:

Crude Death Rate

(CDR)

	1960	1967	1968	1969	1970	1972
CDR (per 1,000)	14.3	7.6	7.3	6.9	15	15

Crude Birth Rate

(CBR)

	1960	1967	1968	1969	1970	1972
CBR (per 1,000)	47.5	35	33.9	39.2	48	49

Note: According to the National Statistics Office, the lower rates for 1967, 1968 and 1969 are attributable to under-reporting.

5200 Vacunaciones

1 Trienio 1968-69-70

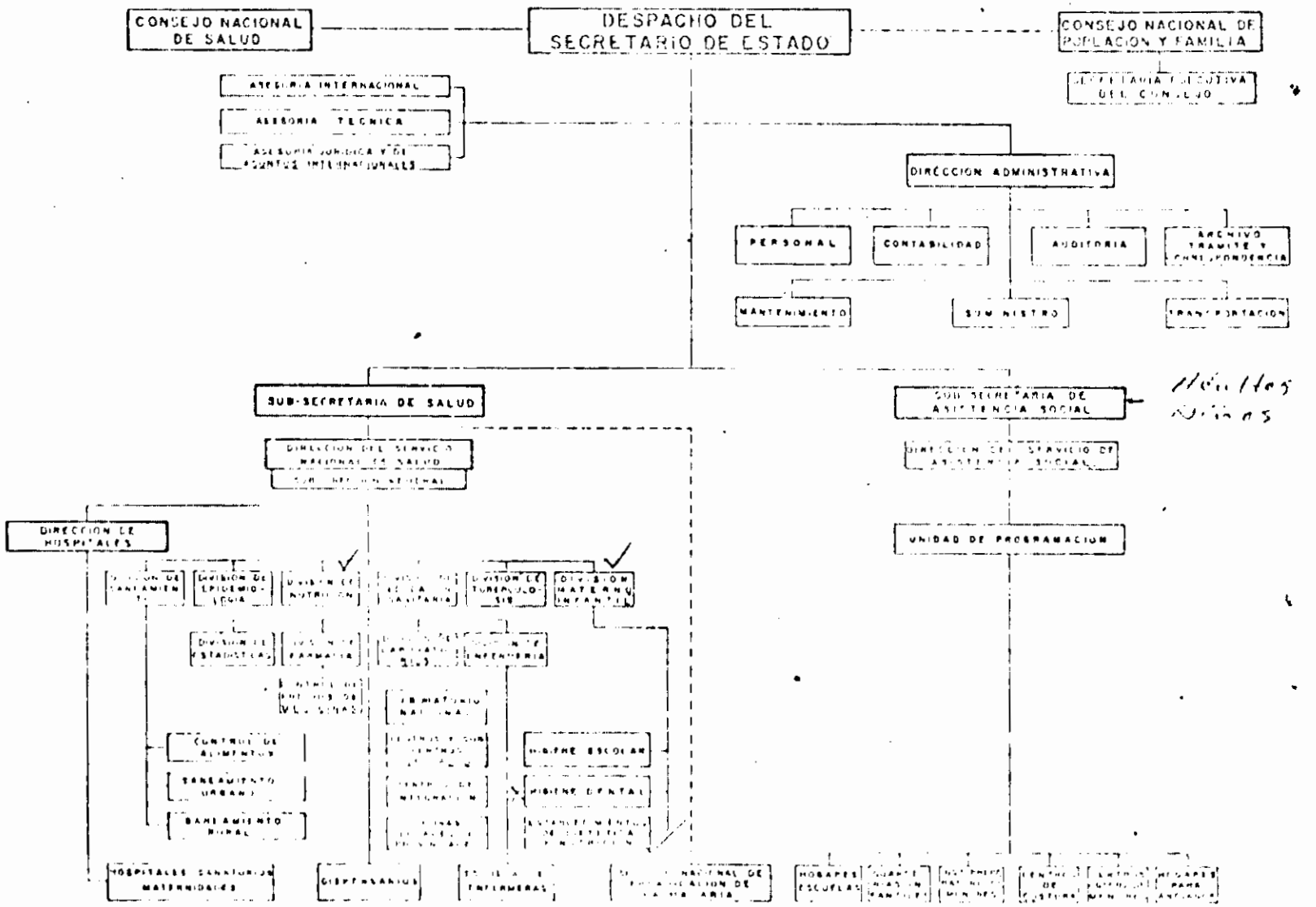
Tipo de Vacuna	Población del año intermedio		Total de dósis aplicadas en los últimos 3 años	Total de personas vacunadas en los últimos 3 años	Niveles de vacunación porcentajes	
	Grupos	Número			Alcan.	Util
	2	3	4	5	6	7
Antivariólica	Menores de 5 a.					
	Pob. total	3899265	110.209	110.209	2.8%	80%
D P T	Menores de 1 a.					
	Menores de 3 a.					
	Menores de 5 a.	686270	401.434	150.538	21.9%	70%
Toxoide tetánico	Embarazadas.					
	y adultos especialmente expuestos al riesgo.		328.089	122.532	-	-
Antipolio	Menores de 1 a.					
	Menores de 3 a.					
	Menores de 5 a.	686270	1.040.426	390.160	56.0%	80%
Antisarampión	Menores de 1 a.					
	Menores de 3 a.					
	Menores de 5 a.	686270	3.548	3.548	0.5%	80%
BCG	Menores de 1 a.					
	Menores 15 años	1735172	367.834	367.834	21.0%	80%

Año de preparación: 1971

Fuente: Memorias de la División de Epidemiología-SSP y AS.

Comentarios: Hipótesis: Para las vacunas que requieren 2 dosis se calcula que un [illegible] de los que reciben la 1a. dosis, reciben la 2a.

ORGANIGRAMA DE LA SECRETARIA DE ESTADO DE SALUD PUBLICA Y ASISTENCIA SOCIAL



DISTRIBUCION POR REGION DE LOS PROFESIONALES
DEL EQUIPO DE SALUD.

1972

	MEDICOS	ODONTOLOGOS	FARMACEUTICOS	TECNOLOGOS MEDICOS	ENFERMERAS GRADUADAS	AUXILIARES Y PRACTICAS	TECNICOS DE LAB PRACTICOS	MEDICOS VETERINARIOS.	INGENIEROS SANITARIOS	OFICIALES DE SANEAMIENTOS	TRABAJADORAS SOCIALES	EDUCADORES	NUTRICIONISTAS
REGION I	1151	284	368	30	182	1359	77	?	?	?	?	?	?
REGION II	302	56	136	10	57	581	45	?	?	?	?	?	?
REGION III	197	27	91	3	36	377	32	?	?	?	?	?	?
REGION IV	92	6	55	3	23	245	19	?	?	?	?	?	?
REGION V	116	18	64	2	19	180	17	?	?	?	?	?	?
T O T A L	1868	499	714	48	317	2742	190	150	21	78	77	25	16

Annex 1

SESPAM

Hospital Resource in the Dominican Republic - 1970

Number of Beds Per Institution	SESPAS		IDSS		Armed Forces		Private	
	Fac.	Beds	Fac.	Beds	Fac.	Beds	Fac.	Beds
Less than 10 beds	11	84			13	61		
10-49	27	518	10	314				
50-99	12	646	1	54				
100-499	21	4074	4	1031	2	521		
500 or more	2	1400						
Total	73	6722	15	1399	15	582	190	2637

Central Government

Comparison of Functional Classification of Expenditures 1966-1972

(RD$ millions)

	1966	1967	1968	1969	1970	1971	1972
Social Services	58.2	60.6	65.7	73.0	87.3	98.5	110.2
Education	28.8	28.8	30.4	36.3	41.9	43.9	46.4
Health	20.7	21.6	23.9	25.6	29.0	32.3	33.4
Housing	0.7	5.0	4.4	5.0	9.1	13.2	13.1
Labor	0.6	0.5	0.5	0.6	0.6	0.6	0.6
Community Development	3.4	0.8	1.1	0.8	2.1	2.5	2.5
Water & Sewarage	4.0	3.9	5.3	4.7	4.6	6.0	14.2
Economic Services	48.0	56.7	59.7	70.2	81.6	103.0	117.8
Agriculture	13.5	14.0	18.0	17.1	15.2	15.4	17.5
Irrigation	5.7	4.8	3.5	10.4	12.4	14.4	12.3
Industry and Mining	1.8	3.9	1.3	1.0	3.1	3.5	2.6
Transportation & Communication	24.7	27.9	30.5	34.2	42.0	58.4	49.1
Energy	-	-	0.4	1.9	2.7	6.8	4.6
Urbanization and Buildings	2.3	4.0	3.6	5.3	5.7	8.2	30.7
Other	-	2.1	2.4	0.3	0.5	1.3	1.0
General Services	91.8	80.8	82.2	92.1	95.9	98.5	106.3
Internal Security	17.2	17.2	17.6	17.6	17.0	17.7	18.6
Defense	32.8	28.3	28.7	29.8	30.3	31.2	32.5
General Administration	19.2	15.4	18.4	20.4	23.2	24.1	29.4
Transfers to Municipalities	15.2	13.3	11.0	11.0	9.7	9.3	9.1
Debt Service	7.3	6.5	6.5	10.7	11.8	12.3	12.9
Other	0.1	0.1	-	2.6	3.4	3.9	3.8
Total Expenditures	198.0	198.1	207.6	235.3	264.8	305.0	334.3

Source: Ejecución del Presupuesto

September 1973

[illegible]

ANNEX K

Total Health Expenditures by Source of Financing

	Total Health Exp.	Secretariat of Health	Presidency	Armed Forces	Other
1964	15.9				
1965					
1966	20.7	17.5	2.1	-	1.1
1967	21.6	13.9	4.6	1.0	2.1
1968	24.0	14.8	5.9	2.3	1.0
1969	25.6	15.2	6.8	1.9	1.7
1970	29.0	16.1	8.1	2.1	2.7
1971	32.3	17.5	8.5	2.1	4.2
1972	33.4	18.4	10.4	2.0	2.0

Source: Ejecución de Presupuesto

ANNEX M

Budget Execution for Agencies of the Dominican Health Sector

Agency	1970	1971	1972
National Aqueduct and Sewers Agency	4,538,678	5,788,083	5,235,673
IDSS	15,719,912	17,178,848	18,836,750
Red Cross	383,705	359,558	392,525
Malaria Service	815,057	814,710	879,360

Ejecución del Presupuesto 1972

ANNEX N

Program Budget for the Dominican SESPAS

Program	Executed 1970		Estimated 1971		Budgeted 1972	
	Amount	Percent	Amount	Percent	Amount	Percent
Higher Administration	483,463	3.2	550,490	3.6	756,570	3.6
General Health Services	622,688	4.1	608,520	4.0	736,220	3.5
Basic Services	489,556	3.2	473,330	3.1	661,280	3.1
Health Attention	342,156	2.1	461,495	3.0	1,148,305	5.4
Health Promotion	454,860	3.0	484,650	3.2	626,720	2.9
Health recuperation	9,660,700	63.8	9,546,465	62.4	12,746,965	60.0
Social Services	990,383	6.5	1,015,920	6.6	1,220,340	5.7
Financing other Institutions	2,085,796	13.8	2,146,650	14.0	3,331,160	15.7
TOTAL	15,129,602	100	15,287,520	100	21,254,560	100

Secretariat of Public Health and Social Assistance 1972

ANNEX O

Program Descriptions of the Dominican SESPAS

Higher Administration

All related to the direction, planning, and coordination of health and social assistance.

General Health Services

Rural health clinics, medical dispensaries, and "sanitary offices" in the entire country.

Basic Services

Health education, nursing, laboratory and blood banks, biostatistics.

Health Attention

Environmental health services, epidemiological direct campaigns, nutrition.

Health Promotion

School health, dental hygene, dietary and infant nutrition facilities, family planning.

Health Recuperation

Hospital care, and the Division of Pharmaceutical Products and Narcotic.

Social Services

Social assistance and child protection.

Financing Other Institutions

Partial financing of the National Institute for Potable Water and Sewers, Red Cross, Civil Defense, National Malaria Erradication Service, and transfers to Private Institutions.

[redacted]

II. P.L. 480, TITLE II

a. An Analysis of the Current FY 1974 Program

(1) Institutional Relationships. Three locally incorporated American Voluntary Agencies; CARE, Catholic Relief Services (CRS), and Church World Service (CWS), and in the case of the latter two, Dominican counterpart organizations, have been invested by the Government of the Dominican Republic with full responsibility for the implementation of Title II feeding programs. The in-country link between the Voluntary Agencies and the Government is through individual voluntary agency/GODR contracts which provide for the duty free entry of commodities as well as for the payment by the Government of Voluntary Agency Title II program implementation costs.

Actual program operations are based on cooperative relationships which have evolved over time between the Voluntary Agencies and the Secretariat of Health and Social Assistance which exercises control over the Government's maternal and child health program, the Secretariat of Education which has jurisdiction over school feeding activities and other Government agencies such as the State Sugar Council and the Dominican Agrarian Institute which implement MCH activities in their respective areas of responsibility. Food for work or community development projects are based on agreementsbetween the implementing Voluntary Agency concerned and the participating organizations or community groups.

Overall annual program proposals, which are developed by the Voluntary Agencies in consultation with the Government, based on AID/W guidelines, are subject to review by the USAID Mission.

On the operational level, the Voluntary Agencies perform all program-related functions involving (1) the clearance of commodities through customs; (2) inland transportation and storage; and (3) the myriad of related activities such as inventory control and end-use follow-up without GODR management participation. Since the Government has not actively participated in the day-to-day operational aspects of the Title II program, the Voluntary Agencies have been vested with major program planning, development, and implementation responsibilities. The Government has had no opportunity to develop the skills and systems needed to administer a nationwide nutrition program involving either Title II and/or Government-financed inputs except for its limited experience with the pre-1969 government-to-government program which was terminated due to ineffective management and high commodity losses.

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(2) Inputs of the Government of the Dominican Republic. The P.L. 480, Title II program at present accounts for $3.5 million, or approximately 47% of a total Government nutrition/supplemental feeding program which is valued at an estimated $7.4 million. The Dominican contribution of $3.9 million, or 53% of the total program has been budgeted for the following purposes: (1) RD$1.0 million to defer a major portion of the administrative expenditures of the Voluntary Agencies and to finance the inland transportation costs of Title II commodities; (2) RD$1.5 million for a whole milk MCH distribution program administered by the Secretariat of Health; and (3) RD$1.4 million for the construction and operation of public dining rooms in which poor people may obtain wholesome meals at nominal cost and purchase foods at subsidized prices.

Although the RD$2.9 million budgeted for the construction and operation of public dining rooms and the whole milk distribution program may at first glance appear impressive from a cost sharing point of view, such factors as the limited impact of the public dining room program (15,000 recipients per day) and the erratic availability of milk, poor milk distribution systems, and unsanitary handling practices relegate these programs to a less effective role than would first appear.

Since there are no accurate statistics available regarding the number of recipients that actually benefit from the milk program and how much of the RD$1.5 million budgeted for this project is actually disbursed, the effective benefit of the Dominican input to the overall nutrition effort is probably considerably less than the preceding statistics would suggest. The percentage of Dominican inputs would be reduced somewhat further if we were able to determine with any degree of accuracy what proportion of the estimated $1.4 million which the Voluntary Agencies contribute to the Dominican Government annually in grants and material assistance for their independently-financed projects is invested in or related to the nutrition program.

(3) Program Composition. FY 1974 Title II resources are being utilized to (1) assist 277,000 MCH recipients daily ($1,627,211); (2) provide daily dietary supplements to approximately 320,000 school children who represent 38% of the known primary school enrollment ($1,086,944); (3) provide incentives to an estimated 107,000 unemployed or underemployed citizens to participate in food for work projects ($776,750); and (4) provide daily food supplements to 7,000 youngsters confined to charitable institutions and hospitals ($46,440). The Government of the Dominican Republic, Voluntary Agencies, and USAID are theoretically in agreement concerning the high priority of the MCH program.

However, such factors as inadequate delivery systems, poorly defined priorities, and lack of a comprehensive national nutrition policy have hindered a shift of available resources from other supplemental feeding programs -- mainly the politically attractive school feeding effort -- to the more critical area of maternal and child care.

b. Program Appraisal

Although there is general agreement that the US$62.0 million which have been contributed to the Dominican Government since 1962 under the Title II authority effectively met the short range humanitarian and political objectives of the United States, the manner in which these contributions were utilized did not encourage the Government to develop a self-reliant and long range strategy for meeting the nutritional requirements of a rapidly expanding population. It should, however, be pointed out that the utilization of the Title II effort as part of a broader development framework was not an explicit objective of our bilateral assistance program in the Dominican Republic during the 1962-1973 period.

Due to the exceptionally efficient manner (annual loss factor of less than 1/2 of 1%) in which the Voluntary Agencies and the USAID Food for Peace Office have administered the program, and in view of the fact that the USAID Mission did not encourage the Government to phase-in more actively in the Title II feeding program, the Government has been under no pressure to become more involved in this effort, or to address the vital question of eventual though inevitable shortfalls in Title II availabilities. As a consequence, the Government has not begun to focus adequately on the long range need for achieving a Dominican solution to the vital question of national nutrition. This has been more a reflection of the Government's institutional inability to cope with this kind of problem than a Dominican lack of interest in the problem.

c. A Phase Over Plan, 1975-1978

(1) Negotiation Objective. In view of the improved economic position of the Dominican Republic, the decreasing availability of Title II commodities, and, hopefully, improved availability of local foodstuffs, our proposed objective during the four year phase over period would be to assist the Government of the Dominican Republic to develop the institutional capability to conduct its own nutritional program so as to allocate adequate

indigenous resources better to meet the nutritional requirements of the country through a more integrated approach to the problems of population, health, and food production.

(2) Institutional Relationships. Each of the following two approaches could be utilized to administer the Title II program during any transitional period which may be agreed: (a) immediate assumption by the Government of responsibility for all phases of the program in which they might or might not decide to use the Voluntary Agencies, and (b) assumption by the Government of responsibility for program and policy direction first and retention by the Voluntary Agencies of operational (receipt/storage/distribution) responsibility for the commodities themselves, leaving the question of how Government-financed commodities will be distributed in the 1975-1978 and post Title II phase of the Government's nutrition effort for later resolution.

The Mission supports the second alternative for reasons of program efficiency and ease of implementation. Given the efficient manner in which the current Title II program is being implemented and the satisfaction with which the Government of the Dominican Republic views the Voluntary Agency handling of the program to date, continued involvement of the Voluntary Agencies in the receipt, storage, and distribution of Title II commodities and appropriate follow-up by the USAID Food for Peace Office during the (FY 1975-1978) period is clearly desirable. Nor do we believe that we should preclude the Government of the Dominican Republic from continuing to utilize the Voluntary Agencies or their counterpart organizations after 1978 if it so chooses. Furthermore, given the character of local counterpart organizations and the varying degree of interaction between the Government and individual Voluntary Agencies, we anticipate that the pace, magnitude and even character of the phase over will differ considerably from one Voluntary Agency to another. In effect, then, our approach would be to have the Government replace the United States as rapidly as possible as the prime provider of food commodities and to allow the Government and the Voluntary Agencies to assume whatever relationship they may find mutually advantageous. Every effort will be made during this period to assist the Government in developing and institutionalizing its own operational capabilities so that at such time as Title II could be terminated, the Government would have increased capacity on both the program policy and implementation side to carry out the major portions of an effective national nutrition effort.

To ensure fundamental Dominican agreement on the basic conditions for continued Title II inputs during the phase over period, the Mission would hope, based on the results of appropriate exploratory discussions with the Government concerning the nature, extent, and alternatives for increased Dominican participation, to facilitate an exchange of letters with the Government describing in detail the responsibilities of the parties directly concerned.

Prior to the 1975-1978 phase over period, the USAID Mission will seek to negotiate the designation by the Government of the Dominican Republic of an appropriate institutional mechanism to exercise overall program and policy direction of both the Title II program and the Dominican's own financed supplementary feeding and nutrition effort. Whether this mechanism is implemented independently or is integrated with the operations of the National Population and Family Council (favored by the USAID Mission) will depend on further discussions with the Government. In either case, it is expected to (a) be responsible for supervising the supplementary feeding programs of the Secretariat of State for Health and Social Assistance and the Secretariat of Education; (b) perform such functions as negotiating the Title II program implementation reimbursement contracts with the appropriate Voluntary Agencies; and (c) serve as the central point of contact for the USAID and any other organizations that are or will be involved in the implementation of a Dominican nutrition program. This body would also, in coordination with other Dominican governmental entities, serve as the focal point for the (1) development of a National Food and Nutrition Policy; (2) intensification of efforts to obtain access to Title II substitutes; (3) improvement of nutrition education at primary, secondary, and university levels; (4) exploration of the feasibility of a nationwide food fortification program; and (5) introduction of nutrition education for low income mothers. Food for Work and Community Development-type activities wouldbe initiated by this body and implemented through the appropriate Dominican Secretariat, administrative subdivision, or community action group with the assistance and cooperation of the Voluntary Agencies.

The USAID Mission and the Voluntary Agencies would work closely with the newly created body to render assistance with ongoing programs or administrative problems and to transfer as much of the needed expertise from the Voluntary Agencies to the proposed Dominican organization/coordinating body as is reasonly requested. The USAID Mission would be prepared to assist this body with training programs and appropriate technical assistance were this needed.

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(3) Transition Program. Continuation of Title II inputs for the FY 1975-1978 period is based on the assumption that the Government of the Dominican Republic will (1) expand its financial or commodity support of the nutrition program essentially in accordance with the guidelines outlined below; (2) designate a nutrition policy making and coordination body to exercise program policy direction over supplemental feeding/nutrition programs; and (3) utilize the Voluntary Agencies to implement the Title II side of the nutrition program within the framework of a transfer of functions to appropriate Dominican control.

Fiscal Year	GODR % Contribution	USG % Contribution	Total
	(in millions)		
1974	RD$3.9 - 53%	$3.5 - 47%	$7.4
1975	5.5 - 68%	2.6 - 32%	8.1
1976	6.4 - 78%	1.8 - 22%	8.2
1977	7.3 - 88%	1.0 - 12%	8.3
1978	7.9 - 94%	0.5 - 6%	8.4
1979	8.5 - 100%	0.0 - 0	8.5

Of the $2.6 million in FY 1975 Title II inputs programmed, $1.6 million will be utilized for the Maternal and Child Care Program (277,000 recipients); $0.6 million for School Feeding activities (180,000 recipients); and $0.4 million for employment generation type projects (53,000 recipients). From FY 1976 through the end of the Title II program, it is anticipated that all U.S. financed imports will be utilized for MCH activities.

As the Government of the Dominican Republic assumes a proportionately larger share of responsibility for the management and inputs of the total nutrition/supplemental feeding effort, the Voluntary Agencies could gradually disengage (in the order of priority) from participation in (a) the institutional feeding program; (b) school feeding effort; (c) food for work program; and (d) MCH activities. Much would, of course, depend on how rapidly the Government could efficiently absorb these functions. The time frame involved could well extend beyond the phase out of Title II commodity allocations. As U.S. participation in individual programs would be reduced, the Government of the Dominican Republic would be requested to offset programmed Title II reductions by investing appropriate resources to expand agricultural production and to enlarge the scope and quality of MCH activities. Although expanded Government participation could

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assume many forms, a major objective of our strategy would be to ensure adequate Dominican investments in those programs which contribute to maintaining or increasing the flow of food supplements to MCH recipients.

To assist the Government in developing the increased agricultural production and other long term resources needed to offset programmed reductions in Title II inputs, the USAID Mission is considering a series of development proposals which will focus on the broad problems of agricultural production, income distribution, nutrition, and population control. In the short run, the Dominican Government must be required to finance Title II substitutes on the world market at high prices and non-concessional terms. In terms of its long-range needs, however, the Government would have to focus as rapidly as possible on increasing domestic agricultural production and on a more effective and coordinated utilization of available resources and infrastructure.

In this respect, the USAID would hope to receive a commitment from the Government of the Dominican Republic that the development of access to low cost, domestically produced Title II substitutes would become an important priority of the nation's agricultural program. Realistic substitutes for Title II inputs appear to be the increased production or utilization of legumes, rice, and corn, and other nutritionally-valuable foods such as food grains or food industry by-products which would be utilized in either their natural state or processed into high-protein fortified foods. Another approach contemplates the introduction of improved food plants/seeds which would result in the production of more nutritious and protein-rich food grains.

Although Maternal and Child Care and Family Planning are acknowledged as priority areas by the Government, current multipurpose low cost delivery systems for such services remain less than adequate. To date, it has been impossible to reach a substantial number of potential MCH recipients due to the inadequacy and geographic limitation of the delivery infrastructure. During FY 1973, for example, the average number of daily recipients was 22% below the programmed level. Limited Dominican expansion of the MCH infrastructure during FY 1974 has enabled the Voluntary Agencies to exceed their programmed levels of MCH recipients during recent months, but unless further expansion takes place a substantial number of potential recipients will not be reached by this vital program. Even though an additional 40 rural medical facilities will soon become operational as part of an AID-financed project, additional resources will have to be

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allocated to expand or refine the existing health systems. This proposal and increased Dominican expenditures would form an important part of evaluations for future AID assistance proposals in the public health area.

Since the network of rural clinics, nutrition centers, and the remaining public health infrastructure can additionally serve not only as MCH facilities but as distribution or dissemination points for family planning activities and nutrition education programs, increased Dominican investment in this sector would serve a high priority purpose and serve to further a more coordinated attack on the health/nutrition/population complex of problems.

Thus the major objective of our strategy is to convert the Title II program from a humanitarian/social welfare type of activity to a more integrated and effective instrument of the development process. Our principal approach will be to incorporate Title II into a series of complementary development proposals and to utilize the incentive of its continuation at substantial levels as a means of eliciting increased Dominican interest in the selected areas of Health, Family Planning, Nutrition, and Agriculture.

In summary, then, if the Government of the Dominican Republic is expected to assume an increasingly larger share of the nutrition and supplemental feeding program now supported with Title II inputs, it must focus on (1) the production of Title II substitutes (agriculture); (2) the development and refinement of appropriate delivery systems (health); and (3) institutional policy reforms (executive) which will enable it to concentrate on the problem and to administer a closely integrated nationwide health (MCH, FP, nutrition) and food production program.

Whatever mix of alternatives is selected, however, it is our view that it should (1) give reasonable assurances that as large a percentage as possible of any increased Dominican contribution will be directed to the individual recipient himself; (2) be integrated with other nutrition related programs such as those involving family planning and MCH services; and (3) invest the Government of the Dominican Republic with major responsibility for developing the management and administrative capabilities to implement an independent nationwide nutrition program.

(4) Conclusion. It hardly need be said or elaborated that to achieve the negotiated phase over outlined above will not

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be easy. It may not even prove possible. The Voluntary Agencies, for example, have some serious reservations about how fast the Government could acquire the capability to assume greater responsibility for the nutrition program within the proposed 1978 time frame even with appropriate assistance from their staffs and the USAID. We share these concerns and recognize that the details of what we are proposing will have to be worked out most carefully. Nevertheless, it seems to us that the objectives cited above are sound and that this plan offers better prospects than proposals heretofore put forward.

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PART C. EDUCATION

Introduction

President Balaguer's speech of February 27, 1972, characterized education as "...considered by all as the greatest priority in our development process." In the speech, major emphasis was given to universal primary education as a national goal and to reforming secondary education so as to make it more responsive to the country's skilled manpower needs.

This Presidential statement of policy is consistent with the 1968 "Basis for the Economic and Social Development of the Dominican Republic," issued by the National Planning Office, which identified the broad outlines of development objectives in the major sectors. For education, the plan proposed, inter alia, the following:

a) Total reform of the system, programs and methods of elementary, middle and higher education.

b) Universalization of primary education.

c) Training of non-certified, in-service teachers and professional improvement of normal schools and university education departments.

d) Improvement of educational facilities with eventual elimination of incomplete primary schools.

e) Change and diversification of middle, specialized, and higher-level education to meet the country's development needs, especially for trained technicians in the fields of industry, commerce, agriculture, social services.

In 1971, these objectives were accepted and refined by the Government's Ad Hoc Commission on Education which was established by President Balaguer for the purpose of developing an education sector plan to be used as the basis for an AID loan.

However, an examination of the present status of the education sector discloses that no substantial progress has been made in achieving most of these objectives. Thus, although an appraisal of the publicly-financed school system by educational level demonstrates that enrollments are increasing, more classrooms

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being constructed, and more money being expended, the publicly-financed portions of the sector are performing at the same relative level of efficiency -- or perhaps more accurately stated, inefficiency -- as ten years ago despite the "priority" which has been quite clearly and unequivocably stated by the President.

Education Situation at Various Levels

a. Primary Education

Primary school enrollment increased 6.1% annually from 1962 to 1972. There are now approximately 824,000 students enrolled compared with 510,000 in 1962. However, the proportion of children in primary school, in relation to the total primary school age population, has remained relatively constant -- in the range of 60-65% over the last decade. Since the school age population has increased substantially during this period, more children, in absolute terms, are not attending school than ten years ago.

Although there has been considerable migration of families from rural to urban areas, as shown by the following figures, the Government has invested rather more proportionately in urban than in rural schools.

Urban/Rural Comparisons

	Total	Urban No.	Urban %	Rural No.	Rural %
No. of Primary Classrooms 1969/70	11,228	4,518	40.2	6,710	59.8
No. of Primary Classrooms 1971/72	13,026	5,761	44.2	7,265	55.7
Increase	1,798	1,243	69.1	555	30.8
No. of Primary Teachers 1961/62	9,011	3,217	35.7	5,794	64.2
No. of Primary Teachers 1971/72	15,290	7,702	50.3	7,588	49.6
Increase	6,279	4,485	71.3	1,794	28.6
No. of Qualified Teachers 1967/68	1,918	1,140	59.4	778	40.5
No. of Qualified Teachers 1970/71	2,028	1,318	64.9	710	35.0
Student/Teacher Ratio 1967/68	55.6:1	47.2:1		62.0:1	
Student/Teacher Ratio 1971/72	53.8:1	42.8:1		62.4:1	

The foregoing chart reflects three significant facts with respect to primary school teachers: first, although the overall number of teachers has increased, the percentage of qualified teachers has declined. For example, in the period 1967 to 1971, only 110 qualified primary teachers were added to the rolls in public schools. Second, in the rural areas, the number of qualified primary teachers has declined absolutely as well as percentage-wise. Third, despite the addition of many non-qualified teachers, the high student/teacher ratios have not appreciably improved.

Further, surveys have shown that for every 100 rural children entering first grade, only 9.5 will complete the sixth grade. For urban children the figures are 51 out of 100. While the urban ratio is significantly better and not untypical for a developing country, the dropout rate still represents a substantial waste of resources and suggests, together with other data available, that functional literacy may be considerably lower than official estimates would suggest. This being the case, the goal of universalization of primary education can be said to have more political appeal than substantial content.

The Government has allocated considerable financial resources to the education sector over the period 1966-1972. This recognizes the high priority -- for whatever reasons -- which is accorded to education. Education has, in fact, been the second largest expenditure item, receiving on the average about 15% of all Government disbursements for both current expenditures and capital investment. In 1972, $46.4 million was spent in the education sector of which $21.4 million, or 46%, was utilized for primary education, a percentage which has remained reasonably constant during the 1966-72 period. Nevertheless, if the stated goal of universal primary education were to be achieved over the longer term, considerably more resources would have to be expended than presently in prospect or contemplated. The Government should begin to explore program possibilities for initiating low-cost educational delivery systems, particularly in rural areas.

It should also be noted that the official curriculum for primary schools was written in 1938. Little has been done to modify or upgrade it. Almost all courses use rote learning and recitation as the principal methods of teaching -- methods in part dictated by the almost total lack of textbooks and other teaching materials. There are no subsidies for school

texts and they must be purchased at private bookstores. As a result, the cost is beyond the means of most students or their parents. In many rural areas, bookstores, of course, do not even exist.

b. Secondary Education

The school population at the secondary level (7-12 grades), has grown by a spectacular 335% in the last ten years; in 1962 there were 28,085 students, by 1972, 122,565. This at least reflects appropriate emphasis on secondary education as terminal education since only one in four or five applicants are accepted for university training. Secondary enrollment represents only one-fifth of the thirteen to eighteen-year-old secondary-age population. However, rural youth has been effectively denied the opportunity for secondary education because of the dearth of secondary schools in rural areas. Because secondary classroom construction has lagged throughout the country, most public schools operate on two shifts and some have an additional program in the evening.

The Government has begun to introduce some reforms in the structure of secondary education. The most important characteristics of the reforms are the establishment of a basic four-year common cycle (Grades 7-10) and a two-year diversified cycle (Grades 11-12) which will have academic and vocational "tracks." Implementation of the reforms has gone slowly, however, due to the lack of qualified teachers for the new courses, and the fact that a great majority of schools are in urban areas where most students elect to take the more prestigious academic program. The reforms when fully implemented will add a degree of developmental relevance to secondary education, but overall quality will not be significantly upgraded until more qualified secondary-level teachers are trained and assigned and changes in teaching methodology made, and, more textbooks and teaching materials provided.

Thus, although the reforms incorporate at least some of the long-term objectives stated by the President, the lack of progress against stated goals is not reassuring with regard to the capacity of educational leadership or of the educational institutions to deal with the major problems of development facing the nation. The IBRD (IDA) loan to secondary education, the implementation of which is now beginning, hopefully will have some positive impact but the USAID Mission is not sanguine that the reform will be either real or meaningful.

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c. Higher Education

There have been notable quantitative achievements in education at the post-secondary level. Enrollment in universities has increased almost seven fold in the past ten years (4,022 to approximately 33,000 in the period 1961/62 to 1971/72). There are now almost five times as many graduates annually as ten years ago. In addition to the public university, three new universities, one junior college and one agricultural institute have broadened education opportunities as well as increasing the fields of study available.

Traditionally, the most important institution of higher education has been the Autonomous University of Santo Domingo (UASD). Despite attempts at modernization, the quality of the learning at the University has been deteriorating steadily because of the intensity of on-campus, nationally-oriented political activity. The University has been closed for substantial periods of time by the Government. Some allege that the Government has also used the power of the purse to discipline the institution. For example, in 1972, UASD received only RD$5.0 million of its scheduled subsidy of RD$13.0 million. This, as might be expected, has caused much furor and resentment. The bickering has done little to improve student attitudes or increase educational attainments of the students or improve the quality of educational instruction. Yet three quarters of enrolled university students are at UASD. Control of the school, by statute, is vested in the faculty and student body. It had an estimated 24,480 registered students in 1972/73, many of whom are obviously interested in academic activity but are unable to pursue their studies because of the highly politicized atmosphere. There is, however, a significant discrepancy between total registered students and the lesser number actively accumulating credits in degree programs. While the traditional disciplines of law, medicine and engineering still attract the most students, the other faculties (Science, Social Science and Economics, Agriculture and Veterinary Medicine, Humanities and Architecture) which have undergone expansion, accounted for approximately 45% of UASD's graduates in 1972.

Pedro Henríquez Ureña National University (UNPHU) originated when a number of the UASD faculty severed their ties with the Autonomous University in 1966 on the issue of the undue politicization of the UASD students as well as of the faculties and administration. UNPHU places great emphasis on the quality of its education, particularly in the fields of humanities, law and medicine. In addition, it has taken the initiative to expand its curricula in other fields such as agriculture, economics and education which have direct development application. In fact, in the field of education, UNPHU

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graduates more professionals than all other Dominican universities combined. The University has 6,500 registered students, and several times more applicants than it can accept, and receives a Government subsidy but only in the amount of $1 million annually. Lastly, given the emphasis placed on the professional preparation of the UNPHU students, a relatively higher demand for its graduates by prospective employers has developed, placing UASD graduates at a comparative disadvantage.

The Catholic University Madre y Maestra (UCMM) is a private Catholic University in Santiago founded in 1962 and enjoys strong community support. It has 2,074 students and its curricula complements UASD's offerings in the fields of education, nursing, social work, engineering, and business administration. Part of the increasing importance of UCMM lies in the fact that it is becoming a center of manpower skills needed for the regional development of the Cibao.

Other institutions of higher education include the Central University of the East, located in San Pedro de Macorís, which only recently began operation, and the Institute for Higher Studies in Santo Domingo, which is the country's only junior college.

Secretariat of Education

The Secretariat of Education itself constitutes one of the major constraints to the development and modernization of the education sector. The central problem is that there is a large gap between the array of responsibilities vested in the Secretariat and its capacity to carry them out.

To illustrate some of the responsibilities of the organization, the Secretariat controls almost 80% of the primary classrooms and 60% of the secondary classrooms, and employs 71% of the primary school teachers and 50% of the secondary. Moreover, the Secretariat sets the official curriculum for both public and private schools, approves all textbooks for use in approved courses, operates three normal schools for primary teachers and employs education supervisors for the official school system. However, the Secretariat lacks the ability to provide effectively and efficiently the basic services required of it. It is unable to carry out its evaluation, research and planning roles. Its statistics are outdated and unreliable and its supervisory responsibilities over teacher performance and school administration are carried out at best in a haphazard, partial manner. Although there are a number of qualified professionals in the Secretariat, inadequate salaries and the absence of an effective personnel system are disincentives to quality performance and foster irresponsibility and passivity among education personnel at all levels of the organization.

The Secretariat suffers from a set of structural weaknesses which further inhibit effective performance. First, there is considerable duplication and overlap of functions, some of which are directly observable from an examination of its organization chart (Annex A). Second, there is undue centralization of decision-making in the Office of the Secretary, and coordination and communication between the Secretariat and its field units are completely inadequate -- some say non-existent. Furthermore, it is frequently alleged that political rather than educational factors are many times used in the selection and assignment of teachers. In conclusion, reform and upgrading of the Secretariat must be considered a high priority need but nevertheless quite unrealistic and unrealizable at the present time.

Economic Factors Affecting the Education Sector

Given the subsistence economic level of a large mass of the rural population and, to a lesser extent, of the urban population, many Dominican children are denied access to formal education. Estimated unemployment ranges from 12 to 15% in urban areas and unemployment/underemployment in rural areas is higher yet -- estimates range from 30 to 75%. Under such circumstances, school related expenses such as transportation, clothing, textbooks and materials, and even lunches make it impossible for a considerable number of rural and urban children to attend school on a sustained basis. Additionally, the pressures on families to keep children out of school in order to work at farming or to augment the family income in other ways are strong.

Approaching the same set of economic problems from the vantage point of government expenditures, it is clear that the Government is still far from even approximating its stated goals in education although it is spending significantly larger amounts of money than was spent ten years ago. For example, to take the goal of universal primary education alone, we estimate that in order to have achieved this objective in school year 1971/72, it would have cost the Secretariat of Education an additional $15.6 million in current expenditures, and alleviating the primary classroom deficit would have required an additional $16.5 million in public investment. Had this occurred, the Secretariat's budget would have been $56.0 million instead of $40.4 million; and public investment in education would have been $22.0 million instead of $5.5 million. Total expenditures in education would then have been almost one-quarter of all Government expenditures.

Looking forward to the year 1980, given the present rate of population growth, it is estimated that the school-age population will total 1,920,000 or almost 600,000 more than in 1970. Assuming present rates of enrollment, the number of school children will grow at a rate of 5.2% per annum. Thus, just to keep pace, an average of 1,000 new classrooms per year will have to be constructed, as opposed to the 300-400 which are being constructed annually at present, and about 1,000 new primary teachers and 500 new secondary teachers will have to be introduced yearly into the system. Qualified primary teachers are presently being produced at an annual rate of 500 per year and secondary teachers at a rate of 125 per year. Thus, further deterioration is in prospect.

It is apparent from the above that the gap between available resources and the educational goals of the Government is so great that other approaches and technologies designed to deliver lower cost education to the rapidly expanding school population will have to be developed and implemented if the goals are to remain in the realm of the practical.

Social and Attitudinal Problems in the Education Sector

In the above sections, the problems that confront the educational sector have been discussed principally from the perspective of the major quantitative, economic and institutional factors involved. However, there is a broader, and considerably different, social dimension to the problems which warrants attention. The fact is, the shortcomings and inequities in the present Dominican education system, private as well as public, mirror similar inequities and problems in the society as a whole.

For example, a high percentage of monied Dominicans send their children to private schools for all their formal education. One of the unfortunate results of this practice is that most of the parents who have attained positions of leadership in the community have no direct stake in the success or failure of the public school system. In this context, it may be germane to note that the most striking expansion of educational facilities over the past decade has been in the private sector, principally in private universities and secondary schools. It is, for instance, clear from the following table on secondary education trends that the expansion of quality education over the period 1967/72 has greatly favored the private secondary school, and that this constitutes a considerable drain, at least with respect to the human resources available, on the public sector.

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Secondary Education Trends

and Comparison of Public and Private Schools

1967/68 and 1971/72

	1967/68	1971/72	% Inc.
Total Enrollment	76,073	122,565	61.1
Public Schools	54,639	91,473	67
Private Schools	21,434	31,092	45
Total Teachers	3,242	4,987	53.8
Public Schools	1,717	2,543	47
Private Schools	1,525	2,444	60
Student/Teacher Ratios	23.8:1	24.6:1	
Public Schools	31.8:1	35.5:1	
Private Schools	14:1	14:1	
Qualified Teachers	722	1,379	91
Public Schools	N/A	686	
Private Schools	N/A	693	

Another fact made clear by the table is that there exists a serious shortage of qualified teachers in the public school system. There has not been in the Dominican Republic a genuine tradition of popular education, no doubt because of a succession of despots whose interests could hardly be served by a knowledgeable public. Public school teachers have also generally been accorded low social status. Coincident with this custom, teachers have in large part come from the lower classes, been poorly educated and meagerly paid. Given the lack of involvement of the children of the well-to-do in the public school system, there has been little incentive to change or modernize this system. Thus, the expanding number of educated Dominicans from the middle class, who might be attracted to a professional career in public education, generally hold to the view that they would lose social status by becoming teachers.

[redacted]

In addition, the public school system traditionally, for the following reasons, has not been a significant channel for upward social mobility in the Dominican Republic. First, with respect to the large mass of rural people living on the economic margin, the daily pressures of subsistence tend to insensitize them to any awareness that they might have that education could lead to greater economic and social mobility or opportunity for their children. Indeed, it is fair to say that in many cases such parents prefer to have their children working at menial jobs to increase, even slightly, family income. Hence, there is little popular demand from the bottom up to alter or extend the public school system in the deprived areas of the country. Second, among those who have managed to lift themselves beyond the subsistence level, there has been a marked tendency to use vehicles other than the public school system to climb the social ladder. These have included historically the military, politics and the sugar industry.

AID and Other Donor Programs

a. USAID Programs

The USAID, in the period 1962-1970, assisted Dominican education through:

- Various local currency agreements for school construction, equipment supplies, teacher training, vocational and agricultural education and university development;
- A one-time distribution of $10,000 textbooks;
- Technical assistance provided by a number of American university contract teams for projects in higher education and teacher training;
- Training of 408 short-term participants in workshops and through observational visits, and 144 long-term participants in various academic programs in education;
- Two loans to the Educational Credit Foundation, in the amounts of $1.4 million and $1.75 million, for educational credit for university and graduate training in the country and abroad.

The Government of the Dominican Republic has, in addition, twice made loan requests to USAID which were subsequently developed into education loan proposals. The first loan, authorized in 1968 in the amount of $12 million, was deauthorized in 1969. The second loan, for $10.9 million, was approved by AID/W in June 1971, and was deauthorized at the end of 1972 after protracted negotia-

tions. In both cases, the loans were deauthorized because the Government was unwilling, ostensibly, to accept as a condition of the loan the adoption of a fixed salary scale, a teacher pay raise and material incentives for teacher upgrading. It is understood, however, that the principal reason behind the Presidential refusal to agree to the terms of the loan was that it would have generated a demand for across-the-board pay increases for all government employees.

Beginning about 1970 the Government evinced a preference for obtaining greater external assistance for the education sector from multilateral sources. This has led to the following activities.

b. IDB

Two IDB loans at the university level have been made: One of $900,000 to the UASD for upgrading engineering, agricultural and economic studies, and another of $3.4 million to the UCMM for the construction and upgrading of secondary teacher training facilities. The first loan has been completed and the second is about one-third disbursed. The IDB is currently examining a $2.4 million loan request from the Educational Credit Foundation to finance students in undergraduate and graduate education in domestic and foreign institutions. In addition, IDB is considering technical assistance to UASD for planning classroom and library facilities expansion, and to UNPHU for the development of a master plan for physical expansion.

c. IBRD/IDA

An IDA $4.0 million loan was signed on February 18, 1971, for the expansion and diversification of secondary and normal schools. The primary purpose of the loan is to finance the construction and equipping of nine secondary schools and two primary teacher's colleges. UNESCO technical assistance in educational planning is also a component part of the program. Progress has been slow and only one disbursement of $300,000 has been made. The reasons for this are, first, the Secretariat has been slow to start on a long-range development plan and to appoint counterparts for foreign technicians to be provided and, second, UNESCO has to date only filled one of the three stipulated technical assistance positions. There have also been long delays and problems in drawing up procurement lists and obtaining title to secondary school land sites.

d. UNDP/UNESCO

UNDP/UNESCO is providing technical assistance and training grants for the following projects:

Engineering Technician at UCMM: 1 expert
Training of Secondary Teachers (1973-1977): 1 expert
Educational Planning (1967-1972): 3 experts
Primary Teacher Development (1969-1976): 1 expert
Academic and Vocational Orientation (1971-1973: 1 expert
Secondary Education Improvement (proposed): 1 expert

Although the technical assistance being provided under the auspices of the UNDP appears to be of good quality, the projects themselves are too small and diffused in too many areas to have significant effect.

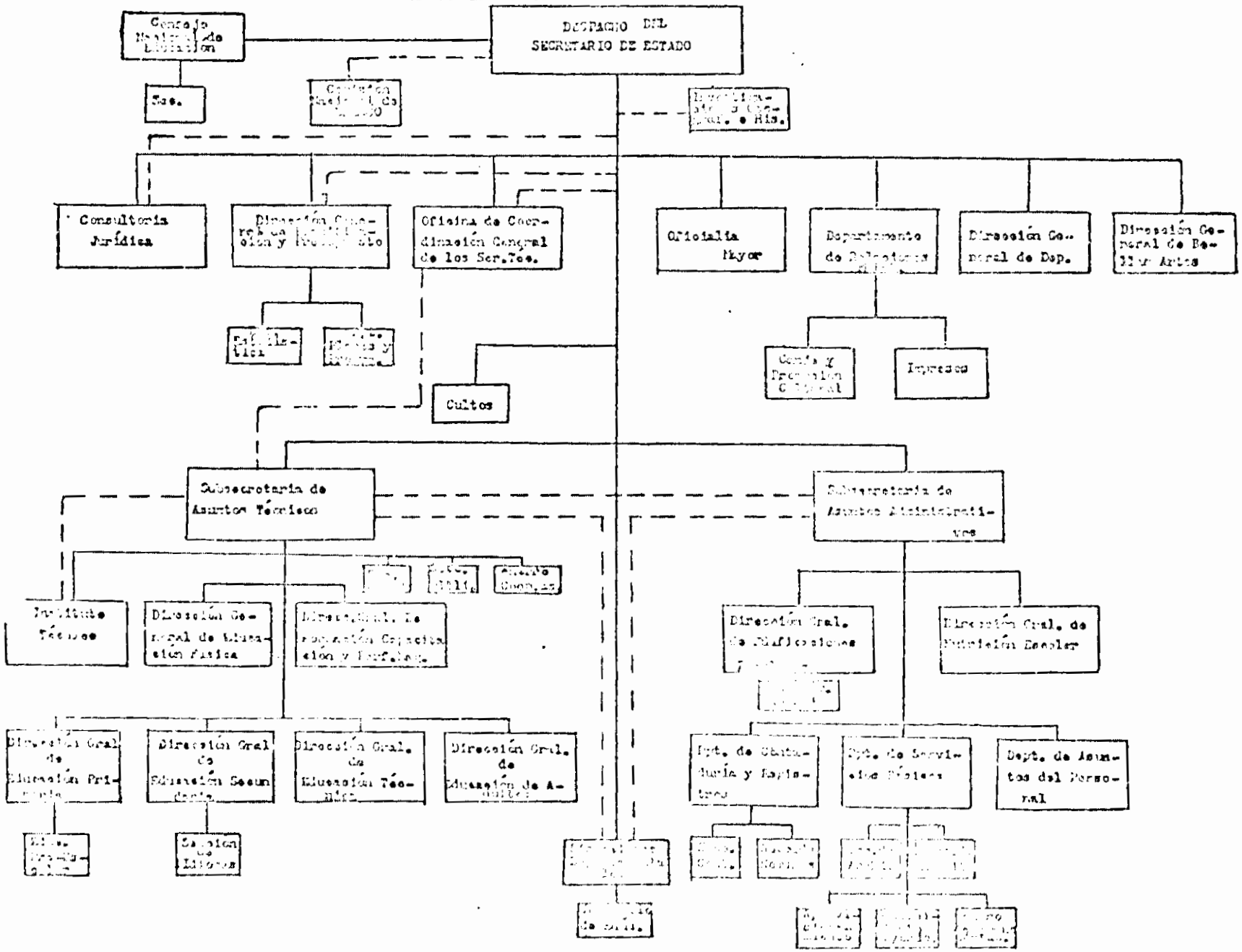
The USAID Mission Approach to a Development Strategy in Education

The deauthorization this calendar year of a $10.9 million Education Sector Loan after an apparent agreement had been reached with the Dominican Government, and after intensive negotiation had taken place makes it inopportune now or in the near future to discuss the possibility of U.S. assistance in the area of education with Dominican officials. The continuing absence of qualified and energetic leadership at the top level of the Secretariat of Education leads us to the same conclusion.

We continue to see the Dominican education sector as a priority development area, and believe that the quality-of-life concerns of AID could be well served by a selective, well-conceived program of external assistance to education, for example in obvious fields of need such as improving the capability of the Secretariat, particularly with respect to sector planning, the delivery of low-cost education services to the rural primary school system, and teacher training. However, given the circumstances noted above, we can only propose that a low-key and discreet dialogue be maintained with a few respected professionals in the Secretariat as well as with prominent educators in the private sector. Selective training and conference invitations could assist in maintaining important contacts in the sector. But, consideration of significant bilateral assistance should be deferred until a more propitious time.

ANNEX A

ORGANIZATION OF SECRETARIAT OF EDUCATION



PART D. TOURISM

Situation

Tourism, thus far, has made an insignificant contribution to the Dominican economy. However, the Dominican Republic does possess many natural endowments plus many potential assets(1) necessary to compete for and to garner some of the Caribbean tourist trade. These factors, coupled with the marked increase in recent arrivals of travellers plus an ambitious, expanding program of government support, collectively provide a reasonable basis to predict that tourism will grow in significance.

Tourism, accordingly promises to be an increasingly important source of foreign exchange and a stimulus to employment over the next decade and thereafter. The Government's efforts, to date, can best be described as a mobilization phase involving the formulation of policy, the enactment of necessary legislation, and project planning. The implementation stage is now starting. The picture portrayed below also assumes a relative political calm over the next ten to twenty years and a more rapid growth in visitors -- in absolute numbers -- than that of past years.

Based on Government tourism data, 11,467(2) foreign air-passengers arrived in the country in 1960. During 1972 this had increased to some 113,000(2) foreign air arrivals plus some 48,000(2) visiting Dominicans who reside abroad. The foreign visitor figure represents only 2.5% of the 4.6(3) million travelers who visited the Caribbean in 1972. Based on the first six-month figures, foreign visitors for 1973 to the Dominican Republic are projected at well above 200,000 plus some 58,000 visiting Dominicans. If the foreign figure reaches 250,000, it would represent only 5.4% of last year's (i.e., 1972) Caribbean tourist market which itself is increasing yearly. In 1960, it has been estimated that $2,979,900(2) was spent by visitors in the country; for 1972 this had reportedly risen to $28,206,385(4). These were direct expenditures and they represent principally foreign exchange earnings.

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(1) Topographical features (sun, sand and water), convenient geographic location to the United States, historical attractions, some handcraft potential, etc.

(2) Source: GODR Tourism Office. Ship arrivals and visiting Dominicans not included unless so specified.

(3) Source: Central Bank INFRATUR

(4) Revised expenditure computations in a new OAS technical study, reflect substantially higher figures. Including visiting Dominican expenditures, total 1972 expenditures are reported at some $46 million in the OAS report now (Oct. '73) in final preparation.

If the number of foreign tourists was to triple by 1982 over that of 1972, a not unreasonable assumption based on current developments and the fact that the number of foreign arrivals increased approximately tenfold from 1960 to 1972, it is projected that such visitors would expend $84,750,000 in 1982.[5] One regional tourism study sponsored by AID stated that each $1,000 expenditure by tourists generates approximately $3,200[6] in gross revenue and that $500 to $550 of this gross sum consists of wages and salaries. Proceeding on this basis, a conservative projection indicates some 25 thousand additional jobs could be expected to result from the tourism growth estimated above.

In mid-1972 there existed approximately 1,050 hotel rooms considered suitable for foreign visitors. Excluding the government-sponsored zone projects, the number of tourist-type hotel rooms will more than double (reach 2,000 plus) in the next three-four years. Half of this increase is now under construction. Proposals for more than 2,000 additional rooms have been submitted to the Government for approval. Equally significant, the Government's North and South Coast projects are intended to provide some 3,658 additional rooms by the late 1980's.[7]

Government Policy and Support

The National Development Plan 1970-1974 published in 1970[8] called for a comprehensive tourist development program to earn foreign exchange and for other benefits, e.g. employment and income generation -- direct and indirect, regional development, etc. An initial target of 200,000 tourists per year by 1974, requiring 1,200 hotel rooms, was set. The plan, as adopted, which was based upon and followed by a series of technical studies, recommended development be concentrated in a few tourist zones. Convincing evidence of the Government's intent to commence implementation of the plan was demonstrated by the enactment of a number of laws and decrees, starting in 1970, which provide an adequate legal basis for a comprehensive tourism program. Among other things, authority was

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(5) Based on average stay of five days at $50 per day for foreign visitors. Expenditures of returning Dominicans and ship arrivals excluded. The OAS study now in final preparation, projects expenditures twice this figure based on revised method of computation (utilizing net exchange formula developed by University of West Indies, BVI) and on a substantially greater number of tourist arrivals, e.g., OAS projects 855,275 foreign tourists plus 102,096 visiting Dominicans in 1982.

(6) The Future of Tourism in the Pacific and Far East. Checchi & Co., 1961.

(7) OAS study mentioned above reflects 4,342 rooms by 1980.

(8) Preliminary version.

granted to acquire all lands needed for tourist development. A separate fund was established to finance both private and Government tourism projects, and liberal benefits were made available to enterprises deemed engaged in tourism. Moreover, the Government expended considerable funds for the construction of a new airport, new access roads and major urban works in the North Coast zone area and has undertaken extensive renovation and beautification works throughout the capital city. Collectively, these sizeable public works projects represent further evidence of the Government's intent to support tourism development.

Current Program

The planning of two large, government-sponsored, tourist projects involving international financing is almost completed -- the "Costa de Ambar" project on the North Coast near Puerto Plata, and the "Costa Caribe" project to the east of Santo Domingo. In summary form the projects may be described, from the period 1973 to 1999 as follows:

Coast	Area (000s of Sq. Mtrs.	Total Cost (RD$000)	Gov't Cost (RD$000)	Pvt. Sect. Cost (RD$000)	Direct Employ.
Ambar	10	89	23	66	14,000
Caribe	2	36	11	25	5,900
Totals	12	125	34	91	19,900

	Hotels	Rooms	Beds	Tourists in 1999	Gross Rev. ($ millions)
Ambar	5	2,200	4,400(a)	233,517	1,370
Caribe	3	1,352(b)	2,704	84,597	528
Totals	8	3,552	7,104	318,114	1,898

Source: INFRATUR, Banco Central (a) Commercial facilities only.
(b) Includes private facilities.

Government expenditures cover infrastructure facilities, e.g., utilities, civil works, recreational facilities -- golf courses, clubs, beach improvements, etc. Private sector costs include hotels, resort dwellings, commercial and recreational facilities. The hotels, reportedly, will be privately-owned and will be managed by international hotel organizations. During October 1973, final revisions were being made to Phase I of the "Costa de Ambar" project. Phase I will consist predominantly of infrastructure construction which is expected to cost RD$23.0 million.

Finally, the Government, utilizing its own resources, intends to develop the Samaná area into a third zone. The project is being directed by the Office of the Presidency. The full scope of the project has not yet been identified but extensive renovation and civil works have been undertaken. (Of RD$17.3 million allocated for various improvements, including hotel construction, some RD$9.3 million has been spent.)

In addition to the above, there are the rapidly expanding private sector efforts resulting in new hotels, restaurants, nightclubs and casinos, and other service enterprises.

Much of the tourism private development is centered in the capital city thus far. A unique exception to the private sector efforts in the capital is the La Romana tourism complex 100 kilometers east of Santo Domingo. The operation, which includes a hotel complex, a professional golf course, private air field and beaches, etc., has been a leader in seeking and catering to foreign tourists by means of a vigorous U.S. promotion program. Some $3.9 million, after depreciation, has been invested in tourist facilities to date with an additional $2.1 million of works-in-process. The facility plus adjacent lands are owned by Gulf and Western, a U.S. conglomerate. Presently a deluxe condominium development is also being sponsored along with a continued expansion of hotel facilities.

Economic Implications

Consolidated data have not been developed covering total investment versus benefits over a given time frame. Thus, no realistic computation can be made indicating capital expenditures and maintenance costs versus foreign exchange generation and domestic service benefits. However, investment will exceed returns for some years to come.

Government Institutions

The Government's tourism program involves three organizations plus the Office of the Presidency. The National Directorate of Tourism (DNT) has authority for a wide range of tourism activities including promotion, planning, classification, regulation and enforcement, etc. However, with a 1972 budget of less than $250,000, the Tourism Office cannot adequately fulfill its promotion role. The general consensus is that it lacks both the human and the material resources(9) to do its job and that foreign technical assistance is needed, promptly, to aid in policy formulation and program direction. In 1972 the Central Bank formed the Department for Development of Touristic Infrastructure

(9) The OAS-sponsored tourism study is recommending an immediate budget increase to $2.0-$4.0 million of which, at least, $1.0 million is to be for promotion abroad.

(INFRATUR) which is to carry out the two zone projects (i.e., Costa de Ambar and Costa Caribe), operate the INFRATUR Fund to finance planned facilities and perform many other activities relating to physical planning and project execution. Although new, it is the strongest, in terms of staff and financial resources, of the Government's tourism organizations. There is, finally, a Development Corporation for the Hotel Industry and Development of Tourism which owns and leases to private entrepreneurs approximately 15 state-owned hotels. Most of these are small hotels located in the interior; their service is mostly poor and not of suitable standard for foreign tourists.

Institutional Problems and Other Constraints

Most, if not all, studies of tourism in the Dominican Republic have identified the three areas mentioned below as the principal problem areas in tourism development.

a. Leadership and Institutional Problems:

In the past, most observers have stressed the need for strong, knowledgeable, full-time leadership. A current reassessment of this problem indicates that there is still a lack of forceful unified direction. Additionally, observers have noted the existence of sensitive jurisdictional problems among the several agencies. There are, however, no current indications that either the management or the institutional problems will be confronted directly, at least for some time. Indeed, there has arisen a cumbersome duplicate organization approach. This problem will likely grow in significance as the pressures resulting from operational and implementation factors increase. This could to some extent compromise the Government's efforts in the sector.

b. Lack of Adequate Facilities:

Heretofore the lack of facilities was identified as a prime constraint. Taking into account projects underway and in advance stages of planning, this constraint appears to be of diminishing importance. With hotel space to double in the next three-four years, with improved and new airport facilities, better communications and transport, completed access roads and restored historical sites, plus those facilities being built and in advance planning, a reasonable base exists to support a moderate to substantial growth in tourism. The country is emerging from a very low resource base in tourist facilities. Given the increased availability of tourism facilities resulting from those now being built or in advance planning, we do not think lack of facilities will be a primary constraint to tourism over the next five-ten year period. There will be short periods of difficulty such as the forthcoming 1974 Caribbean Games.

c. Promotion

A third and commonly identified constraint is the lack of a systematic promotion campaign capability. Prior to 1972, adequate facilities were simply not available and a sophisticated promotion program would have been premature. Given the prospective enlarged capacity, the need for promotion has now taken on an added importance to insure that the facilities now becoming available will be used. Suitable tourism promotion, i.e., retention of a foreign firm or firms, will no doubt require a presidential decision.

d. Public vs. Private Sector

A possible issue, not substantively touched upon by prior studies, but one that the Mission believes could be of increasing importance as the tourism program advances, concerns the still unclear definition of the roles of the Government and of the private sector. The Government's expressed intent is to utilize private sector resources. However, based on past experience, the Government could become involved as both owner and operator -- unless otherwise motivated by the conditions of external financing and outside participation. Given the poor historical record of local enterprises involving Government participation, a course in this direction could have adverse implications. This is not a current problem, but one which U.S. Executive Directors to the IBRD and IDB may wish to monitor since both Banks are likely to be importantly involved.

e. Political Stability

A critical factor is that of political stability upon which tourism growth will depend. There is reason to believe that over the medium term -- and it is difficult to look too far into the future -- the outlook is optimistic.

Separate and apart from the sectoral constraints discussed above, there are other problems affecting tourism development that can best be classified as operational restraints. Some of the more apparent are the lack of trained manpower, provision for quality standards, lack of support services, etc. As additional hotel facilities become available, the shortage of trained personnel such as hotel management and service personnel becomes even more acute. Foreign personnel are being hired to fill the critical gaps, lesser staff are being trained on-the-spot while a modest, private training program is being carried on. Current efforts are not satisfactory, and the Central Bank's INFRATUR Department is developing plans and programs to alleviate the problem. With reasonable planning and allocation of adequate resources, we do not believe these operational restraints will necessarily obstruct overall sector development.

Other Donor Assistance

Based on a formal application pending for the past two years, the World Bank has been actively participating in the formulation of the North Coast "Costa de Ambar" project. In October 1973 a large World Bank group visited the Dominican Republic to make final recommendations on Phase I. It is anticipated an approximate $14 million loan will evolve from this consultation.

No formal application has been submitted on the "Costa de Caribe" project. However, informal discussions indicate that the Government will submit a loan application to the Inter-American Development Bank when the project study is completed. This prediction, among other things, is based on the fact that the Bank financed one of the early tourism studies. A loan of $5-7 million is probable.

OAS is presently providing technical assistance on a sporadic, ad hoc basis to the Tourism Office to help develop an action plan for tourism development including that of policy formulation. Also short-term assistance in promotion is to be provided under U.N. auspices.

Conclusions

The Mission has concluded that tourism, while a priority sector, is not one which requires AID attention. Tourism development here will be a long-term process, requiring substantial resources, some of which seem in immediate prospect from other lending agencies.

PART E. HOUSING

The Housing Sector in the Dominican Republic

Housing needs in the Dominican Republic substantially outstrip available supply and are rising as a result of population growth and rural/urban migration. In 1970 the deficit was estimated at 155 thousand urban and 295 thousand rural units. By 1983 it is estimated that the deficit could total considerably more than 900 thousand units given the present rate of construction.

While the Government of the Dominican Republic continues to give a measure of support to subsidized low cost housing, the National Housing Bank (BNV) and its associated Savings and Loan System (S&L) primarily aim at needs of the growing middle income group. Housing, particularly for low income groups, is not a high priority item for National Government expenditures nor have the international lending agencies shown much interest in this area.

Thus, the continued increase in magnitude of unsatisfied housing demand is a part of the price which is being paid for addressing other social and economic development problems which the Government of the Dominican Republic has given relatively higher priority. Further, there is a strong feeling that more public housing in urban areas is a direct stimulus to increased rural/urban migration, thereby contributing further to urban development and housing problems.

AID's Assistance in the Dominican Republic Housing Sector

AID has provided, or caused to be provided, approximately $30.0 million of assistance to the Dominican housing sector over the past ten years. Development loans totalling $7.1 million provided the seed capital necessary to establish the National Housing Bank and create a national S&L system. Five housing guaranties totalling $19.0 million have been granted. Other AID-supported housing activities have included (a) approval of the Dominican Government's use of $2.8 million of Dominican-owned counterpart from U.S. loans and $538 thousand of two-step differential funds to assist the National Housing Institute (INVI) in construction of low cost housing; (b) provision of a grant of $600 thousand to AIFLD for labor cooperative housing projects; and (c) improvement of some 1,700 housing units utilizing Loan 517-L-014 funds as a part of the community development program.

Activities in the Housing Sector of the Dominican Government

The Government has enacted legislation which encourages private sector housing construction programs by providing financial and other incentives. It has also financed directly low cost subsidized housing programs. Legislation which has stimulated housing activities includes: (a) creation of the INV and S&L systems, (b) authorization permitting INV to issue tax-free bonds, and permitting INV and the S&Ls to sell tax-free participation in insured mortgages, (c) creation of INVI, (d) establishment of a special presidential program for low-cost subsidized housing, (e) creation of a private mortgage construction bank, and (f) establishment of a Government Worker's Housing Assistance Institute.

Some Economic Aspects of the Dominican Republic Housing Sector

a. Housing Demand

Of the approximately 750 thousand housing units now occupied, an estimated 300 thousand are considered substandard and in need of replacement. To provide for the needs of population increase anticipated during the next ten years would require construction of an additional 375 thousand new units.

b. Financial Dimensions of Demand

On a yearly basis, to eliminate the housing deficit over ten years would require the construction of 37.5 thousand units per year to meet the needs of population increase plus 30 thousand units per year to liquidate current replacement needs. It is estimated that this rate of construction would cost $337.5 million per year (1) for the ten-year period, an unmanageable financial burden equivalent to 103.7% of the current total programmed Central Government expenditures for all purposes, or 177.6% of the current public sector investment budget.

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(1) Analysis of the annual financial burden to construct 67,500 standard houses per year was based on an estimate (concurred in by the Regional Housing Technical Advisor) that the average standard house would cost approximately $5,000. It was considered that about 60% of the standard units would be low income subsidized units costing around $3,000 each, 20% would be S&L financed units in the $6,000/10,000 range, and 10% in the $10000/15,000 range and 10% would be privately constructed in the range over $15,000 each, resulting in a weighted average of

c. Housing Supply

According to the latest estimates of the INV, public and private construction is adding only about 5500 units a year, which falls far short of demand and results in a growing housing deficit. In addition, there may be as many as 17 thousand unregistered or "clandestine" housing units constructed per year. These are mostly flimsy and unsanitary shanties.

d. Allocation of Economic Resources to Housing in the Dominican Republic

(1) Savings Transfers to the SBL System. By June 30, 1973 the thirteen SBLs had 90,[illegible]5 savings accounts with a net savings of $44.7 million, and had 9,640 mortgage loans on record valued at $78.5 million.

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approximately $5,000, or an annual cost of $337.5 million for housing construction to meet the full demand within ten years.

The total Central Government expenditures for 1973 were programmed at $325.3 million and the total public sector investment budget was approximately $190.0 million. Of its expenditure budget, the Government has allocated $6.8 million, or 2.1% to housing. The highest line item in the Dominican expenditure budget is $64.5 million, or 19.8%, for health.

Of course, other than standard housing unit approaches could be taken such as a nationwide shelter, shell house, or sites and services program and these might bring down the average cost per unit for 60% of the demand as low as $1,000 and make a weighted average for all housing around $3,000. Even this lower figure would project an unsupportable financial burden of $202.5 million per year (62% of total expenditure budget or 106% of investment budget). If one were to assume that all housing units would have a cost of only $1,000 apiece, the financial requirements would still be $67.5 million per year or almost 21% of total expenditure budget.

(2) S&L Mobilization of Other Local Resources. By the same date, the BNV had mobilized $2.2 million through issuance of tax-free bonds (cédulas hipotecarias) and the BNV and the S&Ls combined had sold contracts of participation in tax-free insured mortgages totalling $28.1 million making a grand total of over $30.0 million mobilized from loan resources by sale of tax-free instruments.

(3) Employment and Income Distribution Considerations. An estimated 8,000 workers (about one-[illegible] of one percent of the total labor force) are fully or partially employed in housing construction in 1973. Assuming that the average Dominican laborer's family contains about seven persons, housing construction would provide, wholly or in part, for the support of some 56 thousand Dominicans who would share in this distribution of national income.

Other Donor Housing Programs

No external assistance programs by international financing agencies are currently under way or planned in the near future in the Dominican Republic. The IDB does have a request for an "urban development" loan in the amount of $8.[illegible] million; however, information presently available to the Mission indicates there is little possibility that the loan will materialize.

Likely U.S. Assistance over the Next Several Years

Given other competing demands on use of resources, the Mission does not anticipate any new loans for housing to be executed for the next several years. We would expect AID activity in the housing sector to be concentrated mainly on implementing the two recently signed housing guaranties (007 and 008), whose disbursement activities are expected to cover a period of from two to three years. Although additional capital transfers could augment the rate of housing construction, the housing institutional structure has been created and further AID transfers in this sector are not recommended at this time.

PART F. OPIC ROLE IN THE DOMINICAN REPUBLIC

The last report the USAID Mission has indicates that the OPIC investment insurance portfolio consists of thirty-five contracts with some twenty-four investors. Eight investors have two or more contracts. The contracts fall mainly in the following investment areas: (a) mineral extraction, (b) branch banking and (c) various small or medium-sized productive enterprises.

Ninety-two percent of the country's current expropriation coverage is accounted for by the Falconbridge contracts.(1) The contracts insure a technically-sophisticated, ferro-nickel mining project against expropriation, and to a slightly lesser degree, against the risks of inconvertibility and war. The second category comprises the investment of three U.S. banks, primarily in branch banking (seven contracts accounting for approximately 3.3% of the expropriation, i.e., maximum, coverage). The third category involves some 26 contracts, many in the field of agribusiness.

The outstanding risk insurance is as follows:

	Inconvertibility	Expropriation	War Risk
Current	$192,654,602	$202,563,635	$198,418,635
Maximum(2)	$211,463,820	$214,551,820	$206,936,820

(As of 5/31/73)

There are no investment guaranty (as opposed to investment insurance) contracts outstanding, nor have there been any other OPIC activities (e.g., preinvestment surveys, direct investment loans, community credit guaranties, etc.) in past years.

By reason of the large ferro-nickel mining project with some $187.2 million of OPIC expropriation coverage representing over 90% of total project cost, the resultant country level is high. As a matter of interest, the country level of OPIC expropriation coverage is the third highest in Latin America. Moreover, the insuring of the Falconbridge project has had the effect of concentrating a disproportionately large part of OPIC's local

(1) Two contracts issued.

(2) The maximum permissable coverage over the entire contract period, normally not more than 200% of equity investment or the interest and principal on debt investment. The current amount is, basically, the amount presently committed.

investment portfolio in a single project, and that in the normally sensitive extractive industry area. While potentially troublesome, this type of foreign investment does not appear to be a current problem here.

We have been informed about OPIC's adoption in 1971, of new policy and guidelines covering "large and sensitive" projects which is intended to lessen the degree of exposure and, consequently, risk. In the Dominican Republic, we would recommend this approach be followed in considering OPIC insurance for any new mineral extraction or processing of mineral projects.

The Mission has concluded that if OPIC insurance for branch banking were unavailable, it would probably not be a major impediment to U.S. investment in this area. Historically, branch banking investment has been of two types. The first has been to provide working capital to support local banking operations; the second to increase the bank's capital base so as to comply with Dominican banking laws. The former working capital investment was necessary to maintain a satisfactory market share; the latter, however, was and is the cost of doing business in the country. Given the availability and the competitive nature of commercial banking here, the large U.S. banks must either meet current market and legal requirements or forego from participation in this growing market. Basically, we believe this to be a business decision.

Regarding the third category, based on past experience and present developments, we believe there to be opportunities for increased OPIC support and participation in agro-industry in the Dominican Republic. For example, there have been a number of food-processing and other agribusiness-based investments(3) covered by OPIC insurance. These investments have been relatively small, and, given local market factors, are likely to remain small in the future. However, the availability of OPIC insurance, we believe, probably was a positive factor in the decision of U.S. investors to proceed and likely to remain so. Moreover, other OPIC programs, e.g., the OPIC/Agribusiness Council Project Development Program, the Direct Lending Program, etc. might prove useful in furthering agribusiness investment in the Dominican

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(3) The third category also includes a commercial financial operation, two investments by a U.S. conglomerate, and one or two others that are exceptions to the Mission's general discussion and recommendations related to this category.

Republic. Because of the country's natural endowments and emphasis in agriculture, the Government's interest in increasing agricultural production, the ready availability of labor, there would seem to be an advantage in initiating various agricultural-processing ventures here. Consequently, OPIC may wish to consider active support of U.S. investment in agribusiness here. In our view, agribusiness investment will at this stage of Dominican development result in greater economic benefit to the country than the more typical, import-substitution manufacturing industries.

OPIC support of U.S. investment in tourism enterprises is also recommended. Clearly, tourism will increase significantly over the next decade (see Tourism section), and U.S. know-how could make an important contribution to the country's tourism development program which is now approaching a more active operational phase. As with agriculture, however, we would be concerned with any tourism investments involving extensive land-holdings.

With respect to operational considerations, it should be noted that the Government's Secretariat of Foreign Relations, thus far, has been willing to approve any legally-constituted investment under the Investment Guaranty Treaty. Under these circumstances, it can be assumed that a project's economic and social benefits have not been examined or seriously considered by the Dominican Government. In this respect it would be helpful to the Mission if more information about OPIC's eligibility standards and criteria were provided, than that normally available to us from the investor's application, to enable the Mission to respond more adequately about a project's economic and social benefits -- if indeed this is desired.

We recommend the continuation of the OPIC program in the Dominican Republic with the suggestion that selectivity, along the above lines, be exercised by OPIC in its future investment insurance coverage. Additionally, other OPIC programs may well be fruitfully employed here. We would urge a developmental orientation of OPIC activities with possibly an increase in the country level of investment insurance in the short run. Such an orientation would be responsive to Dominican development objectives and, ultimately, enable OPIC to have a more balanced portfolio.

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3. PROPOSED U.S. ASSISTANCE

A. Summary

The probable situation in the Year 2000 compels the Government of the Dominican Republic to deal with the major development issues now if it is to improve its chances for maintaining its economic viability as an independent country.

Given present development policies and programs, there is no question but that the projected number of people in the Dominican Republic would overwhelm present resources and resource use within a score of years. Inaction on their part and failure on the part of external lenders to assist them could conceivably again result in over-dependency on the United States. Costs to the United States were we to believe it in our interest to rush in at a later stage to help avert economic and social disaster in the Dominican Republic could be substantial.

The question is: Are there some timely measures which Dominicans could take now to forestall the type of situation alluded to above? The short answer is yes, but very likely changes in prospective resource allocations, external as well as internal, may be required. The more satisfactory answer to the question is complex and not easy.

There are some hopeful indications of changes in Dominican development policy. A number of able and influential officials in key areas are coming to realize the magnitude of the problems facing their Nation and are taking seriously the need to have better analytical information on which to base development decisions.

The President has a clear conception of his priorities, but possibly has a less clear conception about how to deal with his problems. He has unequivocably affirmed that control of population growth is his most important problem. He has cited agriculture and food production, and, health generally, as being of the next rank, with education and other activities trailing. He has also requested help. While no commitments have been made on quantity of aid, the U.S. Mission has expressed willingness to consider some assistance. It is clear that the President wants and needs U.S. bilateral aid assistance -- even if on a modest scale -- in those areas where his needs are greatest and where AID has special competence.

The Chairman of the National Development Commission frequently seeks our advice and counsel. He has long held his position and enjoys the President's confidence. Conversations have

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been held with the Governor of the Central Bank, a man of great capacity and development orientation, particularly with respect to improving balance of payments prospects. The Secretary of Agriculture has the confidence of the President and claims, by statute and personal inclination, primary responsibility for the entire agriculture sector. He has taken a number of significant steps, and advocated others, to pull the multiplicity of agricultural agencies closer together. He seeks to use analytical tools to help focus attention on policy issues and improve the agricultural operations of the Government. There are other key officials giving shape and focus to a Dominican development effort such as the Secretary of Health who probably has the single most complex and difficult Dominican organization to administer.

Possibilities for external aid to have significant impact are good. While U.S. bilateral assistance may well be relatively small this year and next, and the year after, small investments appropriately placed can yield significant returns.

The Dominican Republic is possibly not getting the most in economic benefit from investment of its own resources, but there is another question: Is it getting the most from investment of external aid? A brief examination of what external institutions are providing would seem to indicate that more could be done in this area to focus inputs on highest priority undertakings.

The issue, in one sense, is likely to be even more pressing over the next few years when the flow of resources increases, and the flow is likely to increase for several reasons: One, disbursements on loans already agreed will be stepped up. Two, indications are that the Government will seek more concessional lending. Three, with reasonable luck the economic boom in the Dominican Republic could continue another year or two or three (despite incipient balance of payments problems in the near term) and this type situation tends to attract additional resources from major lenders and investors.

One question which it might be useful to consider at some point is whether or when the flow of external resources might be structured on some more regularly coordinated basis. Discussion might help to provide better overall focus. Such step could possibly be useful since it is unlikely that there will be an authoritative, articulated Dominican development plan for some little time (although one is said to be in preparation).

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While the principal focus of this Development Assistance Program (DAP) is on bilateral assistance, the Supplementary Guidance calls for a general reappraisal of U.S. Development Strategy. In this regard, to encourage greatly increased use of multilateral sources of aid has been an integral part of our development strategy over the past few years. In general, we believe that the use of multilateral sources as the prime providers of external aid and assistance was and is an appropriate move. Thus, we see our role as one of limited financing and balancing of inputs in the critically important areas. This being said, the subsequent three subsections will be directed toward prospective or possible U.S. bilateral assistance.

B. Within the Above Sectors This Fiscal Year

We recommend that U.S. bilateral assistance take three forms: (1) Development Lending, (2) Technical Assistance, (3) P.L. 480, Title II. While we recommend that P.L. 480, Title I, be reinstituted in FY 1975, prospects for this fiscal year seem poor and are therefore excluded from our recommendations under this heading.

(1) Development Lending

Through the assessment process in connection with the DAP, we consider it most likely that an agriculture sector loan can be put together this year which will be responsive to the Government's request.

Working closely with the Secretary of Agriculture, the USAID Mission has identified a number of areas where a bilateral U.S. input could have a significant effect on agricultural development and production. Mostly the areas proposed involve either better planning or more credit aimed at making institutional credit available to more farm families. These areas are elaborated in the section on Agriculture. These need to be reconfirmed as a part of an analytical sector assessment process. The Planning Staff of the Agricultural Secretariat is already at work making the necessary studies.

We now estimate that there are several institutions in the sector capable of carrying out a program of the type envisioned which could productively utilize funds in the amount of $15 to $20 million. Nevertheless, it would perhaps be more advisable to aim at a more modest total of $8 to $12 million, since the lower range would be well within the capacities of the institutions concerned and disbursements could rapidly follow loan signature.

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We aim at a loan approval before the end of this fiscal year which, of course, entails timely submission and review of an Intensive Review Request and a Capital Assistance Paper. We will unquestionably need TDY assistance to meet such a rigorous schedule.

An integral part of the foregoing will, of course, be to refine the Agriculture sector assessment submitted as a part of this DAP.

(2) Technical Assistance

The USAID Mission believes that the modest level approved for this fiscal year should be maintained. Much of the funds will go to support the agricultural sector focus and to begin a thorough assessment of the Health Sector, particularly Family Planning and Nutrition for reasons heretofore discussed (See Section 2.B. on Health).

It would also seem useful that funding for training, particularly, and consultants be retained and available to keep open links to the education area, to support other parts of our residual loan portfolio and to help improve Mission competence in the areas of our concern.

The sum involved is about $1.0 million in appropriated funds.

(3) P.L. 480, Title II

The proposed negotiating position on the Title II phase over is detailed in Section 2.B.II. It is based on three basic assumptions: (1) the Government of the Dominican Republic has the financial and other resources to do more to provide food commodities in substitution of Title II commodities, (2) the Government will continue to support financially the program at somewhat increased levels if a phase-over period of five years is agreed, and (3) the Government will take a more active role in providing policy direction through a Dominican interagency process of consultation.

Left open is the question of how operational distribution of the Government's contribution to the program in terms of foodstuffs, etc., is to be carried out. Certainly, the Voluntary Agencies have most effective mechanisms in this regard. The Government has confidence in them, reflected by its willingness to provide financing to cover the administrative costs of the program.

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It seems not unlikely that the Government may wish to continue to use the services of the Voluntary Agencies after cessation of Title II programs in some program phases. This would have the benefit of giving the Health Secretariat some relief. It is already burdened, and likely to be more so, in preparations for a major analysis of the sector, adjustments in institutional policies and practices and major new efforts in family planning, nutrition and other programs.

C. Likely U.S. Assistance Requirements Over the Next Several Years

Our thinking in this respect has to be provisional since there are several unknowns. The following reflects our views as to the pace of activities over the next few years.

(1) Development Lending

If the analytical sector process confirms, as we believe it will, that some assistance in the health area is needed, particularly to complement and supplement the work of others in family planning and nutrition, we would anticipate a sector loan in an amount of not less than $4 to 5 million nor more than $5 to 10 million in FY 1975. Admittedly this is a guess. We do not now anticipate any additional lending in FY 1975.

In FY 1976, it may be useful, given adequate Dominican development performance, to examine more closely whether their capacity to use external aid efficiently and effectively would be greater than projected aid flows. If so, it may be useful to consider an additional increment of external aid more closely approximating their absorptive capacity. It would continue to be our hope that the major load would be carried by the international institutions and that, proportionately, U.S. bilateral aid would not increase. There could result moderate incremental increases from year to year if the U.S. interests so warranted. Follow-on sector loans in agriculture and health should be considered, possibly even a loan in education if conditions then so indicated.

As stated several times in this paper, an increase in external concessional lending, from all sources, is warranted if the Government's choice of development policies is sound and productive.

(2) Technical Assistance

Technical assistance should continue at approximately its present moderate level with, however, incremental decreases following FY 1975.

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(3) P.L. 480, Title II

This program is projected downward with a phase out altogether in five years. If the U.S. supply situation were to change sharply in the next several years, then perhaps quite different approaches might be considered, e.g., selling, rather than granting, Title II commodities, but on 40-year terms with the terms of sale equated to those of concessional lending.

(4) P.L. 480, Title I

This program should be reinstituted when commodities are available, e.g., in FY 1975 if possible, but should be scheduled for gradual phase down consistent with balance of payments requirements. Because balance of payments considerations have long been paramount, there has been some tendency to forget that funds generated to support the development budget have not been inconsiderable and have aggregated nearly 1[illegible] of the Central Government's investment budget over the last several years.

D. Manpower Resource Requirements

The foregoing anticipates that manpower resource requirements should hold reasonably constant in FY 1974 compared with FY 1973, but it is not unlikely that some further modest reduction in American staffing could be accomplished by the end of FY 1975 providing that the local staffing level in FY 1975 could be held constant with FY 1974 or even increased slightly. The direct American staffing level after FY 1975, i.e., by the end of FY 1976 and after, could probably be held to 16 to 19. The local staffing level should be held pretty much constant with FY 1974 and FY 1975 ceiling allocations.

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