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# DEVELOPMENT ASSISTANCE PAPER

## PART I - SUMMARY NARRATIVE STATEMENT

### A. Development Summary

#### 1. Economic and Social Conditions

##### a. General Conditions

Colombia presents most of the contrasts characteristic of developing countries. On one hand, it has a large modern sector with modern industry employing over one million people and highly developed infrastructure both in the cities and in a substantial part of agriculture. This sector provides relatively high incomes to the people in the sector and allows them most of the advantages of modern technology. The institutional structure of the country is relatively well developed, with the economy capable of providing for most of its needs, and reasonably effective government agencies institutionalized and active in all important aspects of development promotion.

On the other hand, over 30% of the population participates very little in the progress that has been made during the last several decades. This 30% of the population has a per capita income below the AID defined limit for the 'poor majority' of \$150 per year. A similar percentage would fall below minimum levels of well-being according to the criteria of nutrition, health status, or life expectancy. This group, which includes some seven million people, is largely rural, with less than one-third living in urban areas. Its members are principally involved in agriculture, although only a small fraction currently has access to agricultural credit and few have ever received advice from an agricultural extension agent. Because of the lack of access to the four basic services (credit, inputs, technology, and markets), production by the small farm sector has lagged behind the rest of agriculture. Access to these services could result in rapid rises in output and income. Most of the children in the families of this group are undernourished and half or more of their elementary school-age children do not attend school. Their health state, both because of malnutrition and chronic water-borne diseases, is quite poor and the majority will die without ever having seen a doctor in their lives. There has been a dramatic drop in recent years in the fertility of urban women, particularly those of moderate income and educational level. However, the fertility rate of the very poor, especially in rural areas, remains strikingly high, at perhaps 45 per thousand. Somewhat less than half of the rural adults have a working knowledge of family planning and only about 10% of the rural women of fertile age practice effective contraception.

The result of the combination of these elements of modernity and backwardness is a per capita income in the area of \$450 per year. This figure is only about 60% of the average for all of Latin America and ranks Colombia fourteenth among the twenty-one countries in the region in per capita terms. Nevertheless, given the relatively large population of the country (24 million), the absolute size of the modern sector in Colombia is larger than that of most other Latin American countries, and gives the economy a greater capability to solve its development problems through internal efforts. For example, the amount of government tax collections should reach \$1.25 billion for 1976, giving the government a command over a very high level of resources to carry out its development programs, while the total output of the economy exceeds \$11 billion annually. This amount of total output, and the fact of the average 6.5% annual growth of the economy, results in the availability of nearly \$800 million in increased income generated each year by the economy. The extent to which the country is capable of solving its development problems in light of these overall figures requires an analysis of income distribution.

b. The Question of Income Distribution

Income distribution in Colombia is very unequal. While the magnitude of the inequality is subject to some controversy, the rough outlines are clear. Half of the total income goes to the top ten to fifteen percent of the income distribution, while the poorest twenty percent receives no more than about five percent. The existing evidence on trends in distribution indicate that inequality increased between the 1930s and the 1950s, but there has been some improvement since. This improvement, however, has been confined to the distribution of urban income, whereas the rural income distribution appears to have continued to deteriorate throughout the period.

An added element of the income distribution picture in Colombia is the very unequal distribution of labor income. While the share of national income accruing to labor is not markedly different from that of other developing countries, the dispersion of this income does appear to be greater, with the income differential between skilled and unskilled workers very great indeed.

In order to give some perspective to the above, it is useful to consider the extent to which government policy can alter income distribution, and the extent to which actual policies have tended to improve or worsen the distribution. It is generally agreed that the most effective short-run mechanism for altering income distribution is redistribution of assets. In the case of a developing country such as Colombia, this effectively means land reform. Though Colombia was one of the first countries in Latin America to attempt to carry out land reform, the results during the past fifteen years since the creation of the Land Reform Institute (INCORA) have been quite modest. Though some early emphasis was given to direct distribution of large estates, activity in recent years has been heavily involved in colonization and irrigation projects aimed at bringing new land into use as a means of providing small farmers with an adequate land base. This "painless" approach to land reform has proven quite expensive, with capital costs per family settled on the land made available through these projects running as high as \$8-\$10,000. Given this high cost, the quantitative impact of the program has been small, and it seems clear that this approach has had only a marginal impact on the land distribution problem in the country. In fact, it appears to have had considerably less impact than the growth of urban employment possibilities, with consequent heavy out-migration from minifundio areas, as a means of increasing the land available to small farmers.

While the experience with land reform in Colombia has been discouraging due to the lack of willingness of the government to use coercive techniques for the breaking up of large estates, this lack of success must be viewed in the perspective of the political realities of the country. Between 1958 and 1974, Colombia was ruled by a National Front coalition of the two major parties, which alternated in the presidency and shared equally the major posts in the bureaucracy. As one of the most knowledgeable observers of Colombian development, R. A. Berry<sup>1/</sup> has indicated, the result of this form of government has probably been to slow down the pace of change in the country, since the government was forced to use bipartisan consensus as a means of carrying out government policy. In addition, given the numerical superiority of the Liberal Party, it seems clear that the Conservative Party benefitted substantially more than the Liberal Party from the National Front, since its ability to win free elections was open to question. Nevertheless, the National Front served to end the period of

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<sup>1/</sup> R. A. Berry, "The National Front and Colombia's Economic Development," August, 1975 (Mimeo).

internal political warfare that existed during the early 1950s and restore an atmosphere of mutual trust among Colombians. Viewed in this perspective, the National Front probably accomplished a meaningful objective, despite the fact that it may have slowed down the pace of social change over what ideally might have occurred in its absence.

Given the limited success with asset redistribution in Colombia, it is necessary to consider the major alternative forms of improving the income distribution. Basically, these involve two different sets of activities: macroeconomic policies concerned with exchange rates, taxation and tariffs, monetary policy, and wage and price policies; and policies involving distribution of government services, such as education and health, and provision of access by the poorer elements of the population to economic services such as credit and technical assistance.

In the two areas indicated above, the experience of Colombia in recent years has been rather favorable. In both areas, government policy has moved in directions that would serve over the long run to improve significantly the income distribution of the country within a framework of overall economic growth.

In the area of macroeconomic policy, Colombia began to shift away from a policy of import substitution, which had involved the usual policy mix of subsidization of capital with cheap credit, tax incentives, and overvalued exchange rates, to one of export promotion during the mid-1960s. This change in macroeconomic orientation has been associated with a faster overall rate of economic growth, faster absorption growth in employment and, apparently, a reduction in the inequality of the urban income distribution. These results are in line with AID findings for other countries related to the impact of an export oriented versus an import substitution industrialization strategy. The most notable recent action by the government in this area, however, is probably the tax reform implemented in September, 1974. Prior to the reform, the tax system was only mildly progressive, principally because loopholes in the income tax system allowed high income taxpayers to escape the high nominal rates. The tax reform eliminated most of the tax avoidance devices, and instituted both effective capital gains taxation for the first time, and a presumptive income on all assets. The presumptive income of 8% of the value of all assets has apparently had a substantial impact on the economy, most importantly in agriculture. Since the effective

tax rate for agricultural land for high income landowners may now be as high as 4-5% of the value of the land, the incentive to hold large amounts of land as an investment has been eliminated. It appears that the impact of this law has already been to drive down land prices in some parts of the country, and it is hoped that it will induce large landowners to sell parts of their holdings to smaller operators who use land more intensively.

In the second area -- that of changing the distribution of human capital in the society -- the government has made a major effort during the past fifteen years and especially so since 1967. The availability of primary education to the 7-11 age group has increased from less than half of the group in 1960 to 80% at present, with the perspective that coverage will be nearly complete by 1980. Enrollment in public secondary education has increased from 92,000 in 1960 to 664,000 in 1974. Water and sewage availabilities show similar rates of growth. An important source of this great improvement in social conditions has been the result of the government's willingness to dedicate continually increased resources to provide them to the portion of the population that lacks them. This commitment is reflected in the fact that national government investment in the social sectors quadrupled in real terms between 1966 and 1975. As discussed in a subsequent section on the GOC National Development Plan and priorities, the effort in this direction can be expected to intensify even further during the next several years. The result of these efforts will be continued growth, at a fairly rapid rate, of access to the benefits of modernization to that part of the population that has lacked it in the past. Based upon trends in other countries that have taken this approach and studies in Colombia of the productivity of investment of this type, this extension of access should result in a gradual improvement in the absolute level of living of the poorest 30% of the population, as well as a gradual improvement in income distribution.

In summary, we can conclude that although the political structure of the country's institutions prevents effective use of extensive land redistribution as a means of improving income distribution, the country has made a serious effort through other means of providing the policies and financing required to extend the benefits of economic growth to more of the people of the country -- primarily through domestic self-help efforts.

## 2. Economic Performance, Problems, and Prospects

### a. Economic Growth

Colombia grew relatively rapidly during the 1950s, fueled by high coffee prices and considerable investment in import substitution industries. When coffee prices fell around 1960 to low levels from which they did not recover until 1970, the economy was left with a relatively inefficient industrial structure, and the inability to import the raw materials and capital goods to change its structure. As a consequence, the growth rate of the economy was unsatisfactory, with per capita product growing annually by only about 1%. AID program lending during the mid-1960s allowed this import bottleneck to be temporarily eased while the government undertook a major effort to stimulate non-coffee exports. The major measures were taken in 1967, and the gradual rationalization of the economy that has resulted has led to substantially faster output growth, with total GNP growing at 6.5% between 1968 and 1974 and per capita product growing at rates above 3%.

There was a slowdown in the economy during the last half of 1974 which has continued through the third-quarter of 1975, as a result both of depressed world market conditions and an effort by the government to reduce inflationary pressures. Preliminary projections for 1975 suggest a growth rate of 4-5%, with rapid growth expected to resume in 1976 as the government attempts to reflate the economy through higher government investment and stimulus to the private sector.

Inflation has become a serious problem during the last several years after relative stability (i. e., inflation of 8-9% per year) during the late 1960s. Inflation reached 25% during 1973 and 1974, fueled by poor revenue performance of the government, inadequate monetary management by the central bank, and international inflationary pressures. Since late 1974, the government has made a concerted effort to regain control of the prices and has largely succeeded. The fiscal situation has been brought under control through a major tax reform, and the level of monetary management has been substantially improved both through structural reforms of the financial system and through the beginning of open market dealing in securities by the central bank. As a result, inflation during the six-month period

April-September, 1975, was at an annual rate of only 15%. Any further slowdown will probably not occur during the next half year because the GOC is gradually raising the price of gasoline and oil products from their previously very low (and subsidized) levels, and the impact of these increases will gradually work their way through the economy. While the recent price trends are encouraging, the government will continue to have a difficult problem in reconciling its development programs with the continued existence of the inflationary pressures that built up before it took office.

In the particular case of petroleum, the GOC has recently begun to take action to counteract the declining production and growing demand for petroleum, which will result in loss of net self-sufficiency in petroleum products by 1976. Producer prices for new crude have been raised to \$5-\$7 per barrel, depending on drilling conditions, with higher prices apparently negotiable for remote areas. The GOC expects this price rise to provide adequate incentive for further exploration. On the demand side, prices remain among the lowest in the world despite recent moderate price increases for gasoline. Because of the inflationary pressures that would result from major price increases, it is unlikely that the GOC will much more than pass through the cost increases resulting from the higher prices for new domestic production and imports. This approach is understandable because of the heavy concentration of fuel use in mass transit and transportation of goods (less than one-quarter of gasoline consumption goes to private cars).

In summary, the overall economic situation is rather favorable, and prospects for continued economic growth during the next few years are quite good. The country has gradually ended the excesses of the import substitution period and, though inflation continues to be of considerable concern, it should not hinder rapid export oriented growth in the range of 6-8% per year during the 1976-1980 period.

b. Public Finance

Gradual and continuing improvements in the tax system fueled rapid growth in government investment, especially in the social sectors, during the 1966-1972 period. Thereafter, tax revenues were relatively stagnant in real terms during the 1972-1974 period. This stagnation was due to several factors -- the increasing drain on revenues represented by export

subsidies; loopholes in the tax system that allowed most capital gains to escape taxation (with a consequent increased use of capital gains by the wealthy to replace ordinary income); as well as a deterioration in the quality of tax administration -- and it had a serious negative impact on the government's ability to carry out its social investment program. As a consequence of the revenue shortfalls, delays in payments of salaries and contract obligations began to occur, together with slowness by the government to pay obligations to decentralized agencies and state and municipal governments which introduced serious implementation problems into the activities carried out by these entities. The shortfalls in revenues were partially covered by commercial borrowing abroad but, given the conjuncture of the economic situation at the that time, the result of the government's financial difficulties was a feeding of inflationary pressures that were building up in the economy as a result of other factors, including the world inflation.

In response to this deepening problem, the Lopez Administration that took office in August, 1974, made tax reform its first major item of business. A sweeping tax reform was promulgated by decree in September through the use of emergency powers. The tax reform, which was based heavily on the recommendations of a Harvard team in 1968, corrected all of the major problems of the system, and has made the Colombian tax system a model for most other countries. The system was greatly simplified and its progressivity was considerably enhanced. Though some of the benefits of the reform will not begin to accrue until 1976, the results of the reform so far have been impressive, with total collections up 54% for the first eight months of 1975. The expected increase for the full year is about 50%, or more than 25% in real terms. The increased revenue will allow a significantly increased investment budget in 1976 for the first time in several years, and has already resulted in a considerable improvement in the orderliness of the expenditure process.

As a consequence of the improvement in the tax system, the ability of the government to carry out its development program without creating inflationary pressures is much more favorable than it has been for several years. This improved environment extends to counterpart obligations incurred under foreign loans where the prospects for implementing agencies getting the funding they require when they require it are better than ever before. The result should be an increased effectiveness of government investment programs.

c. The External Sector

Colombia's external sector was dominated by coffee during most of the post-war period, and government strategy has been to attempt to reduce its role through stimulating other exports. This effort has been quite successful. Coffee accounted for 82% of total exports in 1955, 63% in 1967, and only 44% by 1974. This occurred in the face of declining petroleum exports, which represented 10% of total exports in 1955, but only 0.3% by 1974. Other exports increased from insignificant levels in 1955 to represent 56% of total exports by 1974. While agricultural exports (principally sugar, beef, and cotton) played an important role in the export expansion, exports of industrial goods now represent more than half of all minor exports with textiles leading the list, followed by a wide range of manufactures and semi-manufactures. These achievements were the result of a conscious policy of export stimulation, including flexible exchange rates and export incentives. The major incentive between 1967 and 1974 was a marketable tax credit of 15% for minor exports. This export subsidy was eliminated for many products, and reduced to 5% on all others at the beginning of 1975, and replaced by a more rapid depreciation of the peso.

The export diversification effort has gradually eliminated the structural imbalance in the external sector that existed during the 1960s. This imbalance had necessitated continual restrictions on imports, and required high levels of foreign assistance, most importantly in the form of AID program loans, to provide the economy with the capital goods and raw materials necessary to permit the growth of the country. This bottleneck has clearly been broken, and international reserves, which were negative during the entire 1962-1969 period, have now reached a level exceeding \$400 million. More important than the reserve level itself, however, is the dynamism of the export sector, so that any future balance of payments problems seem susceptible to solution through the conventional techniques of developed countries -- exchange rate policy and international credit policy. In light of this new situation, the country has gradually been liberalizing its import system which was extensively controlled through government approval requirements during the 1960s and early 1970s. The prohibited list of imports has been eliminated, and the percentage of total imports not requiring government approval has gradually risen to a current level of about 50%. Further liberalization is expected during the next year with the gradual replacement of existing approval requirements by import tariffs.

At the same time that the export drive has been succeeding, the availability of international lending through the IBRD and the IDB has been increasing so that new obligations from these banks may reach the level of \$300 million or so per year for the next few years. In addition, there may be relatively high levels of foreign investment in Colombia over the next several years, especially in the area of natural resource development. Although these projected investments are all joint ventures, so they will probably not be affected by the recent moves by the GOC to require majority Colombian ownership in key industries, opposition by other foreign investors to these GOC policies may somewhat offset the capital inflow resulting from their development.

There is expected to be a significant negative impact on the balance of payments resulting from the gradual decline in Colombian petroleum production. The petroleum account is approximately in balance in 1975, but net imports should rise rapidly during the next several years. Despite this area of concern, the balance of payments prospects are quite good and, although periodic problems can be expected from fluctuating coffee prices or world recessions, there seems little likelihood that the foreign sector will ever again represent the structural impediment to the country's development that it did during the 1960s.

### 3. The Colombian Development Strategy

Since taking office in August, 1974, the Lopez Government has moved rather cautiously with respect to its development strategy. The government argued that the immediate priority was to reduce the rampant inflation and solve the government's funding problems. As indicated in the previous section, these efforts have had a considerable degree of success, and much greater emphasis is now being placed on implementation of a longer-run development plan. The Lopez development strategy is based on the position that government involvement in the economy in the past has had a negative impact on the growth. The GOC will make a special effort to encourage growth of manufacturing exports but, like its other activities, this will be done primarily through market forces. This element of the strategy is similar to that carried out by Brazil during most of the last decade -- promoting rapid growth with less regard for income distributional consequences. The GOC argues that direct assistance to the poor is a better method for achieving income distribution objectives than is interference with market mechanisms.

The major aspects of this portion of the plan include the liberalization of imports from administrative controls and taxation of government enterprises that compete directly with the private sector, but the most important element appears to be an effort to stimulate the development of the financial structure of the country. In part, this involves a deregulation of the banking system by reducing its dependence on central bank rediscounts and limiting forced investments so that banks have greater freedom to respond to the needs of the private sector. Additionally, however, it involves a gradual freeing of interest rates and increasing the capital market availabilities to the private sector by reducing governmental demands upon the market. The government expects that these reforms will substantially increase the dynamism of the private sector, leading to more rapid rates of growth of both output and employment.

At the same time that these macroeconomic reforms are being undertaken, however, the GOC proposes a concerted effort to extend social services to the totality of the population through the use of government investment programs. Thus, the Plan essentially argues that the economy should be ruled by market forces and that government should use its taxation and spending powers to provide services to those not reached effectively by the market system. Seen in this light, the Plan combines the necessary elements for both rapid growth and distributive justice.

The essentials of the government investment program are contained in the GOC's National Food and Nutrition Plan, which, as will be seen below, encompasses a much broader scope than food and nutrition. The goal of the Plan is to extend the opportunity for participation in the economy to all of the poorest elements through the provision of productive technology, health services, and education to these groups. While the latter two elements are generally considered "social" and not economic services, the GOC argues, on the basis of a number of empirical studies, that primary education and improved nutrition, especially in young children, have a very high rate of economic return to the country (perhaps between 20% and 30% annually) because they result in a more productive labor force. The government takes the position that the major elements of the Plan are sound social policy and sound economics.

The concrete projects to flow from this diagnosis and strategy are still far from being fully developed, but the broad outlines are now in place. The main thrust of the GOC program will be directed toward rural areas where the bulk of the poorest groups live, and will involve integrated projects to provide agricultural services (credit, technical assistance, marketing facilities, and transportation infrastructure), health services, and primary education to rural areas. The areas for concentration of this activity, which include about 12% of the area of the country but over half of the rural poor, have been chosen and the detailed planning of specific activities is now under way. This integrated rural development activity (known as the DRI program) is expected to have a substantial impact on both the level of living of the rural poor and on the amount of agricultural production. Because the small farmers who are to be brought under the program are both efficient producers of agricultural products and the principal producers of food crops, the program should increase total food production significantly.

Increased food production from the integrated rural development areas, combined with some diversion of food products from other uses, is to be used for the second major element of the Plan. Through a series of projects, each carefully defined for maximum effectiveness with respect to a concrete nutritional goal, the GOC will attempt to substantially improve the nutritional level of the diet of the poorer half of the population. For the poorest 10% or so, for whom a lack of income makes the consumption of an adequate diet currently impossible, there will be direct subsidization, either through diet food distribution or through use of devices such as food stamps. For the poor who are less dependent on direct subsidization, another series of projects, including fortified foods, improvements in the marketing structure, nutrition education, environmental sanitation, and other health measures will be emphasized.

#### 4. The Assistance Climate

It should be clear from the preceding discussion that the general climate for AID assistance in Colombia is quite favorable. The overall economic policies of the government are very much in line with what is necessary for the country's long-term development, so that there is no danger of AID assistance in individual sectors of the economy being frustrated by inappropriate policies elsewhere in the economy. Similarly, the Colombian

effort in the fiscal areas is impressive and indicative of a considerable self-help effort. The tax reform of 1974 should continue to provide significant annual increases in resources available for government programs, so that there is little danger of AID supported institutions being slowly strangled by lack of budgetary support once AID support is withdrawn. Finally, as we have indicated in the discussion of the GOC Development Plan, the government has a serious commitment to assisting the poorest half of the population. While income distribution is skewed in Colombia and will continue to be so for some time into the future, the government is committed to extending the systems of education, health and nutrition, and productive agricultural inputs to those sectors of the population that lack them. The availability of these social and economic services should permit continual growth in the standard of living of the poorest elements of the Colombian population.

## B. Sectoral Discussions

This section provides analytical summaries of the sectors of the Colombian economy where the major emphasis of AID activities will be focused during the next several years. More detailed information on the individual sectors, together with the data that support the assertions and conclusions of this section of the DAP, are contained in the detailed sector assessments of Part II.

### 1. Education

The development of the Colombian education system during the past fifteen years has been quite rapid and shows promise over the medium term of reaching the goal of providing at least a basic education to all of its children. At the primary level, enrollments have risen from 1.7 million students in 1960 to 3.8 million in 1974. This latter figure represents about 15% more students than there are in the 7-11 age group, the prime target group for elementary education. This apparent surplus of students is due to considerable numbers of over-age students who constitute about 25% of total primary enrollments. The problem of over-age students is due to an earlier lack of schools in some rural areas that resulted in late entrance to first grade and to a high level of repetition of grades. Pupil repetition is due in part to lack of schools, as students choose to repeat grades in areas of the country where the succeeding grade is not available. The major part of the repeater problem,

however, is due to the inadequacy of the educational system which relies on underqualified teachers further handicapped by inadequate curriculum guidance and teaching materials.

Despite the qualitative problems, however, the primary education system can be considered to be relatively successful in reaching the target group. It appears that approximately 83% of the urban eleven-year olds are currently in school, together with 58% of the children of this age in rural areas. It seems likely that primary education coverage of the population will be nearly complete by 1980 (that is to say, reasonably adequate facilities and teachers will be available for all of the urban population of primary school age and for 85% of the rural population that is sufficiently densely populated to make school access relatively economic).

At the secondary level, progress has been even more rapid, though coverage of the relevant age group is much less complete. Enrollments in secondary schools have risen from 230,000 in 1960 to 1,340,000 in 1974. This latter figure represents approximately 44% of the youth in the 12-16 age group. Since virtually all secondary schools are in urban areas, the percentage of students from urban areas is considerably higher while that from rural areas is much lower. Some very gratifying progress has been made, especially during the last five years, on curriculum improvements for secondary education, the most important being the establishment of a system of comprehensive high schools (INEMs) in major urban centers.

At the university level, enrollments have risen from 23,000 in 1960 to 153,000 in 1973. In addition, the structure of the enrollment appears to have shifted towards the kinds of skills that are most useful in the economic development process, with a shift away from the traditional studies of law, medicine, and fine arts, into areas such as business and economics, education, natural sciences, and engineering. While the university system does provide a relatively high quality of education in many cases, most of the universities are underfinanced and poorly staffed. At the post-graduate level, universities in Colombia are still relatively underdeveloped, and much post-graduate specialization by Colombians takes place in universities in the United States and other countries.

In addition to the formal education system, there is fairly extensive education by non-formal means. To a large extent, non-formal education serves to solve problems created by the past deficiencies in the formal system, such as literacy training in rural areas. In addition, however, non-formal education provides a degree of skills training, and works to overcome the traditional passivity of the rural poor through activities that indicate that he can help himself. There are two major entities involved in non-formal education. Acción Cultural Popular (ACPO), a private church-related organization that operates radio stations, provides local community organizers and publishes a newspaper and books related to community organization and self-help. The National Apprenticeship Institute (SENA), a government agency, carries out all forms of industrial agricultural and commercial training financed by a payroll tax. Both institutions fill important gaps in the educational system.

The educational structure and trends indicated above appear to represent a relatively rational means of development of the education infrastructure of the country. Numerous studies have been carried out in the country relative to the returns to the country of different levels of education, and the general thrust of the analysis has been that the economic returns to the economy are very high at the primary level, but that they decline substantially at the secondary level and further at the university level. As a consequence, the efforts of the government to universalize primary education seem well placed and the progressively decreased coverage of the higher levels of education are appropriate. Furthermore, as discussed in Part A 1 above, universalization of primary education should have a beneficial impact on income distribution.

While the above comments indicate substantial progress in the educational system during the past few years, there still exist major difficulties in the development of the system. The major problem appears to be the complex administrative structure of the system. The Ministry of Education is nominally responsible for all educational activities in the country, though much of the national government effort is carried out through autonomous government institutes formally dependent on the Ministry but operationally rather independent. In addition, most of the actual expenditures on education occur at the state (departmental) level and, to a lesser extent, at the municipal level. Most payments to teachers at the primary and secondary level

are made by the departments, though a considerable portion of the funds flow from the national government through revenue sharing. While this structure may appear to be desirable from the viewpoint of decentralized administration so that the system can be more responsive to the needs of the people, it does not fully operate in this fashion. A principal reason for this is the centralized political structure of the government, whereby the president appoints the governors of each department, who in turn appoint the mayors of the cities. As a result, there is great unevenness in the quality of the departmental governments and of the departmental education secretariat, whose head is appointed by the governor.

In addition, the quality of financial management at the departmental level has often been inadequate in the past, and has sometimes resulted in delays in paying teachers' salaries and inadequate funding for materials. (In part, it should be noted that some of the financial difficulties of the departments can be traced to the fiscal difficulties of the national government which lagged in paying obligations to the departments and to the decentralized agencies. The improved fiscal situation of the national government should serve to improve this considerably over the next several years.)

Perhaps the most important defect of the current administrative structure is the fact that it has slowed the development of appropriate curriculum and teaching materials to the country's schools, and inhibited the flow of improved materials and techniques from one part of the country to another. This inability of the system to provide the same quality of education in different parts of the country, and to quickly make use of educational innovations, appears to constitute a long-run problem. Nevertheless, this problem is intertwined with the overall question of political structure of the country and is not susceptible to any short-range solutions. It seems likely that solutions will gradually be found to these problems, as the Colombian political structure responds, albeit slowly in many cases, to the development needs of the country.

## 2. Agriculture

In terms of aggregate output, the agricultural sector in Colombia has historically performed well. During the 1950-1972 period, total agricultural output grew at an annual average rate of 4%. Excluding coffee,

which has faced relatively stagnant markets for some time, the rate of growth was even higher, at 4.5%. Nevertheless, this rapid growth in output has not allowed the agricultural sector to play an appropriate role in the development of the country. The fastest growth within the sector has occurred in commercial agriculture and in crops (cotton, sugar) that have been grown largely for the export market. The traditional crops grown for domestic consumption have not had adequate rates of output growth, and the consequence has been substantial increases in the relative price of these commodities. This has been especially serious during the past three years, when the lagging character of crop production for the domestic market has acted to fuel an already serious internal inflationary situation. During this period, agricultural prices, which make up almost half of the consumer price index, rose about 35% relative to the rest of the index, creating upward pressure on wages in the urban-industrial sector and transferring a large amount of income from the urban sector to the rural sector. In retarding the growth of the rest of the economy, the characteristics of the development process in agriculture did not allow an adequate rate of growth of labor absorption in the sector. This slow growth of demand for labor has speeded up the growth of migration to urban centers at a rate faster than could be absorbed by the urban sector. This migration to the cities was apparently inadequate to prevent gradually increasing unemployment in the rural sector and with a worsening of the rural income distribution.

It appears that the two problems described above of rising agricultural prices and rising unemployment are primarily the result of inadequate access to productive inputs for a large portion of the rural population, and an inadequate set of policies by the government. The lack of access is probably most serious in the case of land, where the great majority of farmers have less than five hectares of land, but where large estates, including substantial amounts of underutilized land, occupy the vast majority of the country's land resources. The land scarcity in small farm areas has been exacerbated by population growth, resulting in a gradual decline in the land area available per capita. While the GOC has made efforts to reform the distribution of land, the political problems of expropriation have substantially limited the success of the program, and emphasis has recently been placed almost entirely on colonization and land reclamation as techniques for land reform. The high

costs of these activities have limited their impact to a small minority of the target group. An access problem similar to that for land applies also to agricultural credit and agricultural technology. In the latter case, the problem has been in part that agricultural research has not focused sufficiently on those labor-intensive crops that are of most interest to the small farmer. Consequently, the small farmer has tended to lack a technology that would allow him to increase his income through more intensive agriculture.

The access problem is in part one of inadequate resources. There is, for example, inadequate agricultural credit, so the smaller farmers are the ones denied access. In large part, however, the problem is also one of general policy and attitudes on the part of the GOC. Within the policy-making environment, the position has long been taken that small farmers are inefficient and that the only long-run solution to their problems is for them to move to urban areas. It has been argued that diversion of resources from medium-sized and larger farmers to small farmers would result in a slower growth of total output and, consequently, a less efficient allocation of resources. Recent research, both in Colombia and elsewhere, has tended to contradict this position and has indicated that in general there is no evidence that efficiency increases with size of farm. Furthermore, the weight of new evidence seems to indicate that a given amount of additional credit would result in greater increases in output if it were directed at small farms than it would if directed at larger farms.

In recent years, and especially since assumption of office of the current government in August, 1974, the GOC has gradually become more interested in the small farmer. The most obvious indication of this has been the development of a number of integrated rural development projects in small farmer areas. Nevertheless, this reorientation has not been fully accepted throughout the government and the government institutions responsible for assistance to the agricultural sector. The principal policy problem facing the government at present -- and one in which AID can have a useful input -- is how to effectively carry out this shift in orientation so that the system provides adequate access to the small farmer, so that the two problems of inadequate food production and gradually decreasing welfare for the small farmer can be overcome.

### 3. Health, Nutrition, and Population

The health, nutrition, and population situation in Colombia is similar to that of other countries at the same stage of development. Mortality rates are quite high, especially among infants, and the major causes of mortality and morbidity are communicable diseases, principally water-borne, and diseases related to or exacerbated by malnutrition. Birth rates are quite high and, with a gradually declining death rate over the past twenty years or thirty years, have resulted in rapid rates of population growth.

The system of this sector can be characterized as including four principal elements: access of the population to adequate preventive and curative care; population; nutrition; and environmental sanitation. There are numerous interactions among these elements which make the design of an adequate policy response to the problems of the sector quite difficult. Gastro-intestinal and diarrheal diseases that result from inadequate environmental sanitation lead to inadequate utilization of food consumed, thus contributing to nutrition problems, while inadequate nutrition leads to increased risk of serious illness from gastro-intestinal and diarrheal diseases. Nutritional problems are most serious among the last born in large poor families, with an increased tendency towards premature and underweight babies among the last born. Similarly, high birth rates and nutritional inadequacies are responsible for much of the load on the clinic-hospital system, with maternity cases responsible for fully half of all hospital admissions. It is also clear that the interactions reach beyond these four elements. Poorly nourished children learn poorly, and rapid population growth complicates the minifundia problem of the agricultural sector and compounds the problem of providing houses, jobs, and public services. Nor will it be possible to finally resolve any of these problems of health, nutrition, and population without general economic development and improved income distribution.

Given the complexity of these interactions and the state of our knowledge concerning them, it is not possible to indicate sector status, or appropriate policy responses to it, in one-dimensional terms. Rather, a simultaneous attack on the most serious problems in each sub-area. The situation in each sub-area is discussed below.

The population problem of the country is a matter of serious concern, since about 44% of the population is below 14 years of age. Nevertheless, the fertility situation in the country provides some basis of optimism concerning future trends, particularly in urban areas. Birth rates appear to have fallen sharply during the last five years, so that crude fertility is now estimated at around 36 per thousand, compared with 44 per thousand during the mid-1960s. The availability of family planning services, both in the public and private sectors, has grown rapidly, and current expectations are that the population growth rate, which was 3.2% during the late 1960s, will fall to 2.0% by 1980. The currently large differential in fertility and access to family planning services between urban and rural areas has led family planning agencies to recently place much greater emphasis on reaching women in rural areas. The GOC, which had begun to become active with public statements on the need for family planning during the last several years, has recently adopted a more cautious attitude, choosing to avoid public statements. Despite this lack of articulated support at high levels, however, the public health system has become increasingly involved in the provision of family planning services and has not interfered with the vigorous family planning service programs of the private sector.

In the area of environmental sanitation, very substantial progress has been made during the past two decades. More importantly, systems have been established for gradual extension of water and sewage coverage to the bulk of the population, especially in urban areas. All major cities have relatively efficient water and sewage systems that serve the great majority of their inhabitants, and they are continually investing resources in further extensions of the system. In smaller cities, a decentralized government agency (INSFOPAL) provides the technical expertise and financing to the municipalities. Coverage in these smaller cities is not as complete as in the large cities, but a majority of the residents do have easy access to piped water. Services for villages and rural areas are provided through another government agency (INPES) and it is here where the most serious problems remain. Although INPES is working on technical solutions to the sanitation problems of its target group (communities with 50 to 2,500 inhabitants), adequate technical packages are not yet available to enable the entity to provide low-cost water and sewage service to the dispersed population.

The public health system in Colombia is comparatively advanced for a country at Colombia's stage of development, and is based on the principle of maximum use of preventive medicine and curative medicine provided at the lowest level of treatment possible. The public health system is responsible for slightly more than 70% of the population, with the remainder divided between individual private case and employment-related group health services. The public health system consists of a regionalized system of hospitals, clinics, and health posts with further extension to rural areas through promotoras. General direction is provided by the Ministry of Health through departmental health services. The objective is to further delegate planning and supervision to the head of the regional hospital, who becomes responsible for both preventive and curative care within his region.

The nutrition status of much of the Colombian population is quite poor, since a substantial fraction of the population lack the income necessary to acquire a balanced diet. The GOC has long been involved in nutrition activities, concentrating on assistance to high-risk groups through maternal/child feeding programs and school feeding activities. As indicated above in the discussion of the National Food and Nutrition Plan, the GOC is currently developing a major new effort in this area. The Plan attempts to stimulate production and lower prices for nutritious foods through agricultural production, marketing and processing programs, and to reach those not adequately helped through production effects by direct feeding and food coupon approaches, and by nutrition education activities. The Plan appears to hold promise of improving the nutritional status of the population much more rapidly than the hitherto traditional approach of relying on growth in income to eventually solve the problem.

### C. Proposed AID Assistance Program

#### 1. Introduction

At the request of the Colombian Government, AID and the GOC have agreed to a phase-out of the bilateral aid program over the next several years. Though no final date for closing of the AID offices has been set, no new loans are to be signed after the end of the Interim Quarter (September 30, 1976). Before entering into a discussion of the general strategy to be

implemented between now and phase-out, it is useful to briefly discuss the GOC decision and its implications.

After maintaining a loan authorization level of nearly \$90 million per year during the FY 1966-73 period, the new loan level fell to \$35 million in FY 1974 and further to \$12.2 million in FY 1975. This rapid decline in the new authorizations was a response of AID to the changing development requirements of the economy that are described in previous sections. These changing conditions and levels represented the implementation of the strategy developed in the DAP submitted in December, 1973. In that document, the Mission proposed to phase out the large resource transfers that had previously characterized the AID program in Colombia, and concentrate on small projects aimed at eliminating specific bottlenecks to the continued development of the economy. A similar tendency has occurred with respect to PL 480 assistance. Title I assistance to Colombia has been terminated, and a plan for complete phase-over of the Title II program by June 30, 1978, has been negotiated.

The GOC has been fully aware of the declining levels of AID assistance and the reasons for the decline. The GOC interpreted the declining level as indicative of an eventual phase-out of the bilateral program, and chose to initiate the discussions concerning the appropriate timetable for the phase-out.

It is important to view the phase-out question in the perspective provided above. Colombia continues to have very serious problems of extreme poverty and underdevelopment in spite of the achievements of the last two decades. Given its relative state of development, however, it is clear that poorer countries should have priority on AID resources. The Colombians have taken the initiative in suggesting an orderly phase-out of AID activities at a time that seems appropriate, and that only precedes a probable AID decision of the same type by two or three years. The decision was taken in the context of an expectation that AID would continue to provide assistance that the GOC has requested through the end of the Interim Quarter. The specific activities proposed deal with problems that the GOC recognizes as serious, and that require AID involvement either as a means of overcoming those problems or laying the groundwork for future projects carried out by

other donors. Thus, the remaining activities constitute an integral part of planning for its development strategy, and as part of an orderly phase-out of AID assistance.

As a consequence, we feel that any consideration of phase-out of the program earlier than that proposed by the GOC would be inappropriate and not responsive to the development situation of the country. We feel that the position of the GOC concerning bilateral assistance is a laudable example of how the phase-out process should occur. Any effort on our part to speed up the timetable would only serve to undercut a position that we think should be fostered by AID in the more developed countries of the third world.

The discussion of strategy and specific programs given in the next sections of this paper are focused on the concrete developmental objectives of the proposed programs. While all AID assistance should be consonant with these objectives, it is nevertheless important to also view the program in terms of its relationship to overall U.S. objectives. Colombia is currently one of the few Latin American countries that maintains a democratic system of government. It also maintains a basically friendly attitude towards the U.S. and has played and continues to play a moderating role between the U.S. and the more strident Latin American governments. Similarly, Colombia has exercised a moderating influence on other member countries of the Andean Pact with regard to such questions as the extent of state intervention in the economy. While Colombia has supported the Pact decisions concerning gradual sell-downs by foreign investors, it has nevertheless attempted to maintain a private enterprise bias in the economic integration process in the face of opposition from some other countries which would prefer extensive state involvement in the industrial sector. In sum, Colombia has maintained a basically democratic orientation, a friendly attitude towards the U.S., and has attempted to develop within a context that favors the private sector. This set of attitudes has helped maintain stability of the inter-american system in the face of excesses, often alternately of the left and right, in other Latin American countries. In consequence of these considerations, the Mission recommends that AID, and the U.S. Government in general, should make a special effort during the remaining period for AID assistance to be responsive to the GOC, even though this may occasionally be inconvenient bureaucratically. The amounts of assistance required through phase-out are quite limited (\$14

million in new loan authorizations), and should be available with sufficient flexibility so that the phase-out can be carried through in a spirit of cooperation and in such a manner that it will serve to cement future bilateral relationships.

Finally, we recommend that serious attention be given to approaches to meet the requirements of the bilateral relationship during the post-AID period. Our only specific proposal in this area concerns the maintenance of the flow of Colombians to the U.S. for advanced education and training. This has been an important means of supporting a favorable disposition of Colombia towards the U.S., and we feel that possible methods for maintaining this flow beyond the phase-out should merit considerable thought during the next several years.

## 2. General Strategy

The focus of the proposed AID program in Colombia is to assist the GOC in developing programs that directly and concretely improve the welfare of the poorest 30% of the population. This poorest 30% of the population fits well within the Congressional Mandate for priority AID assistance. The members of this group in Colombia have per capita incomes of \$150 or less, have little access to health services, agricultural credit, technical assistance, and a large fraction of the group lack adequate education opportunities. About two-thirds of the group is in rural areas where the problem of access to services is most acute, so the emphasis of the program will be on rural areas.

The general approach used will be to assist the GOC in eliminating specific bottlenecks to the effective extension of social services to the target population. Thus, program emphasis will not be on transfer of financial resources to solve these problems, but rather on the activities that will allow the Colombians in the long run to solve them. In practice, this implies a concentration on activities of an experimental and institutional development nature that will enable the GOC, with possible assistance from other lenders, to continue to build on the base provided by the AID assistance.

The specific assistance proposed to implement this approach totals \$14 million -- a \$6 million nutrition loan, a \$4 million loan for small farmer

technology, and a \$4 million loan for non-formal education. In grants, we propose four new activities for authorization: small farmer technology and non-formal education grants that would support loan proposals for the same purposes; an education technology grant for rural primary education; and a training project to support specialized education outside Colombia. With the exception of a portion of the proposed training project, all of these activities meet the criteria established above and can be related directly and concretely to the AID Congressional Mandate. Each addresses a critical problem that is not likely to be solved in the near term without outside assistance. In the special case of a portion of the proposed training activity that does not meet the criteria, we view the assistance as an essential part of the phase-out process that will help maintain linkages between the U.S. and Colombia, while providing the highly trained people necessary to support the future development of the country.

The proposed program will require the continued operation of separate divisions within the Mission concerned with agriculture, education, and nutrition, population and health through the phase-out period. It is reasonable to question the need for this approach, but we feel that it is the most appropriate response to the development situation that we face. There are two reasons, one theoretical and one practical, for not attempting to reduce our focus to one or two project areas as part of the phase-out process.

The theoretical argument concerns the relation of project concentration to economic development. It is often argued that project concentration in one or two sub-sectors of the economy is desirable because it results in a synergistic impact where the individual projects mutually reinforce each other to increase total impact. Our position is that nearly the opposite is the case in Colombia and that maximum total impact is obtained through project diversification. In our view, concern with synergism is important in situations where the development process is still incipient, and it is necessary to use planning and project coordination to substitute for the market forces and public institution responsiveness that exists when the development process is further along and the process of change is institutionalized. Colombia, with a well articulated economy, where the private sector is generally responsive to profit incentives, and government institutions are functioning reasonably well in most sectors of the economy, is well along

in the process. Government institutions and market forces can thus be counted upon to make an important contribution to the success of a project without this having been specifically programmed. In this perspective, the important role for AID assistance is to break individual bottlenecks that inhibit, for one reason or another, the functioning of this articulated system. As a consequence, an attempt to diversify the kinds of projects undertaken seems appropriate so that the maximum total increase in welfare occurs, and funds are not spent in a form of "overkill" that results in their being substituted for resources that would have appeared in any event. We feel that the proposed program meets this set of standards and that each project breaks a bottleneck in the Colombian economy or provides the innovational activity that will have a catalytic effect on future programs carried out by the GOC or by other donors.

This conclusion can also be reached from another perspective. Given annual disbursements of less than \$20 million in an economy that produces \$12 billion in output annually, it is clear that the AID program can only have a marginal overall impact on the Colombian economy, even if concentrated in one sector, such as agriculture. In this situation, the desired output from AID assistance should be the elimination of individual bottlenecks to the more efficient production of the economy, improved policy as the result of better understanding of possibilities, and improved GOC programs that are the result of experimentation with new approaches.

On a less theoretical plane, the maintenance of the program in the three general areas allows the Mission to capitalize on its expertise and experience in the sector while providing a graceful transition of responsibilities to the GOC and other donors. The capability in each area was recognized in the GOC request for each of the loans that is proposed in this paper. The proposed projects cannot be considered in isolation, but rather as having as their basis the long experience AID has had in Colombian development through more than \$900 million in previous loans. The past investment has resulted in some fundamental changes in the development situation, as well as an increased understanding of the development process in Colombia, both by AID and the GOC. This understanding, together with the close contact existing between Mission staff and GOC counterparts, should provide the basis for productive involvement in the Colombian development process in each

sector during the phase-out period. The proposed projects are being tailored to these circumstances. In addition, the judicious use of non-project grant funds during the phase-out period for well programmed activities in areas where other AID involvement has ended would serve to further draw upon this expertise in a fruitful manner.

Finally, we wish to address the question of the relative emphasis in the program on agriculture. Since the majority of the target group for our assistance is rural, concentration of the program on agricultural development might be considered appropriate. One need only cite the evidence from studies in both nutrition and primary education indicating rates of return exceeding 20% per year to investment in those areas to prove that agricultural development is no panacea for the problems of the rural poor. The key to improving the level of welfare of the rural poor is the provision of access to both the tools for direct increases in production and the education, health, nutrition, and family planning opportunities made possible by modern technology.

We do not deal in the following sections, which describe the proposed program in each sector in some detail, with future AID activities in narcotics and labor union development. We assume that these projects, which are of special interest to the U. S. Government, will continue after phase-out, as will indirect support to Colombian family planning agencies.

### 3. Education Activities

The proposed education sector activities follow the general strategy given above. The large resource transfers that characterized sectoral lending are being phased out and disbursements under the last education sector loan -- with the exception of funding for participants already in the U. S. -- will be terminated at the end of Calendar Year 1975. Beyond that date, the program will concentrate on specific project activities aimed at improving individual aspects of the educational system that are of special interest to the rural poor.

As indicated in the sector discussion on education, serious qualitative problems continue to exist in the education system, especially as it affects rural areas. Rural primary education is still of poor quality in many

areas, and a large fraction of rural children have only two or three years of schooling available to them. In addition, the past neglect of the rural areas with respect to relevant education makes considerable attention to non-formal education activities necessary. We propose two activities in the education field to deal with these remaining problem areas in the Colombian education structure. A third project, aimed at providing specialized advanced training abroad, does not fit within this framework, but is discussed below as an element of the phase-out process by attempting to maintain bilateral linkages between Colombia and the U.S.

The first of the proposed new projects would provide \$452,000 in grant funds to apply education technology to rural primary schools. As noted in our description of the educational structure in Colombia, the current administrative structure of the system does not permit rapid flow of curriculum and teaching materials innovations throughout the system. While the improvement of the overall structure is a long-run problem that can only be solved by Colombian decision-makers themselves, there are possibilities for significantly improving primary education without doing this. This project would spread one improved teaching mechanism, the unitary school, through several regions of the country. The problem addressed that of the poor education received by rural children in one-teacher schools. The project will allow the spread of already developed technologies for one-teacher schools so that one teacher can teach all five elementary grades more effectively than he or she is currently teaching one or two grades. It is clear from the geographical dispersion of the Colombian population that one-teacher schools will be the major source of primary education for many rural children for the next several decades, so that improvement in the quality of such schools is an important element of programs designed to aid the AID target group.

Activities financed by the grant will include technical assistance and research studies related to curriculum and institutional materials development for one-teacher schools, seminars to discuss research findings and the application of educational technology to rural schools, training for leaders charged with the implementation of the system, and the purchase of demonstration equipment and materials to support these programs. The second new project area is non-formal education. As indicated by the Education Sector Assessment, non-formal education programs will continue to be

important in the development of human capital in Colombia for a considerable period into the future. The past and present inadequacies of the formal education system simply make this a requirement. We propose two activities in this area. First, a grant project for \$536,000 which would attempt to significantly increase the quality of non-formal education in Colombia through assisting a private non-profit organization, the Center for Non-Formal Education (CEDEN), to act as a clearing house for non-formal education in the country and as a source for technical assistance to such projects. The need for this mechanism has become clear from the wide variety of uncoordinated non-formal programs currently under way in Colombia. A survey by CEDEN indicated that there are more than four hundred such activities currently in operation.

The proposed grant would allow CEDEN to carry out studies that have been suggested by its previous work, to offer seminars to improve communication among non-formal education entities, to train its own leadership and those of other non-formal entities, and to offer technical assistance to these organizations.

The second proposed activity in the non-formal education area is a \$4 million loan to support the activities of the two major operational organizations in non-formal education, SENA and ACPO. SENA, the government apprenticeship institute, has in the past been mainly concerned with industrial and commercial training. This activity would allow it to substantially increase its activities in the rural areas, concentrating on agricultural production and small industry. These training activities would reach the rural poor that have lacked access in the past to such training and would be carried out through mobile training programs. Equipment for these programs would be financed under the loan while SENA would provide the manpower and local costs of the program. The second portion of the loan would finance equipment purchases by ACPO (Acción Cultural Popular, a private church-related organization) that would substantially increase the financial capabilities of ACPO, allowing it to extend its excellent leadership training and community development activities to more areas of the country. This project will be closely coordinated with the activities of AID in agriculture, with the agriculture projects providing the farming technologies that can be disseminated to small farmers by SENA and ACPO.

The third activity proposed in education is one which would provide advanced training abroad for Colombians. About two-thirds of the \$955,000 funding proposed for the project would finance students in specializations directly related to the GOC planning effort in the priority sectors. Over the longer term, this project would provide the specialized expertise necessary for the GOC to continue to improve the access of the poorest elements of society to the essential services in health, nutrition, education, and agriculture that would increase their welfare. Another third of the funding would provide specialized training in other fields of specialization as a means of maintaining close relations between the U.S. and Colombia. The extensive use of U.S. universities in the past for such specialization has served U.S. interests by maintaining friendly disposition of Colombian leaders, most of whom have received such training in the past, towards the U.S. While this project will provide only limited funds for this purpose, and then only through 1979, we are currently searching for mechanisms by which some amount of training of this type can be carried on further into the future.

#### 4. Agricultural Activities

The focus of agricultural sector activities will be on programs aimed at benefitting the poorest 30% of the population. While the activities will focus on individual projects aimed at improving the welfare of the target group, the basic goal of sector activities will be to convince the GOC of the feasibility of using the small farmer as an important means of solving Colombia's rural development and agricultural production needs. As indicated in the sector discussion, the GOC is in the process of undertaking a major effort at integrated rural development. As currently conceived, the GOC program does appear fully effective in achieving its objectives. The achievement of the AID goal in the sector would lead to a refocusing of the GOC orientation, making it less centrally directed and more responsive to the needs of the small farmers.

In working towards the sector objective, the Mission will be implementing three ongoing loans and four ongoing grants. In addition, a new loan and associated grant are proposed. A second new activity in non-formal education, which is discussed above as an education sector project, will be integrated into the same focus.

The ongoing loan activities include a fish research project, a rural cooperatives loan, and a pick-and-shovel access road loan. The first of these has the objective of developing appropriate technology for use in farm ponds. Fish culture provides a protein source that requires considerably more labor and less land than traditional sources of protein. As such, it appears to hold considerable promise as an additional source of income and improved nutrition for small farmers. The project will carry the development of this technology through the research and field-testing stage, and is expected to provide an economic package of technology and appropriate species useable by small farmers by the end of the project. The cooperatives loan and associated grant attempt to demonstrate that cooperatives represent a viable means of increasing incomes of small farmers through self-help and local decision-making, augmented by credit and technical assistance. The loan is the first large-scale external assistance ever made available to the movement, and is expected to serve as a catalyst for the rapid development of cooperativism. It is also the first loan in AID's history in Colombia to be made to a non-governmental entity. The third active loan, for pick-and-shovel roads, attempts to institutionalize a technology that has been used in the past on an experimental basis to increase agricultural production through improved market access while increasing small farmer incomes directly by providing employment. In addition to financing, with GOC counterpart, approximately 800 km. of access roads, the loan will provide the technical assistance and specialized studies necessary for the establishment of objective criteria for road location and construction technique.

The three ongoing grant projects include the cooperatives grant mentioned above, a soils fertility project, an agricultural marketing project, and a project in agricultural sector analysis. The soils fertility project is assisting ICA (the GOC agricultural research and extension agency) in developing appropriate technologies for small farmers, and feeds directly into the proposed small farmer technology loan that is discussed below. The marketing project, involving one long-term expert, attempts to improve the distribution system for agricultural commodities as a mechanism for increasing production and farm incomes. Finally, the sector analysis project is assisting the GOC, through both Mission and AID/W funding, to increase its expertise in overall sector planning. Aided by the results of the project so far, there has been a considerable increase in the understanding and expertise within the GOC over the past several years of the underlying processes of agricultural development.

The only new project proposed for the sector before phase-out is a combined loan/grant activity that would assist the GOC in mounting a technology development program to provide a continuing flow of new technologies and approaches to delivering critical services applicable to small farmer development programs. The project will operate at two levels. First, survey data and technology-identification work will be used to identify superior technologies that are currently in use and attempt to generalize them. At the second level, efforts will be made to reorient the research efforts of ICA towards those problems that are of greatest importance to small farmers. As better technologies are identified through either approach, the project will finance field-testing and provide experimentation into different approaches to technology delivery. Extensive use will be made of the delivery systems being assisted by two other AID loans -- rural cooperatives and non-formal education. In both cases, the project would attempt to institutionalize linkages between research and delivery of improved technology through both access to research results and feedback from the final users of the technology.

#### 5. Health, Population, and Nutrition

In the health area, AID has been involved since 1973 in a sector program aimed at increasing the coverage of the preventive health system and improving the quality while reducing cost of the curative system. This sector loan activity, initiated in response to a well developed strategy by the GOC for improving the system, began several years later than AID sector programs in the other social sectors. As a consequence, the process of developing an integrated sector approach to planning and implementation is still underway in health. Our major future activity in this area will be continued work towards the effective implementation of this sector plan through Health Sector Loan 075. We believe use of the currently authorized funding will allow us to leave behind a relatively efficient system of services that will be financially viable with the resources that are currently anticipated. In view of the planned phase-out, however, we expect to wish to reprogram some sector loan funds to support efforts by the GOC to more specifically extend health services to the rural population. This activity had originally been planned as a separate FY 1977 loan, but we feel that sufficient funds can be reprogrammed as to lay an adequate basis for a large scale project financed by one of the international lending agencies. This adjustment, combined with adequate access to technical support funds to finance needed studies, evaluations, and short-term training and consultants, will allow our major objectives in the health sector to be achieved.

Two specialized activities in the health sector being carried on primarily through AID/Washington funding should also be mentioned. A health sector analytic model is currently being developed in Colombia with assistance from the Technical Assistance Bureau. The model, which makes a pioneering attempt to develop quantitative techniques for overall health planning, should play an important role in assisting the GOC in the long run planning for the sector. Also of importance in sector development is the experimental PRIMOPS project in health delivery. This is a pilot activity in a low-income area of Cali to evaluate a low-cost delivery system emphasizing the use of paramedical personnel and health care as close to the home as possible. Both activities are of considerable importance and we support their funding to completion.

In addition to the rural sanitation programs under the sector loan, the Mission is in the process of implementing a small city sanitation project through INSEOPAL. This project assists the GOC in developing criteria for selection of priority projects and in tariff policy so that the maximum amount of self-sufficiency can be obtained for municipal water systems.

In the area of population, we plan to continue the general approach outlined in the PROP submitted in March, 1975, though with the slight modification indicated in TOAID A-70. The types of activities designed for AID in the PROP (with the exception of the Profamilia rural program) were evaluative research, training, educational equipment, and information and education -- largely non-service activities to support the service activities of other funding sources. The PROP calls for more direct bilateral involvement than might seem consistent with a phase-out program, but we feel that the proposed activities can reach their major goals before phase-out. Some of this kind of activity may be needed later to be financed either by Colombian agencies or other donors, but at a much more limited level. In the case of the Profamilia rural program, however, some particular attention must be given to assuring that adequate funding is available to carry out the program after phase-out. With respect to general family planning service activities, there will continue to be a need, particularly in the private sector, for external assistance. The human resources for the program should be sufficient, but financial resources, through the Population Council, FPIA, Pathfinder, IPPF, UNFPA, or other, will be a continuing need.

In the area of nutrition, the Mission proposes a \$6 million loan to support the Colombian Food and Nutrition Plan. The loan would provide assistance in the following areas: support for computer time and evaluation surveys for the evaluation and analysis unit of the National Planning Office established under the Plan; funding for technical assistance, training, and pilot projects when the current health sector loan expires; support (with the UNDP) for a full-line factory established to produce the Colombian developed manufactured vegetable mix, Bienestarina; and financing of a pilot multi-sector nutrition project in the Department of Cauca. The Bienestarina plant would provide sufficient capacity that the needs of public institutions and commercial sales can be met in addition to the needs of the supplementary feeding program and the food coupon program. The noteworthy aspects of this activity include the planned involvement of the private sector in a mixed corporation and a government guarantee of the purchase of the production. The Cauca pilot project will be the first test of the feasibility of the GOC nutrition program, and will provide valuable guidance for the design and implementation of a national nutrition project for 1977, to be financed in part by the World Bank.

At the same time, the Mission will continue its program to phase out the PL 480 Title II program by June, 1978. By that time, the Title II inputs will have been replaced in the supplementary feeding programs by Bienestarina. The inputs for Bienestarina production will be obtained both from locally purchased materials and from donations from other sources.

D. Phase-Out Planning

The rate of reduction in personnel and ultimate conclusion of Colombia-based activities by AID will, in the first instance, reflect the kind and volume of program activity and, secondly, the heavy administrative burden of closing a Mission which has been active for many years.

As USAID/C has shifted from sector toward project lending during the past and present fiscal years, the nature of staff activity had changed considerably. The Mission will continue to require a relatively high level of staff, U.S. and local, throughout the period ending roughly with the fourth quarter of Fiscal Year 1978. For example, local technical staff will decline by only 28% from present levels in mid-FY 1976 through the end of FY 1978. At that point, when project pipeline is significantly reduced, there comes a more rapid reduction in staff, U.S. and local (see Tables I and II). By the end of FY 1978, when the loan pipeline is expected to total \$3.7 million, slightly less than 40% of the total staff on board will be project oriented. The majority will be occupied with the numerous diverse tasks related to closing down the Mission. That fact accounts for the relatively high number of local employees who will still be required during Fiscal Year 1979. Table III illustrates that during FY 1979, more than two out of every three local personnel on board will be Executive Office locals, all directly linked to the closing down of Mission operations.

By the end of Fiscal Year 1979's first quarter, it is expected that financial operations will be transferred to the Office of the Controller, AID/W, or to the Embassy Disbursing Office, depending on the nature of the activity.

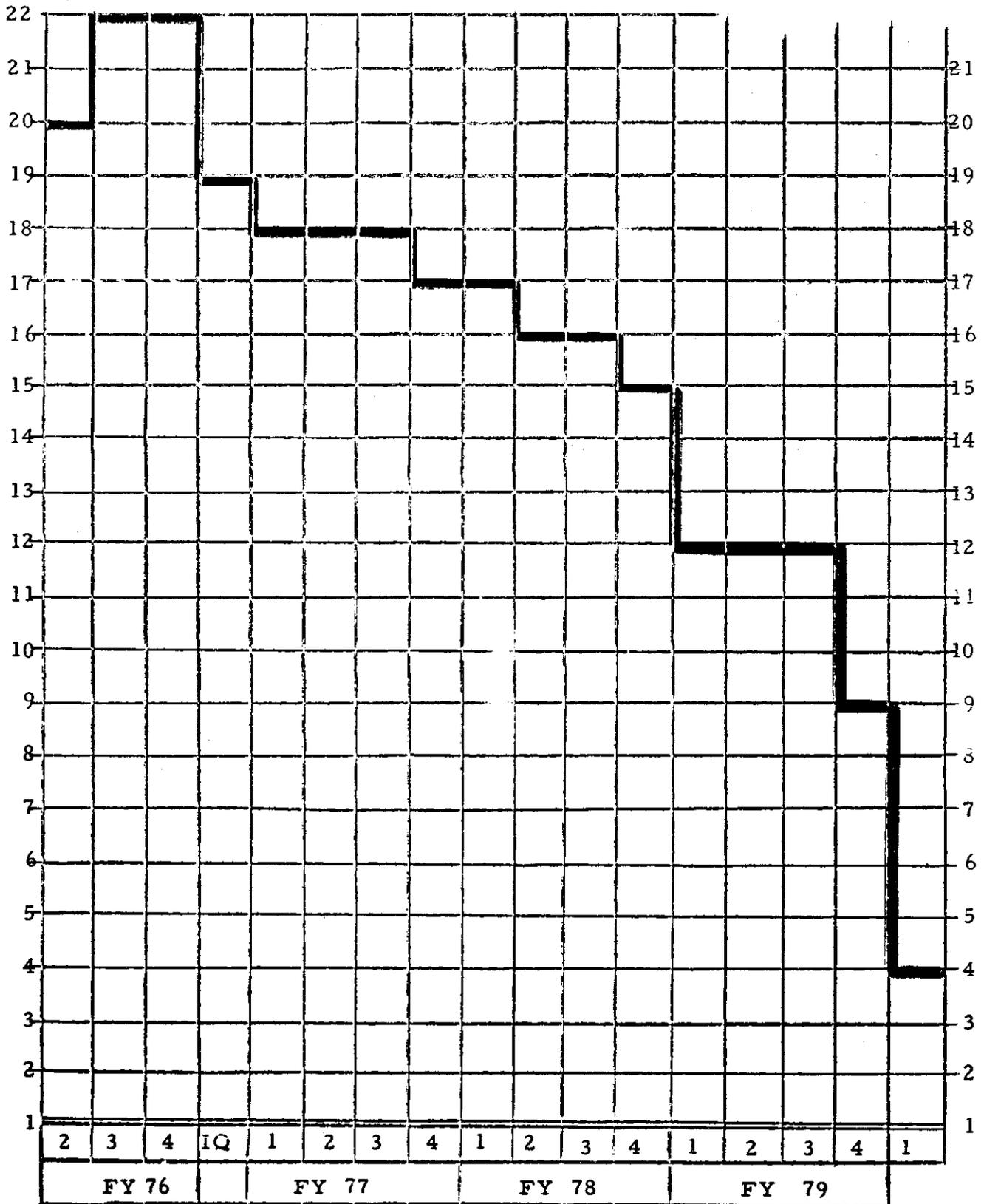
Continuing Narcotics activity will presumably be administratively managed through the Office of Narcotics Coordinator, U.S. Embassy, as will the concluding operations planned for the Participant Training grant-funded project.

No AID personnel will be required for phasing out the Mission following the end of the first-quarter of FY 1979.

U. S. DIRECT HIRE STAFF, USAID/C 1/

TABLE I

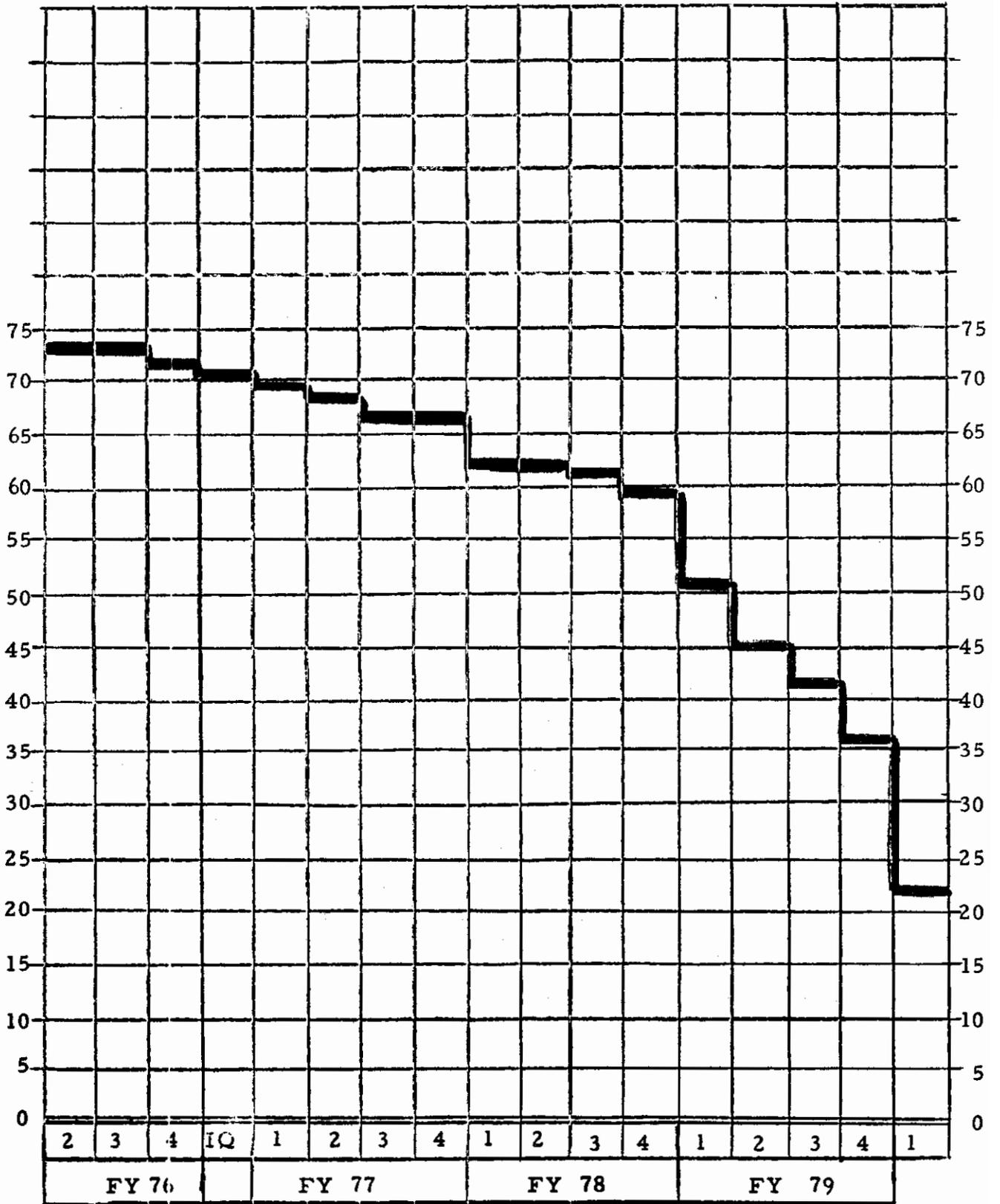
(Fiscal Years, by Quarters)



Totals 20 22 22 19 18 18 18 17 17 16 16 15 12 12 12 9 4

LOCAL STAFF, USAID/C  
(Fiscal Years, by Quarters)

TABLE II



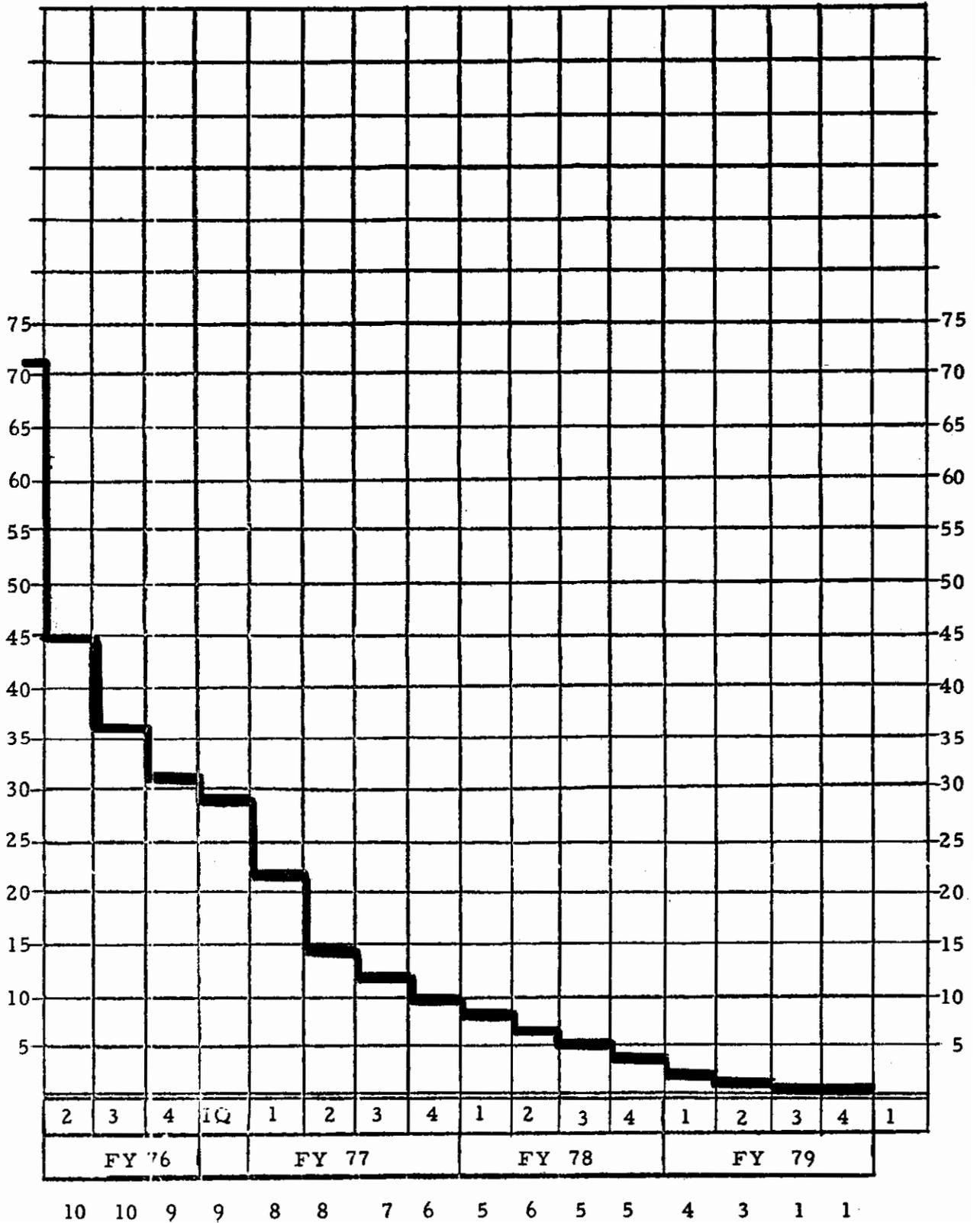
Totals - 74 74 73 71 69 68 67 67 63 63 62 59 51 45 42 36 23

Local Staff by Function, USAID/C

(Fiscal Years, by Quarters)

Director and Program	7	7	7	7	6	6	5	5	5	5	5	4	3	3	2	2	2
Technical Divisions	21	21	20	19	18	18	18	18	16	16	16	15	8	8	8	7	2
Controller Office	9	9	9	9	9	9	9	9	7	7	6	6	6	3	-	-	-
Executive Office	37	37	37	36	36	35	35	35	35	35	35	34	34	34	32	27	19
Total Locals	74	74	73	71	69	68	67	67	63	63	62	59	51	48	42	36	23
	2	3	4	IQ	1	2	3	4	1	2	3	4	1	2	3	4	1
	FY 76				FY 77				FY 78				FY 79				

**PROJECT LOAN PIPELINE DISBURSEMENT SCHEDULE** **TABLE IV**  
 (Fiscal Years, by Quarters)



PROJECTED LOAN PIPELINE

(Million dollars)

<u>LOAN</u>	<u>6/30/75</u>	<u>12/31/75</u>	<u>9/30/76</u>	<u>9/30/77</u>	<u>9/30/78</u>	<u>TDD</u>
058 Mineral Resources	0.5	0.4	0.2	--	--	
062 Cadastral	1.2	--	--	--	--	
064 Agriculture Sector IV	0.2	--	--	--	--	
065 Education Sector III	0.8	--	--	--	--	
066 Education Sector IV	1.0	0.4	--	--	--	
069 Health Sector I	3.8	--	--	--	--	
073 Education Sector V	7.1	--	--	--	--	
074 Small Industry	5.0	4.2	2.0	--	--	
075 Health Sector II	17.3	9.0	3.0	--	--	
076 Small City Sanitation	7.5	4.5	2.5	--	--	
077 Cooperatives	5.0	5.0	3.5	1.5	--	
078 Fish Reserarch	2.2	2.2	1.5	0.3	0.1	12/78
Pick & Shovel Roads	(5.0)	5.0	4.9	2.9	0.8	12/78
Small Farmer Techn.	(4.0)	4.0	3.0	2.0	0.8	6/79
Non-Formal Education	(4.0)	(4.0)	3.2	2.0	1.0	6/79
Nutrition	(6.0)	(6.0)	6.0	2.0	1.0	6/79
<b>TOTAL</b>	<b>72.6*</b>	<b>44.7**</b>	<b>28.8</b>	<b>9.7</b>	<b>3.7</b>	
Number of Active Loans	16	10	9	6	5	

\* Includes \$19 million in loans not yet authorized.

\*\* Includes \$10 Million in loans not yet authorized.

## PART II - DETAILED SECTORAL ASSESSMENTS

### A. Agriculture Sector Assessment

#### 1. Overview of the Agricultural Sector

This sector assessment should not be considered an exhaustive analytical description of the agricultural sector in Colombia. The last revision of the agricultural sector analysis in March, 1973, provides such detail. Rather, the current document should be considered an updating of that analysis that highlights certain aspects of the sector that are of greatest current interest.

##### a. The Role of the Agriculture Sector in the Economy

The agriculture sector continues to play a critical role in the Colombian economy, contributing over 25% of the nation's gross domestic product, employing nearly 40% of the country's labor force and providing two-thirds of the value of exports. The value of agricultural production in constant prices has been growing at about 5% per year over the last ten years. Coffee still leads the export sector, but the concerted efforts on the part of the GOC to reduce Colombian dependence on coffee has resulted in a substantial decline in its share of total exports. Coffee accounted for more than 90% of the value of exports during the fifties and early sixties. While increasing in absolute value, coffee has declined to 44% of the value of exports by 1974.

Table I provides some data on agricultural production by commodity groups on a volume basis from 1969 to 1974. In percentage terms, food production has barely been keeping pace with population growth. Unfortunately, production data are quite poor for many food products, but the GOC estimates that the growth rate of food available for domestic consumption has not averaged 3% per year over the last decade.

##### b. The Organization of Production

Much has been written about the dualism which exists in the Colombian agriculture sector. It is useful to analyze the sector by dividing it into two subsectors: commercial producers and small farmers.

TABLE I

Production by Commodity Groups in Metric Tons  
Colombia 1969-1974

<u>Commodity Group</u>	<u>1969</u>	<u>1970</u>	<u>1971</u>	<u>1972</u>	<u>1973</u>	<u>1974</u>
Grains	1,849.5	1,758.6	1,866.2	2,013.8	2,081.9	2,538.5
Tubers	1,781.3	2,113.1	2,024.6	2,062.0	2,253.5	2,222.5
Oils	242.6	294.7	407.9	384.3	439.5	426.7
Sugar	1,724.0	1,562.2	1,600.0	1,714.0	1,640.0	1,682.0
Other Foods	397.0	353.5	370.0	302.0	323.0	433.0
Sub-Total Food	5,994.4	6,082.1	6,268.7	6,476.1	6,737.9	7,302.7
Percentage Change	-	+1.46	+3.07	+3.31	+4.04	+8.38
Fiber	356.9	376.4	322.4	412.1	332.4	395.1
Other Non-Food	44.0	42.0	39.3	36.1	39.7	52.8
Sub-Total Non-Food	400.9	418.4	361.7	448.2	372.1	447.9
Percentage Change	-	+4.36	-13.55	+23.91	-16.98	+20.37
GRAND TOTAL	6,395.3	6,500.5	6,630.4	6,924.3	7,110.0	7,750.6
	-	+1.65	-2.00	+4.43	+2.68	+9.01

Grains group is represented by rice, barley, corn, and wheat.

Tubers group is represented by potatoes and cassava.

Oils group is represented by sesame, African palm, soybeans, and sorghum.

Sugar group is represented by cane for refined sugar and panela.

Other food group is represented by banana and cacao.

The commercial subsector has developed in Colombia primarily since World War II. It consists of medium and large (10 hectares and up) farms located in the flatland areas of the valleys and savannas and a large part of the north coast. This subsector produces most of the cotton, rice, oil crops, sugar, and livestock of Colombia. The commercial subsector is characterized by substantially more capital-intensive type of production and an underutilization of the land resources. There exists in Colombia about 317,000 farms of more than 10 hectares and these farms occupy nearly 93% of the agricultural land. For many of these individuals, farming is not their major source of income and, if better investment alternatives exist, they generally choose to underutilize their land and invest outside of the sector. The commercial subsector has been extremely dynamic and has employed an average annual growth rate of more than 8% during the past two decades.

The small farm subsector is somewhat difficult to define. According to the data from the 1970 agricultural census, there were some 1,177,000 farms in Colombia, of which 860,000 were of less than 10 hectares. Some 269,000 were less than one hectare, many of which might really be garden plots or weekend resorts rather than farms, so, excluding them, we have a figure of 591,000 small farms in the country. These small farms include a total of 2,108,000 hectares (2,235,000 hectares if farms under one hectare are included), which represents slightly more than 7% of the agricultural land covered in the census.

The importance of farms under 10 hectares in total production is far greater, however, than their share of the land would indicate. The data for 1960 (the last year for which such data is available) indicates that more than 30% of the total value of agricultural production of the country came from farms under 10 hectares. Since most livestock production (mainly cattle) occurs on large farms, the concentration of crop production is higher, and the concentration of the food crops that enter into domestic consumption higher still. Some 44% of the production of "minor" crops occurs on small farms where minor crops represent everything except cereals, coffee, sugar, and cotton. Similarly, production of individual crops, such as vegetables, cassava, beans, and plantains have more than 80% of their production concentrated on small farms.

At the same time that the small farms have been very important in the production of many basic food crops, their production performance has

been unsatisfactory. Table II summarizes the output trends by type of crop for the 1950-1972 period, and indicates that, while the output of crops generally produced by large farms has been growing very satisfactorily, that of the "traditional" crops has lagged seriously. The result of this has been that exports of the commercial crops has grown impressively as mentioned above, and the lag in production of the traditional crops has resulted in substantial increases in the prices of these commodities relative to the general price index, as indicated by the price data for 1950-1972 in Table II. Table III summarizes the experience of the past four years, based on the wholesale price index of the Bank of the Republic. While the prices of all other commodity groups remained constant relative to other prices, the fruit and vegetable groups, which includes the basic consumption items of cassava, plantains, and potatoes, rose more than 50% relative to the general index. The result of this was those products served to fuel demands of urban workers for increased wages, increased inflation, and a slowing down of the dynamism of the industrial sector, as income was transferred from the urban sector to the countryside. Since fruits and vegetables account for around 20% of total agricultural output of \$3 billion in 1974, the result of a 50% increase in the price of vegetables and fruits relative to everything else is to transfer something more than \$300 million from consumers of these products to producers. Clearly, then, the problem of slow growth in production of these commodities is of considerable significance to the economy, and it is important to find means by which the production of these commodities can be stimulated and their relative price begin to fall. As prices of these commodities fall, given the relatively high income-elasticity of demand for them by lower class consumers, the market for them should expand substantially.

It has often been assumed that there exist economies of scale to agricultural production, and that farms smaller than a given size (e. g., ten or twenty hectares) are too small to be "efficient." A growing body of empirical knowledge on the relation between farm size and efficient production, however, has tended to strongly contradict this position. Numerous studies have tended to establish the conclusion that there are constant returns to scale for a very wide range of farm size based on inputs actually used and that small farms actually use their land base more fully. The extreme example of the small farmer as the basis for rapid growth in production is Japan where average farm size in 1960 was one hectare and the value of output per hectare was roughly ten times the level existing in U. S. agriculture at the same time.

TABLE II

Annual Rates of Growth of Agricultural Output, 1950-1972  
and Changes in Relative Agricultural Prices

<u>Type of Crop</u>	<u>Annual Growth Rate</u> <u>%</u>	<u>Relative Price Change</u> <u>1950-1972<sup>1/</sup></u>
Coffee	1.7	-1.5%
Commercial	8.2	-13.4%
Traditional	1.0	+36.0%
Total Sector	4.0	-1.8%

<sup>1/</sup> Deflated by implicit GDP deflator.

Source: DANE, "Boletín Mensual de Estadística," No. 277-278.

TABLE III

Index of Relative Agricultural Prices

May, 1975

<u>Category</u>	<u>Index (1970 = 100)</u>	<u>Relative Price</u>
Meats	310.5	110.7
Milk products	263.7	94.0
Cereals	308.4	109.9
Legumes and fruits	434.2	154.8
All items	280.5	100.0

Source: "Revista del Banco de la República," May, 1975.

The existing data base for Colombia tends to support the general conclusion that "efficiency" of agricultural production is independent of farm size based on inputs actually used, and that land is more fully utilized on small farms. The most extensive study, by Berry, concludes that the most efficient farm size, defined as that having the greatest rate of return to capital and land, is 5-10 hectares. The summary data from the Berry study is shown in Table IV. In declining order of efficiency, this size is followed by 3-5 hectares, 0-3 hectares, and then by farm sizes above 10 hectares in inverse order to farm size. The implication of the Berry data is that a given amount of additional investment in small farms will yield a greater increase in agricultural production (and national income) than the same amount of investment in large farms.

c. Infrastructure and Rural Services

(1) Credit

Institutional credit from all sources reaches about 25% of Colombia's farmers. The Caja Agraria accounts for about one-half of the institutional credit to the sector. Private banks and the semi-official livestock bank together account for about 45% of the institutional credit. The private banks are forced to invest a percentage of their deposits in the agriculture sector. Both the Caja Agraria and the private banks employ commercial banking standards in extending loans and, consequently, the medium and large farmers receive the lion's share of the credit. The only major source of institutional credit for small farmers is the supervised credit program of the land reform institute (INCORA) which in recent years has accounted for about 5% of agricultural credit. There are no estimates available regarding non-institutional credit. The interest rates of institutional credit at 10 to 15% have been negative in real terms during the past several years. The heavy subsidy creates a situation of excess demand and the institutions must then ration credit rather than allowing the market forces to do so. This produces inefficient allocation of credit.

The value of agricultural credit in relation to the value of production<sup>1/</sup> has increased substantially since the early 1950s. Using an average of the five years 1950-1954, the value of credit was 9.3% of the value of production, while in 1969-1973 it was 36.8%.

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<sup>1/</sup> Value of 17 crops, excluding coffee.

TABLE IV

Indicators of Relative Efficiency of Different Farm Sizes

Colombia, 1960

<u>Farm Size</u>	<u>Coefficient of Efficiency</u>	<u>Rate of Return to Land and Capital</u>
0 - 3	1.16	20.5
3 - 5	1.30	24.1
5 - 10	1.36	24.5
10 - 50	1.16	19.0
50 - 500	0.87	13.3
> 500	0.81	12.5
TOTAL	1.01	15.8

Source: R. A. Berry, "Land Distribution, Income Distribution and the Productive Efficiency of Colombian Agriculture," Mimeo, 1971.

While credit available to agriculture has increased in absolute terms, agriculture can be considered to be underfinanced relative to industry. In 1974 the agriculture sector produced 25.9% of the gross domestic product with 22.1% of the credit, while the industrial sector produced 21.7% of the GDP with 31.9% of the credit. Mechanisms do exist within the banking system to provide considerable credit for agriculture, but there is a critical problem with respect to the distribution system within the sector. Table V presents the percentage distribution of agricultural credit during 1971-1972. It is obvious from this table that credit availability to the small farmer is a problem. It appears that this is due to imperfections in the delivery system and to the banker philosophy of the Caja Agraria, which results in average loans being relatively large.

## (2) Marketing

In recent years, GOC agencies and private firms have changed their attitude and approach toward marketing problems. The previous approach was to regulate prices, punish speculators and hoarders, eliminate middlemen through organization of farmer and consumer cooperatives or by government agency market intervention. It was believed that the major marketing problems were too many middlemen with too much bargaining power and excessive profits. Marketing research, accumulated over a number of years, has shown that view to be extremely simplistic. Equally important problems are inefficient marketing methods and ineffective coordination mechanism. The government emphasis on control and punishment of middlemen left little room for positive programs to facilitate more efficient and more competitive markets (e.g., market information, training, technical assistance, credit, etc.).

A number of fairly recent developments indicate that a new approach to marketing problems is emerging. Wholesale food market centers have been built and put into operation in Bogota and Cali. While both have had serious financial and administrative problems, it appears that they have stimulated structural and behavioral innovation, partly because of an emphasis on training of intermediaries, technical assistance, market information, and other system improvements. The Instituto de Mercadeo Agropecuario (IDEMA) has announced a policy decision to sell off its highly subsidized and inefficient retail stores in order to specialize in wholesale level price

TABLE V

Percentage Distribution of Agricultural Credit

1971 - 1972

<u>Commodity Groups</u>	<u>Percentage</u>
Coffee	8.6
Other Commercial Crops	34.8
Traditional Small Farmer Crops	23.2
Livestock	<u>33.4</u>
	<u>100.0</u>

stabilization activities through minimum farm price supports and regulatory stocks. The government has deregulated prices on feed concentrates, insecticides, and fertilizers. Proposed large integrated rural development projects include marketing components designed to improve market information flows to small farmers and to help organize and finance marketing cooperatives. The National Food and Nutrition Plan includes several recommendations for improved food distribution (see Section II B 1). The National Planning Office has a newly organized and well staffed division of marketing in its agriculture unit. And, finally, the Ministry of Agriculture Planning Office has organized and staffed a marketing group. The latter, with a USAID-contracted advisor, is carrying out a national diagnosis of marketing problems (see Section IV B 4). This evaluation of marketing problems and successes will lead to a proposed comprehensive policy statement and eventually to program and project recommendations.

(3) Technical Assistance/Extension

Since 1952, there have been continued efforts devoted to assisting Colombia in the development of research and extension institutions adapted to the social and economic requirements of rural Colombia. Substantial technical and financial assistance has been provided by the Rockefeller, Ford, and Kellogg Foundations and by AID. The Rockefeller Foundation, Michigan State University, and the University of Nebraska have been most heavily involved in the development of technical assistance services.

Through the years the organizational structure of the research and extension entity has been subject to numerous changes. A comprehensive reorganization of the agricultural sector agencies in 1969 resulted in the present structure which emphasizes research and pilot demonstration activity, but places little emphasis on extension. ICA (the Instituto Colombiano Agropecuario) is the agency responsible for research and extension, though other agencies have through the years developed their own research programs and/or extension departments to meet their specialized needs. The National Coffee Federation carries out research and extension programs on coffee culture which employ more than 500 agronomists and technicians. INCORA's staff includes approximately 1,500 professional and technical people involved in supervised credit programs or other technical services to farm families. INDERENA has 12 centers involved in research related to natural resources.

Several other public entities have technical staffs providing extension type services at one level or another. In addition to the public sector technicians many banks require borrowers to hire private technical assistance as a condition of agricultural production loans and some private associations such as livestock funds, etc., provide technical assistance to members.

(4) Research/Technology

The large number of agencies and organizations involved in some kind of agricultural research or extension effort naturally has resulted in problems of duplications and some lack of overall coordination. This has had the occasional result of orienting some agricultural research efforts toward less important or lower priority problems. ICA, however, is the agency which produces the major portion of agricultural research in Colombia. ICA's research has been of high quality in crop production, with the main weakness its inability to convey the result to the farmer.

In certain instances research appears to be too sophisticated and not oriented toward solving immediate pragmatic problems. ICA needs to consider the costs and benefits of research projects, keeping in mind that future efforts should be directed more toward problems at the farm level rather than high level research. ICA has capable personnel, and it is solely a matter of policy decision to develop projects which yield results of practical value. Field visits show that ICA's experimental plots in areas of small farms have proved to be very successful. This is an indication that the farmer is impressed with good results when experiments are carried out under actual farming conditions. Greater emphasis should be given to solving current problems such as plant disease, multiplication of seeds, fertilization levels, methods of hillside cultivation, and others that can be identified by producer associations and other institutions dealing directly with the farmer.

2. GOC Agriculture Sector Policy

a. The Organization of Sector Policymaking

The public agriculture sector in Colombia is composed of a ministry and a number of semi-autonomous decentralized agencies. These

agencies are responsible for specialized services, such as research and extension, credit, agrarian reform, natural resources, and marketing. The National Planning Department (DNP) is responsible for coordinating agricultural sector activities with those of the GOC in other sectors of the economy.

Historically, the Ministry of Agriculture has been a weak institution in Colombia, while the National Planning Department has exercised leadership in sector policy. Consequently, most agricultural policy emanates from the Office of Agrarian Affairs of DNP. Due to the relatively weak position of the Ministry, the decentralized agencies have become, over time, more and more autonomous. This lack of a strong linkage between sector policy and its implementation often creates long lags between policy decisions and their effective implementation.

b. Sector Policy

During the last 25 years of agriculture sector planning, the sector policy has emphasized increased production and stimulation of non-traditional exports. Though policy statements have given consideration to income distribution and employment generation, policy in actual practice have been based on the assumption that small producers are inefficient and that they should be pushed out of agriculture. Understandably, this attitude resulted in little positive impact from GOC on income distribution or employment generation. This large farmer bias would not have been so disappointing had the agrarian reform (aimed at income redistribution) process contributed to resolution of social problems. In fact, only a few thousand families have benefitted from land reform, and only 18,000 hectares have been expropriated during the fifteen years of operation of the land reform agency.

(1) Analysis of the Components of the National Food and Nutrition Plan

The Lopez Government has chosen the area of food and nutrition as a major concern. The National Food and Nutrition Plan is the principal planning document and policy statement of the government. The Plan has six basic components, but only three relate directly to rural development. These include food production, marketing, and subsidized food distribution. In the area of food production, the Plan proposes six

activities: research and adaptation of new crop varieties for small farmers; integrated rural development (discussed in more detail below); diversification of the coffee growing zones into food crops; expansion of credit availabilities in the existing channels; agro-industrial development; and fisheries research.

The marketing activities proposed under the Plan consist of government encouragement of producer organizations, construction of farm-to-market roads, deregulation of cargo transport, and support for the wholesale market concept. The subsidized food distribution program (discussed in more detail in the Health, Population, and Nutrition Assessment) includes direct food supplements and a food stamp program.

(2) Analysis of the Integrated Rural Development Project (DRI)

The major thrust of the National Food and Nutrition Plan in terms of both financial and human resources will be on the DRI project. This project is also intended by the GOC to have the greatest and most direct impact on increasing small farmer income and food production.

(a) Coverage and Beneficiaries

The DRI project is to be financed by the IBRD and IDB in addition to the GOC's own resources. The implementing agencies are to be ICA and Caja Agraria. Within the DRI areas, as currently defined, there are 330,000 farms of the 1-20 hectare size. The goal of DRI is to reach 25% of the farms (about 83,000 holdings) within four to five years. DRI plans to have 60% of these in the less than 10-hectare group or about 10% of the farms between one and ten hectares in the country. The remaining 40% will be farms larger than 10 hectares.

(b) Scope of the Program

The program intends to channel credit to the target group and promote the production of high protein foods. Technical assistance will be a prerequisite for receiving credit. The following is an estimated percentage breakdown of the utilization of the funds:

Agricultural Credit	54%
Technology Development	14%
Roads	11%
Health	8%
Rural Electrification	7%
Education	4%
Training	1%
Administration	<u>1%</u>
	<u>100%</u>

The levels of funding which are currently under discussion are in the neighborhood of \$240 million, half of which would be provided by the banks and the remainder by the GOC.

(c) Rural Development and Agrarian Reform

There exist a large and growing body of information which suggests that income distribution is closely correlated with land ownership patterns. The National Food and Nutrition Plan has established as its target group the lower 30% of the income distribution. Given the extremely skewed land distribution pattern which exists in Colombia (see Section I B 1), agrarian reform is a surprisingly lacking element of the National Plan.

3. Implications

a. Critical Sector Problem

As pointed out in Section I B 2, the small farmer subsector has been left behind in terms of sharing in the development process. This fact is further supported by Table VI. This table demonstrates that little emphasis has been placed on the traditional crops. The GOC estimates that only about 6% of the traditional production receives adequate technical assistance.

The critical problems then are that the small farmer subsector lacks access to such services as technical assistance, credit, inputs, and adequate markets. As pointed out elsewhere, there are some 600,000 small farmers in Colombia. This is a sizeable group to try to deal with using traditional methods.

TABLE VI

Percentage Increase in Yields per Hectare Between 1950-1954 Average  
and 1970-1974 Average for the Principal Crops in Colombia

<u>Small Farmer Crops</u>	<u>Percentage Increase</u>
Cassava	11.7
Beans	18.0
Plantain	10.8
Cane for panela	5.9
Corn	20.6
Potato	2.0
Wheat	54.7
Tobacco	30.8
 <u>Commercial Crops</u>	
Coffee	10.0
Banana	43.2
Cacao	22.6
Cotton Fiber	126.1
Seed	120.0
Rice	98.4
Cane for sugar	91.6
Sesame	31.3
Barley	40.0
Soybeans	52.4

b. Policy Gaps

The GOC apparently recognizes that the approach they have been following would not solve the problems of the sector. For this reason they have attempted to develop a "new" project for Integrated Rural Development. However, the DRI, in its approach to the problem, is not new. The DRI will require technical assistance as a prerequisite for credit. Technical assistance on a one-to-one basis with farm plans, etc., is unrealistic if one expects to affect a significant portion of the target group. The DRI is also oriented toward the larger middle-sized farm rather than the small farmer as is evidenced by the fact that 40% of the funds will go to farms larger than 10 hectares and by the total lack of any agrarian reform program. This is likely due to what appears to GOC policymakers to be a conflict of production vs. equity. This is only an apparent conflict, since the small farmer subsector has been found to be economically more efficient and also produces a large percentage of those food commodities which make up the diet of the low income segments of the population.

Agricultural institutional credit in Colombia has in the past been heavily subsidized, with real interest rates either negative or very low. These low real rates of interest have generated an excess demand for loans and force lenders to ration credit. The main criteria used to determine eligibility for loans is credit worthiness or the amount of collateral a prospective borrower can muster rather than the expected rate of return on the money. This strategy protects the lenders from risk but results in a bias in favor of large farmers. The GOC, by pursuing a policy of subsidized credit under the rationale of helping the small farmer and the urban consumer (by keeping food prices lower), has in reality achieved just the opposite by not allowing the market forces to efficiently allocate credit resources. While the Lopez Government has recently moved to raise interest rates on agricultural lending, political pressures have prevented a rise to levels that would eliminate excess demand.

The major policy gaps then are a lack of real emphasis on the small farmer subsector, a failure to look to truly new approaches to dealing with the problem, an inefficient credit policy, and a lack of an agrarian reform policy.

#### 4. Past AID Sector Activities

Since 1961, AID has provided more than \$300 million in assistance to the agricultural sector. Of this, grant assistance during that time has totalled more than US\$7.6 million. AID began sectoral lending to this area in 1968 and five sector loans totalling US\$103.8 million have been made to date. In addition, the sector has received US\$121.5 million from program loan counterpart, US\$33.8 million from PL 480 counterpart, and US\$41.6 million from project loans. These funds have assisted the GOC in carrying out on an expanded and accelerated basis its national agricultural plans, as revised and updated each year. The major area of emphasis of AID programs have been:

##### a. Agricultural Planning and Management

The entire planning and management system (i. e., the central capability of the Ministry of Agriculture) has been strengthened significantly as a result of AID assistance. As a base for sector planning, considerable attention was given to the execution of studies and the accumulation of sufficient data in key areas on which to base sector development plans. The agricultural sector analysis completed by AID in 1973, drawing significantly on Ministry work, is a testimonial to the fact that better data is available and that competent planning staff does exist in the Ministry Planning Office (OPSA).

##### b. INCORA (Land Reform and Supervised Credit)

INCORA has been the single entity which has received the greatest amount of AID assistance in recent years. A large portion of the assistance to INCORA has gone into the implementation of the supervised credit program. To date, this program has made loans to more than 50,000 small farmers and provided technical assistance and loan supervision to borrowers. In addition, 200,000 hectares of new lands have been cleared and developed for settling (including irrigation and drainage where needed), access roads have been constructed, and important infrastructural and community services have been completed. An important aspect of the INCORA program has been the surveying and identification of land parcels and the issuance (since 1961) of approximately 115,000 titles to landowners.

c. ICA (Research, Extension, and Training)

AID assistance, technical and financial, has been a key factor in the development of an active agricultural extension service with 62 agencies spread throughout the country. This assistance has been equally important in the development of a comprehensive network of 14 agricultural research centers covering all altitude and climatic zones.

A very important aspect of both the research and extension programs has been the training of personnel. In this respect, ICA and the National University, under a cooperative arrangement (with AID assistance), contacted with the University of Nebraska in 1966 to provide technical assistance and training to both institutions, provided to upgrade teaching capability in various disciplines at the three faculties of National University and at the University of Caldas. The plans also included a comprehensive participant training program under which 252 participants were trained in the U.S. at the M.S. and Ph.D. levels. A most important part of the joint agreement was the establishment of a graduate college. The plan called for the development of the capability to grant M.S. degrees in six disciplines. These have been established and by the end of 1971 degrees had been granted to 74 Colombians in-country. This has contributed materially to the ability of key Colombians in agriculture to obtain additional in-country training of a specialized nature.

d. INDERENA (Natural Resources)

The development of natural resources has been receiving AID assistance since 1963. Through a PASA agreement with the Inter-American Geodetic Survey, technical and financial assistance has been provided to assist in the compilation of studies and information needed as a base for development planning. Assistance has been provided in the areas of aerial photography, topography, soil and water, forestry, parks and wildlife, fish, and industrial activities.

To date, approximately 30% of the vast forested areas of Colombia has been aerially photographed and forest inventories have been completed in about 15% of the total area. Special effort is being made to accelerate timber concessions, expand fish production, and increase exports. Wood, fish, and wild animal product exports have increased by about 50% since 1967.

## B. Education Sector Assessment

This paper is primarily an updating of the Education Sector Analysis Paper last revised by the Mission in May, 1973. That analysis remains generally valid and provides much more detailed information concerning the education structure and dynamics than this paper. Instead, the paper provides an updating and a highlighting of those aspects of the education sector that are of most interest to the proposed AID assistance activities.

### 1. Overview of the Education System

#### a. The Colombian Educational System

The Colombian educational system is advanced in the process of transition from a predominantly classical, elitist type of education to a broader and more practical type which is more responsive to the development needs of the country. At all levels and in all the divisions--primary, secondary, higher, adult, and non-formal--this basic change is becoming more evident. Although this trend has been supported by AID and other external donors, it results primarily from Colombian initiatives and self-help efforts.

In Colombia, as in most developing countries, there has been a huge increase in enrollments in the education system over the past fifteen years, reflecting both increased availability of facilities and an increased recognition that increased education is an essential means for self-improvement and national development. The enrollment growth has truly been explosive: comparing 1960 enrollments with those in 1974 in each case, primary enrollments rose from 1.7 million to 3.8 million, secondary enrollments from 230,000 to 1.3 million, and university enrollments from 23,000 to 153,000. Though enrollments in non-formal education programs are not available, we suspect that they have had the same kind of growth as the formal system.

#### b. Administrative Structure

On the national level, the President of the Republic and

the Minister of Education establish education policies and design the programs to implement them under the general direction of the National Department of Planning and the National Economic and Social Policy Council. Different technical divisions within the Ministry of Education are responsible for direct program management.

The administration of public education at the regional level is the responsibility of each department (State) or territory's secretariat. While the secretariats receive leadership from the Ministry in terms of policies, plans, and programs, they are responsible for costs associated with teaching and supervisory personnel, plant maintenance, supplies, and other fiscal and administrative aspects of education.

In 1968, the Regional Education Funds (FERs) were created. The purpose of the FERs is to provide a regional administrative base for the expansion and maintenance of primary and secondary education and to increase local support and participation in education programs. However, the FERs' major objective is to improve the regional administrative and financial underpinning of the educational system. Contributions to the FERs are made by the national government, the departments, and municipalities, and the funds are administered under terms established by individual contracts between departmental governors and the Ministry of Education. The contracts require that annual contributions to the funds increase at least at the same rate as the overall budget growth of each entity. The FERs operate at the departmental level with assistance from a delegate appointed by the Ministry in each department. The delegate's major functions are to oversee the terms of the contract and to serve as liaison between the departmental secretariat and Ministry of Education.

Since their creation, the FERs have been responsible for two major improvements in the education sector. They now handle the payment of salaries to all primary school teachers and have made that disbursement process considerably more efficient. Secondly, the FERs have sponsored in several departments curriculum improvement projects which have had an impact on the quality of rural primary schools.

In addition to the FERs, there are several other important semi - autonomous agencies operating within the education sector and under the general auspices of the Ministry of Education:

- The Colombian School Construction Institute (ICCE) is responsible for the Ministry's school construction programs and the provision of school furniture to designated schools;

- The Colombian Pedagogical Institute (ICOLPE) is responsible for the coordination and promotion of educational research concerned with curriculum development, educational materials, and teacher training. The Institute also provides in-service training and technical assistance to primary and secondary institutions;

- The Colombian Institute for the Development of Higher Education (ICFES) is responsible for providing technical, financial, and administrative assistance to universities. ICFES also supervises and accredits university programs and serves as the planning agency within the Ministry of Education for higher education;

- The Colombian Fund for Scientific Research (COLCIENCIAS) has responsibility for promoting, coordinating, and financing programs related to the country's scientific and technical development;

- The Colombian Institute of Educational Credit and Technical Studies Abroad (ICETEX) provides grant and loan assistance, scholarship for needy outstanding secondary school students, for university study abroad and in Colombia, and offers counseling assistance for students going abroad;

- The Spanish Language Institute conducts literacy and linguistic research;

- The Colombian Institute of Culture (COLCULTURA) conducts programs to further the development of the arts and letters;

- The Colombian Institute for Youth and Sports develops programs designed to stimulate recreational activities, physical education, and sports programs among youth; and

- The Colombian Institute of Hispanic Culture organizes cultural activities and publishes certain historical works.

c. Financing the Education Sector

The principal source of Colombian educational finance is the national government budget. However, other entities, particularly the departmental governments, are also important. In addition, the private sector is a major direct source of educational finance.

The interrelationships among the national, departmental, and municipal governments, in terms of their overall financial responsibilities to the education sector are complex and frequently overlapping. Generally, the Ministry of Education provides funds directly to each department for general administrative expenses. The Ministry may also provide indirect subsidies to education on the departmental level through services offered by the decentralized agencies. For example, ICOLPE may offer a teacher-training course or the Sports Institute might equip rural primary schools with physical education materials. The Ministry also channels some of its funds to the departments through the FERs.

The departmental government is responsible for virtually all costs concerning the fiscal and administrative aspects of its public schools systems including salaries, plant maintenance, and supplies. The municipal government shares some of these responsibilities through a system of delegation. The tasks associated with school construction and improvement particularly are generally carried out at the municipal level. In addition, some municipalities offer salary bonuses to teachers for the provision of certain services and directly finance and may administer either a normal or secondary school.

In recent years the proportion of the national government budget spent on education has climbed steadily from 13% in 1970 to 20%

in 1975. In terms of public educational expenditures by the level of government originating the funds, in 1973 the national government originated 60% of the total, with decentralized agencies accounting for 15%, departments for 19%, and municipal government contributions 6%.

d. Organization of Studies

Colombia legislation provides for five years of free, universal and compulsory primary schooling. Implementation, however, falls short of this goal. Secondary level education follows a five-year curriculum, although certain specialized vocational training programs may last six years. University undergraduate degrees generally require five years for completion, with certain specializations requiring four or six years. Law, for example, is taught in a five-year program, medicine in a six-year sequence and nursing and education degrees are awarded after four years of study.

e. Public vs. Private Schools

Most private schools in Colombia, whether primary or secondary, are not the highly modernized, expensive, high-quality institutions that they are in the U.S. Rather, the development of these schools, especially during the past decade, is a response to an overall increased demand for education which has not been met by the public sector. Thus, private education has grown on the basis of availability rather than adequacy, and most private institutions offer an education alternative only slightly more expensive than public schools, and not much more advanced, if at all, in terms of instructional quality.

Over the last decade, there has been a slight rise in the proportion of children attending private primary schools and a somewhat larger decline in the proportion of children attending private secondary schools. Today, approximately 84% of primary school enrollments are in the public sector as compared to 85% in 1960. At the secondary level, the public sector accounts for 50% of enrollments as compared to 40% in 1960. Virtually all private school enrollments are for urban students or rural students attending school in urban areas since there is a negligible rural private school movement.

f. Urban vs. Rural Schools

Despite the fact that existing legislation mandates an equality between rural and urban education, a considerable difference in quality and quantity exists with the rural areas being considerably disadvantaged. One source of inequality is the legislated inferiority of rural education until 1963 when new laws abolished the differing curriculum and attendance requirements. The following data illustrate the differences that exist between rural and urban areas in terms of educational opportunity:

- While 83% of urban eleven-year olds are in school, only 59% of rural eleven-year olds are studying;

- Only 33% of rural primary schools offer the full five-year primary school curriculum in contrast with 73% of urban primary schools; and

- Despite the fact that 47% of the Colombian population resides in rural areas, 85% of the education sector's budget is spent in urban zones.

2. Rural Primary Schools

a. Enrollment Data

In 1974, 1,290,000 students were enrolled in rural primary schools. This group accounted for 33% of the total primary school enrollments and represented an average growth in primary rural enrollment of 4% over the 1970-74 period. The rural education system covered 72% of the corresponding population of seven-year olds and 58% of the eleven-year old group.

b. The Problems of Rural Schools

There are three basic problems associated with rural schools.

1) Internal inefficiency - Because of high early dropout rates and high repetition rates, there is a low efficiency in terms of costs per graduate. In 1968, for example, 27% of rural first-grade students were not promoted to the second grade, compared to 20% of urban first-graders. Academic failure is an important reason why children do not complete primary school. Other symptoms of low internal efficiency are the small proportion of rural primary schools, only 33%, offering the full five-year program and the limited availability of high quality teaching and learning materials to rural primary schools. For example, over half the country's rural teachers are untenured and not able to meet teacher certification requirements.

2) External inefficiency - The curriculum taught in the rural primary schools is full of information that has little relevance to the student's environment. Much, if not most, of what he learns in school cannot be applied to his daily life. Thus, his education is of little practicality in helping him meet his country's rural development needs.

3) Imbalance between rural and urban educational opportunity - Because most rural schools do not offer the complete primary curriculum, they serve to motivate families ambitious about their children's future to migrate to the cities. The cost of such a loss to rural areas may be incalculable as is the cost to the cities which have to absorb these generally untrained migrants.

c. Types of Rural Primary Schools

In terms of teacher distribution, there are three primary school models:

- The one-teacher school which traditionally offers only the first two or three grades of primary instruction. These represent 70% of all rural schools.

- The multigraded school which has more than one teacher, but fewer teachers than the number of instructional grades offered by the school. Such schools frequently, but not always, offer the entire

primary program and represent about 20% of all rural schools.

- The graded school which has one teacher for each instructional grade taught. Again, while such schools frequently offer the entire primary program, they do not always do so and many of them go only through the fourth grade. This model accounts for about 10% of all rural schools.

In terms of teaching methods, there are also three basic rural schools models:

- The traditional school which is characterized by blackboard copying, limited or no textbook use, choral repetition of lessons, and excessive memorization.

- The unitary school which utilizes programmed and individualized instructional material, emphasizes the importance of the student as the key factor in the learning teaching equation, and relies upon the manipulation of materials to promote inductive and deductive learning.

- The open school which applies the teaching methods of the unitary school to a multi-graded or graded setting.

#### d. History of the Unitary Schools

In 1961, UNESCO sponsored an international conference for the Ministers of Education from developed and developing nations to discuss the problems of educating youth in low population density areas. The conference participants prepared a series of recommendations concerning the creation of one-teacher schools offering the complete primary curriculum and other community, economic, and social development programs.

As a result of the Geneva Conference, Colombia began to develop a unitary school program in association with UNESCO advisors. A target area, Pamplona, Norte de Santander, was chosen and programs were established through the Higher Institute of Rural Education to

train rural teachers and school supervisors in unitary school techniques. In addition, a model unitary school was annexed to the Institute to provide a laboratory for further refinements on the system and to permit teachers and supervisors to observe first-hand how the system operates.

By 1968, the Pamplona experience had been visited by representatives from the Ministry of Education, the regional teacher training centers, the departmental secretariats, and the University of Antioquia. As a result of those visits, a number of important developments occurred.

- The national government decreed in 1967 that one-teacher schools offering the complete primary program be established in remote rural areas with flexible curricula, scheduling and administration. To implement this legislation, departmental secretariats were required to offer in-service training to rural teachers in unitary school techniques.

- With the 1967 legislation serving as an impetus, between 1967 and 1968, several hundred unitary school seminars were held throughout the country, frequently conducted by the regional teacher training centers of ICOLPE. These centers over the last five years have reached more than 5,000 teachers and supervisors.

- With the widespread training in unitary school techniques being programmed, the need for a text on the subject becomes pronounced, and in 1968 the first Colombian unitary school manual was published. The manual's widespread distribution, combined with the extensive training programs, gave the movement broadened support and paved the way for additional regional projects.

- The University of Antioquia was contracted by the departmental secretariat of education to design an experimental unitary school program as part of Antioquia's plan to implement the 1967 decree. Eventually, the two entities working together produced programmed student workbooks for use in one-teacher schools as well as in-service and pre-service training programs for personnel using these materials which are now employed in 46 one-teacher schools in Antioquia.

- In 1968, another department, Risaralda, began a unitary school project through its secretariat and the regional training center. The materials developed by the project group are not programmed but do provide enough flexibility to individualize learning and make student participation active. These materials are now being used in 54 schools.

In the decade of the seventies, the unitary school movement has grown. The rural development centers program, functioning since 1972, is using the unitary school strategy to involve communities in educational and social development projects. Today these schools are called "community unitary schools." Similar projects relating the unitary schools to the rural community are currently being started in the departments of Caldas and Quindío and in the rural area of Bogotá's Special District. The community unitary school movement continues to evolve to meet local expectations and to incorporate new ideas as well as those that have been successfully implemented elsewhere.

e. The Rural Development Centers Program

This program, which has been functioning since 1972, addresses the problems of the imbalance between rural and urban educational opportunity and low internal and external efficiency within the rural portion of the education sector. The basic objectives of the program are to improve the quality of rural schools, to increase the availability of education to rural youth, to reduce the high wastage rate in rural schools, and to increase the number and types of resources available to rural education.

Some of the activities of the program include a building program to provide enough classroom space for approximately 344,000 additional children, new curriculum designs to increase the relevance of education to rural needs, and the establishment of new promotion patterns to reduce desertion and repetition rates. In combination with the expanded facilities, the new policies should provide a base for the continued education of a great number of students who do not now attend school beyond the second grade.

A basic component of the plan is the development of the "school center", a central unit designed to serve as the rural education center for three and four grade feeder schools.

The school center will offer fourth and fifth grade instruction, and in gradual fashion add four additional grades to allow pupils to complete a nine-year basic education program. Another basic concept of the program is that the centers will integrate education, health and welfare services, and provide for community participation in carrying out the functions of agencies from the education, agricultural, and health sector.

Long-range conditions for this project include the eventual development of a "network" of three-grade "neighborhood" feeder schools, directing students toward the larger "school center."

Another related project provides for the construction, furnishing, and equipping of 13 lower-cycle secondary schools (grade 6-9) in rural areas with a total enrollment of 7,000 students in one shift and 1,700 boarding places. These schools will have a special orientation towards agricultural activities and will provide a basis for further vocational training.

The Colombian Government intends to establish 39 rural development centers. At the present time, 11 of them are functioning: three in Narriño, two in Santander, and one each in Cauca, Valle, Tolima, Cesar, Vaupés, and Caquetá. Two of these (San Vicente de Chucurí (Santander) and La Victoria (Valle)) have been designated "intensive operations projects" and are particularly active in working with affiliated one-teacher schools.

The San Vicente de Chucurí project, for example, consists of five satellite schools and 110 feeder schools, the majority of which have only one teacher. Plans are currently underway to open an audio-visual materials production center on the site to service all affiliated schools. In addition, in-service training courses for personnel in affiliated schools has been offered on unitary school management. Eventually, the materials production center will produce regionally based materials and individualized instruction cards for use in the feeder schools with only one teacher.

The central programming office of the rural development center program has prepared a plan at the national level designed to enable each of the 11 centers to function in a training and extension capacity regarding the unitary school methodology. This plan was initiated in March, 1975, with the presentation of a seminar on unitary school methods for teachers associated with the San Vicente Center. In May, 1975, another seminar on unitary schools was held for the directors and assistant directors of all the rural development centers in the country. A series of "take-off" and follow-up seminars planned for 1975 should reach all teachers of one-teacher schools that are part of the network of the 11 centers. Close to 600 schools will be involved.

3. Curriculum, Materials, and Teacher Training for Quality Education Programs.

a. Curriculum Development and Materials

In various regions, the Ministry of Education is strengthening existing institutions to carry out research on curriculum innovation. The current policy calls for stimulating experimentation and investigation concerning the cultural and socio-economic characteristics of given areas in order to design curricula that accurately reflect children's needs and backgrounds. Both primary and secondary education are receiving attention.

The University of Valle, for example, operates a Center for Educational Resources (CREE) which has the two-fold purpose of improving the teaching practices of university professors and training a group of them to teach modern techniques to secondary education teachers. The Center also carries out research related to curriculum development.

In recent years, several other universities have implemented activities designed for secondary teachers and concerned with curriculum and the upgrading of teaching skills. Particularly outstanding is the work that has been done by the Javeriana, National Pedagogical, and the Universities of Antioquia and Valle. Similar activities have been carried out by the Institute for Science whose main objective is to familiarize secondary level biology, physics, mathematics, and chemistry teachers with modern approaches to these disciplines.

ICOLPE has taken the lead in Colombia, in conjunction with the National Pedagogical University, in developing new curricula for primary education. Together, these two institutions operate the "El Rocío" experimental school whose purpose is to try out new curriculum ideas. A team of social science researchers is doing a socio-economic analysis of the surrounding community to determine what factors intervene in a child's learning. Once these factors have been identified, the researchers plan to design a curriculum model that will diminish the influence of those variables that interfere with learning while increasing the influence of those that positively affect the child's school performance.

ICOLPE has also helped to finance a project conducted in Sucre by a research team from the University of Antioquia. The project evaluated the effects of a flexible school schedule and branch programming of curriculum materials on school performance and parent and student attitudes towards education. A similar study, conducted in rural Antioquia, was also supported by ICOLPE.

Perhaps the most important work today concerned with rural primary curriculum development is being conducted at the University of Antioquia. In addition to the two projects just mentioned, the University, with the Secretariat of Education, supports a team of programmers who design materials using linear programming for one-teacher rural schools. These materials are tried out, evaluated, refined, and reevaluated before they are published in their final form. Approximately 70% of the units projected for the complete primary program are available, and efforts are continuing to design the remaining workbooks and teachers' guides.

The Ministry of Education is also conducting research through ICOLPE or other contracted institutions to assess the impact of automatic promotion policies. The National Pedagogic University has participated in these and related studies including one concerned with the "a year-round school."

Other current research includes a study to determine cost information and logistics related to the distribution of free textbooks in rural areas and the impact of alternative methods of providing aid (i. e. ,

money vs. materials) to rural primary students. These ICOLPE studies, together with a textbook evaluation program and teaching materials development, should help make primary education much more relevant to the needs of the rural population.

Results from recent inputs made by the Ministry of Education through the German Mission demonstrate that the systematic training of teachers in modern teaching methods, combined with the distribution of teachers' guides and printed instructional materials for students, can be effective in changing instructional techniques from those that emphasize role-memorization to those that stress the conceptualization of ideas.

This is a growing realization in Colombia that textbooks and instructional materials are an important aspect of high quality education. Colombian publishers are efficient and innovative and already some of the finest learning aids in Latin America are in use in the country's private and public schools. However, the cost of books and the fact that it is the responsibility of students not the government to purchase them, has effectively limited extensive textbook use to institutions serving relatively affluent population.

One possibility for enlarging the proportion of students using textbooks is to encourage the distribution of the inexpensive literacy materials and easy readers published by the non-profit Popular Cultural Action Program (ACPO). ACPO has the capacity to produce materials for the rural primary schools. Another alternative is the Colombian Institute of Culture's program for the distribution of small libraries to all rural primary schools. Time will tell if the plan becomes a reality. Recently passed legislation, the Law of the Book, stresses the importance of textbooks and requires that 10% of the education sector's budget be spent on textbook distribution. While this law establishes a defined role for printed materials in schools, the responsible entities have been slow to implement its programs.

Colombia also has an extensive educational television program that is used in many of the country's urban primary schools.

Although the program does not entirely compensate for the lack of school libraries and instructional materials, it does contribute to an overall enrichment of instruction.

b. Teacher Training

Teacher training takes place in several different types of institutions directed at different levels of the system. Primary teachers are supposed to be trained in normal schools and secondary teachers are theoretically trained in pedagogical universities or in the education faculties of general universities.

Although the Ministry of Education requires a diploma from a recognized normal school to teach in the primary grades, estimates are that only about 50% of such teachers hold a diploma. Most of those are located in urban areas. Normal schools are post-primary institutions that offer the basic secondary school curriculum for the first four years and then give two years of specialized teacher training.

In addition to providing pre-service professional training, normal schools also provide in-service training for teachers without degrees, upgrading courses for degreed personnel and intensive courses for secondary school graduates who wish to become certified teachers.

The regional teacher training centers also play an important role in in-service training. In 1963, the regional centers were organized to cover the entire country with each center establishing branch offices in the departments under its jurisdiction. The purpose of these annexes was to create a national teacher training network. Currently, the regional centers are administered by ICOLPE and have as their objectives: (1) the organization and implementation of in-service teacher training programs; (2) coordination and supervision of regional teacher training and materials development program; (3) the development of prototype teaching aids; (4) the development, production, and distribution of teaching materials in cooperation with the German Mission; and (5) the organization of library services, audio-visual facilities, and materials production centers for in-service teachers.

Between 1970 and 1974, the regional centers sponsored 1,230 seminars attended by 56,704 participants. Some of the most important and best attended seminars concerned unitary school teaching (4,693 participants), the use of the German Mission teachers' guides (6,803 participants), manual arts (5,345 participants), and educational supervision (7,407 participants).

4. The Relationship of Secondary and Higher Education to Primary Education.

a. Influence of the INEM

To meet at least partially the increased demand for public secondary education which has resulted from an expansion of primary education and also to make secondary education more relevant to the country's needs, Colombia committed itself in 1967 to the development of 19 comprehensive diversified secondary schools in departmental capitals. These schools (the INEMs) were designed to place students from a variety of social and economic background in a single, large institution offering a choice of curricula preparatory to either further studies at the university or polytechnical level or employment upon graduation.

The program has four basic objectives:

- To better prepare the individual for life within his community;
- To provide the individual with job-oriented training;
- To prepare the individual for higher education if desired; and
- To stimulate qualitative and quantitative changes in the country's education.

The INEM philosophy is being extended to other parts of the system in a number of ways.

- It is planned that each INEM will assist in the development of a "service center," located near its own facilities in a neighboring traditional or vocational school. The center would use INEM methods

and perhaps equipment and teachers, and would function as a "diversified level" cycle for four-year traditional secondary schools in the immediate area. The INEM staff would provide advisory assistance to the traditional schools to prepare their students for participation in the satellite program. This program has not yet been implemented.

- Each INEM will be linked to teacher preparation programs both for the secondary (principally INEMS and satellites) and primary levels. Strong relationships will be developed with a nearby university's faculty of education and with normal schools so that the INEM serves as a model for imparting its philosophy. This strategy will also have the effect of both preparing students at the basic education level for eventual entrance into the INEM.

- Current programs for improvement within the rural primary sector use the innovations pioneered by the INEMs. Specifically, they emphasize learning rather than teaching, inductive and deductive reasoning rather than rote memorization, and the importance of curricular appropriateness to the child's environment.

- The rural development centers program employs many of the INEM diversified cycle ideas in the development of a curriculum that leads to practical and dignified employment in the rural setting.

- The current policy of the Ministry of Education is to integrate the present five-year cycle with what is currently the initial four-year basic cycle of the INEM program. The term "basic education" is applied to this new nine-year cycle and is considered to be the minimum schooling required to produce a graduate able to successfully enter and compete in the labor market successfully. This basic education concept is currently being offered by the rural development centers.

b. Education and Science Faculties

The faculties of education within the various universities are responsible for improving the quality of professors in their own and other faculties, conducting studies on university academic

administration, and assuming the integration of education programs and services with the rest of the university.

Within the education system, they have a major responsibility for training personnel and providing leadership for all levels and areas. They also conduct education research, particularly in the priority areas of educational administration and planning, supervision, curriculum, and guidance. The university education faculties also provide advice and evaluation for public and private institutions and carry out extension work.

Some of their projects, such as the University of Antioquia's unitary school materials development program and its research in flexible scheduling, have been described earlier. Mention has also been made previously of the University of Valle's Center for Educational Resources and the Pedagogical University's work in "year-round schools" and curriculum experimentation. Three other university projects have interesting tie-ins with other levels of the education sector.

Javeriana University has experimented in the "university without walls" concept as a means to train in-service teachers in rural areas using correspondence and the mass media. A similar project has been undertaken by the University of Antioquia on an experimental basis. Before this program is institutionalized, the University's staff will carefully evaluate it. Javeriana University has also taken a leadership role in organizing educational technology seminars in cooperation with Florida State University and USAID/C. These seminars should have a direct impact in primary school curriculum development and planning. A joint Javeriana/Georgetown University project on educational evaluation may also be a beneficial influence on the primary school programs.

## 5. Non-Formal Education

### a. Overview

Colombia has a wide variety of non-formal education programs. Some of these are sponsored directly by the Ministry of Education, while others are located within other Ministries or in the private sector. Although many of these programs have as their major objective the teaching of adult literacy and numeracy skills, others deal

with increasing the peasant's community participation, improving farm and home management skills, acquiring vocational and craft skills and, for the more affluent, there are programs in music, the arts, and languages.

Located within the Ministry of Education are two divisions that are related to non-formal programs. The Division of Adult Education provides programs that cover literacy training, basic general education, secondary general education, and higher education.

The goal of the literacy training offered through the Ministry is not only to teach reading and writing, but also to prepare the student to enter the next higher level of education. Thus, the program also includes instruction in the standard school subjects.

The Ministry also sponsors popular culture centers which teach the five-year primary program over these years and also give professional training in handicrafts and trades. A similar program is organized in handicrafts schools sponsored by the Ministry. These differ from the popular culture centers in that the training is more accelerated and the course of study is only two years.

Home schools are also similar except that the course of study is one year, they are open only to women, and include home economics training in addition to the other courses. There are now approximately 400 centers in the country under Ministry sponsorship that provide literacy training and basic education.

The Radio and Television Division of the Ministry of Education coordinates, organizes, supervises, and evaluates educational radio and television programs which involve literacy training, pre-school, elementary, secondary, and higher education. Systematic evaluations are presently being conducted in order to recommend improvement on teaching quality.

b. CEDEN

The Center for the Development of Non-Formal Education (CEDEN) was established in 1973 by the Foundation for Permanent Education in Colombia (FEPEC). The organization operates in five interrelated areas with an interdisciplinary staff:

- Investigation and evaluation of non-formal education projects;
- Technical assistance to non-formal education projects;
- Human resource development for non-formal education program leadership;
- Informational exchange regarding non-formal education; and
- Innovation related to non-formal education projects.

Recent publications of the Center include "Non-Formal Education: Theoretical Aspects and Bibliography" and "Non-Formal Education in Colombia: Towards an Analysis of the Reality."

c. ACPO

The Popular Cultural Action Program (ACPO) is a private institution operating under the aegis of the Catholic Church whose main goal is to give basic education to the masses, especially the adult rural population, through radio school. The organization has been functioning since 1947 and today reaches close to 200,000 students through its broadcasts and community leadership training centers. ACPO's publishing efforts include a weekly newspaper, "El Campesino," primers in five subject areas, and a small and inexpensive collection of "peasant library" books. ACPO also sponsors extension programs in agriculture and mobile units for its work.

ACPO radio schools are cultural centers usually operating in a rural home. They require a radio receiver to carry the teacher's voice, an assistant serving as an intermediary between the radio teacher and the students, and some simple materials. Assistants are young adults selected from rural communities and trained to act as facilitators.

ACPO's curriculum consists largely of literacy training and arithmetic along with information on home improvement, agricultural and marketing techniques, Colombian culture, religion, community development, health and family planning. The program focuses on helping the student to carry out general improvement projects, both with his family and with other community members.

ACPO is currently participating in the rural development centers program. The organization's role is to help to train workers, provide community development and literacy materials, and in other ways backstop the development of the centers. This participation is ACPO's first explicit cooperation with the government in a major program.

d. SENA

The National Apprenticeship Service (SENA, a semi-autonomous organization within the Ministry of Labor, is an institution of great importance in the field of education, although not connected directly to the formal system. Basically, SENA helps provide technical training for the country's work force.

SENA offers industrial training after determining labor needs for different economic and geographic sectors. It then trains personnel where there is a shortage of skilled labor. SENA programs include all types of training which allow a person to achieve the skills and knowledge necessary to perform a given economic activity in the agricultural, industrial, or commercial sectors. SENA courses train semi-skilled, skilled, and highly specialized workers in programs that are either full-time or part-time and of either long or short duration. Classes may be given either at work sites or at SENA training centers.

The SENA basic five-year plan calls for the training of almost two million Colombians in 116 activities both in rural and urban areas, as well as the provision of technical consulting services to 3,000 companies. An investment of over US\$120 million has been made to carry out these activities. To upgrade the efficiency of its training, it is relying on an increased use of programmed instruction.

e. Popular Training Program (Capacitación Popular)

Capacitación Popular, an innovative government-sponsored literacy and general training program for the poor, is part of the overall attempt to incorporate the marginal majority into the modernization process. Its programs include urban and rural community action, job training, health services, and formal education. It is part of the National Institute of Radio and Television, a semi-autonomous agency of the Ministry of Communications.

The basic concept of Capacitación Popular is to provide a substitute for adult education teachers, through the use of volunteer tele-teachers who serve as intermediaries between pupils and the television programs which are received in viewing centers set up in various community institutions.

At present, only the basic education courses are being broadcast. They consist of televised programs and workbooks in functional literacy, arithmetic, health, civics, and religion. Total course time is 150 hours.

f. Other Non-Formal Programs

1) The Colombian Literacy Organization (OCCA) is a private institution providing literacy training and basic education for adults. OCCA also conducts research in its field, especially regarding the use of functional vocabulary. It also develops teaching materials and methods and provides technical assistance to other institutions engaged in literacy training. It is financed through grants, technical assistance contracts, and its own resources.

2) The Ministry of Government, through its Division of Community Development and in cooperation with rural interest groups, has organized a basic training movement which stresses the role of rural teachers in community development, university community development volunteers, and income-generating cooperative ideas. Generally, programs are designed to improve educational and employment opportunities in rural areas.

3) The Ministry of Agriculture, through such groups as the Colombian Agricultural Institute (ICA), the Land Reform Institute (INCORA), the Rural Credit Bureau, and the Federation of Coffee Growers, provides many extension services related to agricultural production and home management.

### C. Health Sector Assessment

Colombia has a history of continuing efforts to improve the health of its population. As a result, Colombia now ranks above many other Latin American countries in terms of various health indices, although it is still far below the developed countries of the world.

The health sector system consists of four principal elements:

1) preventive and curative health care, carried out for the majority of the population through the public health system of health posts, clinics, and hospitals; 2) population; 3) nutrition; and 4) environmental sanitation. Examples of the numerous interactions among these four elements follow. Waterborne diseases that result from inadequate environmental sanitation lead to inadequate utilization of food consumed, thus contributing to nutritional problems. Studies showing that nutritional problems are most serious among the last born in large poor families and that those babies are more likely to be premature and underweight indicate that wider acceptance of family planning would have a beneficial nutritional impact. Similarly, high birth rates and nutritional inadequacies are responsible for much of the load on the clinic hospital system; maternity cases are responsible for fully half of all hospital admissions. Better nutrition and environmental sanitation would result in reductions in morbidity and mortality from a number of the major causes of death in Colombia, including the two most important - gastroenteritis and pneumonia.

The basic goal of an efficient health system should be to use preventive techniques (nutrition, family planning, environmental sanitation, and inoculation campaigns) to minimize the need for curative health care. Where curative health care is required, it should be provided at the lowest level possible, so that sophisticated physical facilities and highly-trained medical personnel can be reserved for serious health problems. An efficient system should also use cost-effectiveness criteria to ensure that the most important health problems are solved by least-cost interventions producing the greatest increase in the aggregate health status of the population.

This ideal system cannot be implemented fully in any country because of the primitive state of our knowledge concerning the trade-offs in terms

of results between different health interventions. For example, it is not possible accurately to compare the increase in health status resulting from the extension of a water and sewage system to a community with that resulting from an intensive nutrition education and feeding campaign. Nevertheless, considerable work is being done on these trade-offs in Colombia, both through an analytical health sector model and through experimental programs. Hopefully, within a few years these research efforts will begin to provide meaningful data concerning the impact of different interventions thereby increasing the effectiveness of the health system. The sections below briefly describe the current situation and trends in the major aspects of the health sector in the country.

## 1. Nutrition

### a. General Situation

Poor nutrition is one of the most serious health problems in Colombia and an important cause of infant mortality. While malnutrition itself ranks seventh in importance as a cause of death, it also contributes significantly to deaths from gastroenteritis and pneumonia which are the two most important causes of death. Data showing the high rate of incidence of low birth weights, anemia among pregnant women and children, and malnutrition among 1-4 year-olds are all indications that inadequate nutrition is an essential part of the health problem of the country.

The principal problem in poor nutrition seems to be low incomes. A recent IIT (Instituto de Investigaciones Tecnológicas) study indicated that 41% of urban families from five large cities can not afford a low cost minimum diet. There is also strong evidence that low income families do not spend their available income very well. For example, a market study showed that low income Bogota families spent 20% of their food budget on meat rather than other lower cost sources of protein. Moreover, data from the Candelaria and the Tulane/University of Valle PRIMOPS projects suggest that in poor families, intrafamily food distribution tends to be unfair to mothers and very young children. Diseases prevalent among the poor because of their lack of adequate sanitation and water facilities also reduce their utilization of nutrients. Rapid population growth, which averaged 3.5% in the 60's but which is now down to about 2.7%, has also contributed

to the nutrition problem. Studies have shown a higher incidence of underweight and premature babies from mothers who did not space their children. Also, the more serious cases of malnourishment are found among the last born in large poor families. Thus, it is clear that these factors -- income distribution, lack of nutritional knowledge, food supply problems, unequal family food distribution, lack of sanitation, and high population growth rates -- interact supergistically to cause the serious nutrition deficiencies which afflict many Colombians.

b. GOC Nutrition Policy

Drawing upon the experience of the National Nutrition Institute established in 1963, 20 years of experience with supplementary feeding, using U. S. P. L. 480 and WFP resources and technical assistance from UNICEF, the GOC established a National Committee on Food and Nutrition in 1972. At the Lima Food Conference in 1973 the National Committee presented a document called "The Basis for a Food and Nutrition Policy in Colombia." Later, the First National Seminar of Food and Nutrition, held in Cali in December of 1973, spotlighted the multisectoral nature of the problem. Delegates coming to the Seminar from 200 international public and private agencies drafted an approach to the problem.

The Lopez Administration completed its National Food and Nutrition Plan document in March of 1975 and restructured the National Food and Nutrition Council in June of 1975. During this period, working groups were set up to draft programs to realize aspects of the policy concerned with rural development, marketing, food processing, fish development, agro-industry, nutrition education, health projects -- particularly rural sanitation -- legal matters, and evaluation and analysis. Some individual projects have already received external funding, such as from the AID Fisheries Research Loan. Additional assistance has been tentatively scheduled from AID, IDB, and World Bank for other parts of the program.

The strategy which has evolved has elements of increased food production (see Agricultural Sector Assessment) as well as increased distribution to the poor of nutritious food. Elements of the distribution program include: stimulating demand for new foods through nutrition education campaigns; strengthening laws concerning the nutritional value of foods; providing the 10% most needy portion of the

population (particularly mothers and pre-school children) with subsidized foods through direct distribution or use of food coupons; developing the capacity to provide vegetable mixes (e. g. Bienestarina) to priority groups; and instituting an evaluation and analysis mechanism to conduct regional nutritional surveillance as well as evaluation of the Plan's various sub-projects.

To manage the program, the GOC is establishing a group of sub-committees under the Nutrition Council on which the various implementing agencies will be represented. It is also contemplating placing certain funds budgeted for each agency under the control of the Nutrition Council to assure centralized management of all projects. The evaluation unit will report directly and frequently to the Council.

The Department of Cauca has been selected as a pilot area. In 1976, it will initiate a multi-sector attack on the nutrition problem with activities including nutrition education and mass communications, food stamps and supplementary feeding, use of processed food in conjunction with food inputs from the local area, a food marketing project for small stores serving the poor, and involvement of a local university to assist in training, provision of technical assistance, and evaluation. Once the system is tested in this department, the GOC intends to expand it in other areas using its own funds and international loan sources.

c. The AID Role

Current Mission plans call for the phase-out of the Title II program and support for the development of the GOC National Food and Nutrition Plan. A project has been designed to replace Title II inputs into the supplementary feeding program by June, 1978, with a GOC-manufactured vegetable mix, Bienestarina. Utilizing AID technical assistance in food processing and raw materials donations matched by locally purchased materials, the GOC has begun manufacturing the mix in three former animal feed plants which should have sufficient production for the current program needs by 1977.

AID is also providing technical assistance, training, and some funds for pilot projects and studies through Health Sector Loan 075. This support is available through the end of 1976.

AID's main new activity is a nutrition loan which will provide assistance to the GOC nutrition strategy in the following areas: support for computer time and evaluation surveys to DNP's Evaluation and Analysis Unit under the Food and Nutrition Council; additional funds for TA, training, and pilot projects when the current health sector loan expires; support to complement that of the UNDP for development of a full-line (including raw materials preparation) Bienestarina plant to be constructed in Cali to replace existing small plants. This will provide additional capacity so that the needs of public institutions and commercial sales can be met as well as those of supplementary feeding program and the needs of the food coupon program. Noteworthy aspects of this activity are the planned involvement of private industry in a mixed corporation and a government guarantee to purchase up to 40% of production in order to assure widespread availability of the product to the poor and protect the program's commercial viability. Assistance to various aspects of the Cauca pilot project is also planned. The GOC views this effort as a forerunner to a large World Bank loan and is interested in having the experience in 1976 to draw on.

## 2. Population

### a. General Situation

This section provides a summary of the existing situation and trends in fertility and family planning. A more detailed description of the situation and AID's response is contained in the PROP submitted to AID/Washington on March 24, 1975.

Fertility rates, though imprecisely measured, are clearly falling in Colombia, particularly in the urban areas. The average fertility rate has dropped from about 44 per thousand during the late 1960s to be 36-38 per thousand today. Total population growth is currently 2.7% to 2.9% per year, compared with 3.2% or more during the late 1960s. The urban fertility rate is much lower (perhaps 28 per thousand) than the rural fertility rate (about 48 per thousand) and is falling. The decline in overall fertility appears to be associated with

many factors including urbanization, increased employment and educational opportunity, and expanded health services. Population programs have helped to accelerate the decline through substantially increased availability of contraceptives and widespread information and education campaigns. Public opinion seems generally favorable to family planning programs, but some controversy still exists. The present government, especially at higher levels, has been taking a "wait and see" attitude toward family planning.

b. AID Strategy and Programs

Strategy: The basic Mission strategy is to promote the rapid development of the family planning delivery system, attempting to maintain a balance among the various aspects of family planning.

Emphasis is given to the following major areas: continuing and expanding clinical services; expanding community-based non-clinical programs; training, particularly in-country; information and education campaigns, with use of both mass media and person-to-person contacts; evaluative and other research, particularly to measure the efficiency, quality, and impact of various population programs and to develop information for policy decisions by population program planners and socio-economic development planners.

This strategy attempts to maintain a blend of private and public actions in order to take fullest advantage of the particular interests and capacity of all sectors.

By 1978, the funding from the current grant project should produce the expansion of service programs from the 1974 level of 978 hospitals and clinics and 661 non-clinical outlets providing 198,000 new acceptors and a total of 434,000 program users to 1,150 hospitals and clinics and 5,000 non-clinical service outlets providing 607,000 new acceptors per year with a total of 1,319,000 program users. This level of activity should bring the population growth rate to 2% by the end of the decade. The grant-financed training programs will have:

(1) provided adequate numbers of personnel to implement all population

programs; (2) encouraged extension, welfare and community service institutions to include demographic factors in their programs; and (3) prepared Colombian university and faculty members and population trainers to continue training programs in the future. Research and evaluation activities financed by the grant will have developed data for policy-making and evaluation of the impact of family planning programs.

### 3. Environmental Sanitation

Colombian activities in this area have a long history of fairly steady progress. In 1960, only about 40% of the urban population had direct access to water and only 27% to adequate sewage facilities; by 1974, these percentages had risen to 75% and 50%, respectively. Though problems of definition and data exist in rural areas, it is clear that major improvements have also been made there in water and sewage. At the present time, the major problem in urban water and sewage lies in obtaining adequate Colombian resources to extend systems, the development of which has been largely dependent upon external financing from the World Bank and Inter-American Development Bank. AID has an active loan to provide resources for construction of systems in smaller cities, assist in the institutionalization of objective criteria for construction in those areas, and help make the necessary institutional changes which will provide greater internal generation of funds for future construction.

The health sector loan will be reprogrammed to provide additional funds to finance experimental activity in rural water and sewage systems. The resulting technologies will later be extended through funding from other external sources.

### 4. The Health Care System

#### a. General Situation

Accurate current data on life expectancy for Colombia are not available, but fragmentary data suggest that the current expectancy is between 60 and 63 years, up from 57 years in 1960. Infant mortality

-- at a rate of about 65 per thousand -- is still a major problem and accounts for about half of all deaths. Though the infant mortality figure is nearly four times the rate for the U. S. , it nonetheless represents a considerable improvement over the rate about 100 existing in 1960. The majority of mortality and morbidity among infants and children results from infectious and preventible diseases, with gastroenteritis and diarrhea as the undisputed leaders. While infectious and preventible diseases are conspicuously present among the ten leading causes of death in Colombia, the presence on the list of chronic diseases such as ischemic heart disease, cerebrovascular disease, and cancer is an indication of the transitional status of Colombian health.

The public health system recognizes responsibility for approximately 75% of the population, 15% of the balance being covered by social security type and 10% by private systems. Public officials note, however, that approximately 30% of the people for whom they are responsible are not within a reasonable distance of the existing physical facilities. Health personnel tend to be concentrated in the cities. Urban areas also have a considerably higher hospital bed/population ratio. The availability of potable water and sewage disposal facilities is twice as high in the intermediate cities as it is in the rural areas where only about 30% of the people are covered.

b. AID Strategy

In the early 1970s, the GOC conducted an extensive analysis of the health sector and developed a plan based on policies emphasizing maternal/child health, preventive medicine, and the development of a regionalized health delivery system with appropriate delegation of functions among medical personnel to improve access to health services for all people.

At GOC request, AID developed two health sector loans totalling US\$36.7 million which have assisted programs in support of these policies in such a way as also to increase investment by Colombia in health and encourage coordinated sectoral planning and program development. AID assistance has been provided centrally through the

National Planning Department and Ministry of Health. Major efforts have been made to: (1) expand and strengthen the maternal /child health program; (2) improve human resource development programs; (3) strengthen campaigns to encourage vaccinations and fight malaria and aedes aegypti; (4) assist in implementation of the regionalized delivery system; (5) improve rural sanitation; and (6) improve general planning, administration, and information gathering mechanisms of the health sector.

In addition to the loans, AID has assisted Colombia in two major health research efforts. As a result of the GOC's desire to improve its ability to identify lowest-cost, highest-impact health investments, AID and the Colombian National Planning Office began to develop an analytical health model in 1973. This effort has required the conceptualization and development of the model itself which is now nearly complete. Extensive survey data collection will take place in 1976. AID is providing about US\$450,000 in technical and other support to the surveys while DNP is providing about US\$350,000 in personnel, equipment, and supplies. Successful conclusion of the surveys will assist in optimizing future health investments.

A second research project in health delivery is also under way. Developing out of earlier efforts by the University of Valle in Cali to improve health services delivery, this project involves the coordinated efforts of Colombian national, departmental, and municipal governments, the University of Valle, Tulane University, and AID to plan, implement and carefully evaluate an innovative service delivery system in a poor urban area of about 100,000. Presently, five service systems combining health posts, auxiliary nurses, and promotoras are being established, each to serve approximately 20,000 persons. Continuous and periodic monitoring and evaluating are being undertaken to determine the effectiveness and efficiency of the entire system and its discrete parts. These systems are expected in great part to be replicable throughout Colombia as well as generalizable to other developing countries.

Approximately three years after initiating these efforts, it is now apparent that while some have been very successful, only minimal progress has been made in others. On the positive side, the

GOC has made a significant increase in investment in health; central health planning and administration are markedly improved; and information gathering is substantially better. The National Hospital Fund has been reorganized for greater efficiency, communicable disease campaigns and surveillance have improved, and increased attention has been given to MCH programs with increased emphasis on family planning. Less apparent and somewhat disappointing progress has been made in other areas of AID and GOC concern such as implementation of the regionalized system (admittedly a difficult task), extension of services -- particularly MCH and sanitation -- to the rural poor to close the "access gap." The latter is particularly disappointing since success in that area would do the most to improve health status of the poorest part of the population.

The change of government in August of 1974 has been followed by signs that more effective attention will be given to improving the health of the poor. Extensive efforts to sharpen the health policies of the government, including a well-organized health planning "encuentro" attended by some 200 - 300 health professionals, have resulted in statements from the Ministry of Health such as:

"The first priority defined within the new mechanism (the National System of Health) is attention to the rural population with the objective of presenting health services to the rural farmers who do not receive them and who represent approximately 20% of the Colombian population."

In addition, early but vigorous efforts are being made in the Ministry of Health to develop a country-wide plan to provide health access to all the people. The Ministry program, being developed as the National System of Health, visualizes three levels of complexity of service delivery. These levels are: MAC-1 or the local level which itself is divided into three parts depending on whether the basic services are provided by promoters, nurse auxiliaries, or physicians; MAC-2 or the regional level which will offer more sophisticated services; and MAC-3 or the university level where the most specialized services will be available. It now appears that the Mission's interest in providing health services to the poor, especially rural poor, is paralleled by similar intentions in the GOC.

Unfortunately, previous experience indicates that implementation frequently does not follow intent. There are many pragmatic factors which intervene. Moreover it is not difficult to understand and sometimes even sympathize with the present strong public pressures for action at the MAC-2 and MAC-3 levels to give greater relative emphasis to curative medicine and provide more sophisticated hospital care. For this reason, AID should provide support at the primary level (MAC-1) following the termination of the second health loan at the end of 1976. AID should assist the GOC to maintain the focus on the primary level and help to work through the difficult problems which are hindering extension of health programs to the poor population. Given AID's extensive knowledge of the Colombian health sector, its personnel and policies, as well as its concerned in-country staff, its chances for success in this area are good. In view of previous GOC contributions to the health sector, it is reasonable to expect that sufficient counterpart will be readily available to match AID's assistance.