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Country Development Strategy Statement

FY 1986

MADAGASCAR

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MADAGASCAR

FY 86 COUNTRY DEVELOPMENT STRATEGY STATEMENT

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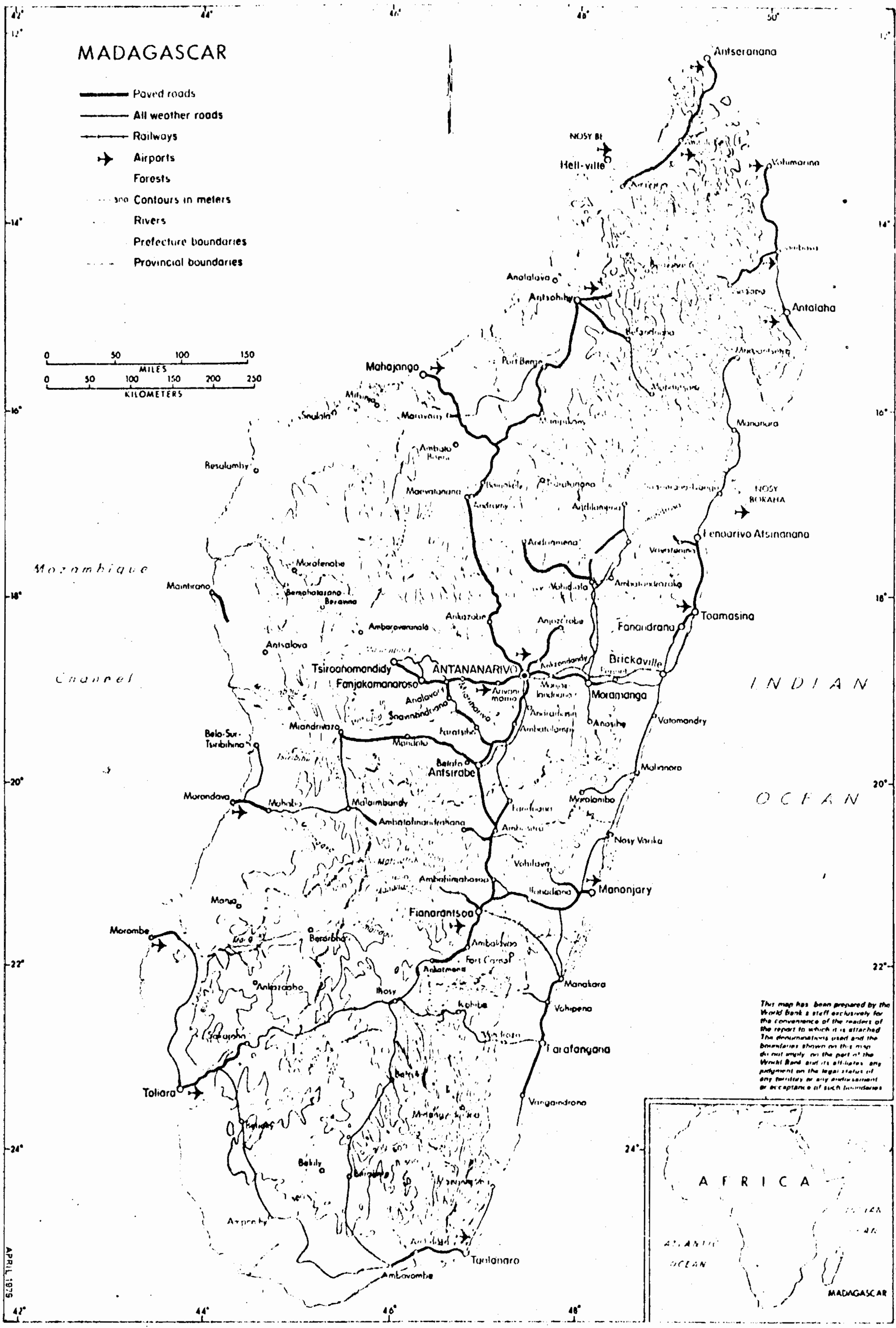
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APRIL 1975
IBRD 14160

LIST OF ACRONYMS:

AMDP	African Manpower Development Program
ARDN	Agriculture, Rural Development and Nutrition
AfDF	African Development Fund
BADEA	Arab Bank for Economic Development in Africa
CCCE	Caisse Centrale de Cooperation Economique (French)
CDSS	Country Development Strategy Statement
CENAM	Centre National de l'Artisanat Malgache
CETA	Economic and Technical Center for Artisans
CIP	Commodity Import Program
CRS	Catholic Relief Services
DA	Development Assistance
DGP	Directorate General of Planning
EEC	European Economic Community
EHR	Education and Human Resources
EIA	Energy Initiatives for Africa
ESF	Economic Support Fund
FAC	Funds for Aid and Cooperation (French)
FAO	Food and Agriculture Organization
FC	Foreign currency
FED	European Development Fund
FOFIFA	National Center for Applied Research on Rural Development
FX	Foreign exchange
GDP	Gross Domestic Product
GDRM	Government of the Democratic Republic of Madagascar
IBRD	International Bank for Reconstruction and Development (World Bank)
IDA	International Development Association (World Bank affiliate)
IFAD	International Fund for Agricultural Development
ILO	International Labor Organization
IMF	International Monetary Fund
IMaTeP	Institut Malgache des Techniques de Planification
INPF	National Institute of Promotion Training
IRRI	International Rice Research Institute
ISNAR	International Service for National Agricultural Research
LC	Local currency
LWR	Lutheran World Relief
MCH	Maternal-child health
MGF	Malagasy francs
MIC	Ministry of Industry and Commerce
MIEM	Ministry of Industry, Energy and Mines
MPARA	Ministry of Agricultural Production and Agrarian Reform
MTP	Ministry of Public Works
MTRT	Ministry of Transport, Supplies and Tourism
ODA	Official development assistance
OECD	Organization for Economic Cooperation and Development
PD & S	Project Development and Support
PIP	Public Investment Program
PVO	Private voluntary organization
SAWS	Seventh Day Adventist World Services
SDP	Special Development Projects
SDR's	Special Drawing Rights (IMF credits)
SERDI	Society for Study and Implementation of Industrial Development
SME's	Small- and medium-scale industries
UNDP	United Nations Development Program
UNIDO	United Nations Industrial Development Organization

Introduction.

The reviewers of this document should be reminded that this is a "preliminary" CDSS. Since it is the first attempt at a CDSS for Madagascar, since there is no resident AID professional staff in-country, and since the total REDSO and AID/W staff time available to work on it is limited due to other responsibilities, it will take at least another year to complete the analysis needed for a full CDSS. That being said, it is also true that a great deal more has been learned about the country and its economic problems in the short time available than was expected, thanks to the energetic and intellectual support provided by the Embassy staff, to the warm and friendly help received from the numerous government officials visited, and to the analytical reports already completed by the GDRM, the World Bank, the IMF, and the UN agencies.

Quite aside from their friendly and patient support, the interest shown by the Directorate General of Planning (DGP) in the whole CDSS process has been particularly gratifying. Not only did officials of the "Plan" accompany the AID teams on many of their visits to the various ministries and indicate their interest and support for the analysis itself, they displayed a keen interest in discussing the team's findings before departure. An outline of the strategy proposed in Part III of this document was translated into French and discussed with the Director General of Planning and his staff, as the preliminary conclusions and recommendations of the CDSS team, before it departed in December 1983. It seemed to receive their warm, if unofficial and also preliminary, endorsement as a perceptive and useful beginning. The team was urged by the DGP to provide them with a French translation not only of the CDSS itself, upon approval by AID/Washington, but of all the background analytical documents as well, if at all possible. REDSO and the Embassy intend to do so, as this is an excellent way to begin a substantive dialogue about the most productive role an AID assistance program can play in Madagascar and about the effects certain GDRM policies are likely to have on the ultimate success of the development effort.

Part of the CDSS team to visited Madagascar in July and August to look at the overall macroeconomic situation and several important economic sectors. This effort resulted in a recommendation that REDSO should consider three sub-sectors as priority candidates for assistance, based on their importance to the economy, their potential contribution to the solutions of both the current crisis and long-term structural problems, and the likely impact of feasable AID programs: rural transport, artisanal and small and medium-scale industry, and agriculture. In addition, it became clear that the most urgent need was for balance of payments support, in the form of a commodity import program, to finance the importation of critical spare parts, equipment, and other inputs for agricultural and industrial use. In December 1983 another part of the CDSS team spent two more weeks in Madagascar looking more carefully at those three subsectors and at the general social and institutional environment in which a possible AID program would operate. It reversed the sector priorities based on a more thorough assessment of the same criteria, suggested the interim strategy proposed in this preliminary CDSS, and identified areas for which additional information is needed for a full CDSS. This team was also tasked with taking a preliminary look at possibilities for a pre-CDSS FY 85 DA project. The team prepared five analytical background reports, from which this CDSS is derived. These reports are available either from REDSO/ESA in Nairobi or from the Indian Ocean States Desk in AFR/EA, AID/W.*

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* Callison, C. Stuart, Colette Claude, and Anthony S. Pryor, "Madagascar Economic Analysis," REDSO/ESA, Nairobi, November 1983 (DRAFT); Brown, Don, and David Atwood, "Madagascar: Proposed Agriculture Sector Strategy," REDSO/ESA, Nairobi, December 1983; Haggblade, Steve, "Recommendations on Potential USAID Assistance to Madagascar's Industrial Sector," REDSO/ESA, Nairobi, December 14, 1983; Smith, John, "Transport Sector for CDSS Inclusion," REDSO/ESA, Nairobi, December 1983; and Greeley, Edward, "Social Analysis Materials for the Madagascar 1986 CDSS, and Project Identification," REDSO/ESA, Nairobi, December 15, 1983.

While the team found much of the information needed for the CDSS background analyses, as summarized in this document, there were several areas in which the data was unavailable, insufficient, unreliable or out of date. Not all of these data gaps can be filled before the next CDSS document is due, but REDSO will work with the GDRM to improve our joint knowledge of the more important ones wherever possible. The four priority areas where more reliable data is desireable are:

1) The conditions and problems of the poor, including the position of women. Without data on income distribution and household expenditures and other data on the quality of life of the different groups within Madagascar, one can do little more than speculate as to the causes of poverty and which groups need more help. There seems to be no comprehensive data on actual and real wage rates for different occupations, nor has anyone looked at labor productivity, employment and unemployment trends by sector. The national income accounts have been sadly neglected, and much more socio-economic data, including better information on fertility, health and nutrition status, is needed for demographic analysis and planning. This is the most serious information gap in this preliminary CDSS, and indeed such information is vital for the GDRM to conduct meaningful analysis and planning toward an equitable and sustainable pattern of development.

2) General agricultural statistics. While a few important data series on agricultural crops are still collected, particularly on some of the export crops, there are major gaps in the agricultural data base. Little is known about the actual farming systems currently utilized throughout the country, so it is difficult to plan for their improvement. MPARA is just beginning to monitor farmgate prices for various farm products. The lack of information on land resources and potential throughout the country and on land use and ownership patterns not only makes agricultural planning hazardous but also makes it

difficult to establish priorities for road rehabilitation and maintenance in the transport sector in support of agriculture.

3) Artisanal, small and medium-scale industry. While the SERDI study of the recent nationwide industrial survey should provide much valuable information on this sector, there will remain important gaps in our knowledge about the staff capability and development needs of key institutions promoting industry.

4) Energy and natural resources. Related to the data needs in the agricultural sector, what is needed here initially is a general energy/natural resource pre-assessment, focussing on the quality and adequacy of existing data, the institutional capability for analysis, planning and implementation, and on other important topics such as forestry and mini-hydroelectric potential.

In Madagascar we are not dealing with organizations in formative states, but rather with venerable institutions that need to be restored. Unlike other African countries, where experience with the modern world goes back only a couple of generations, Madagascar has had cultural and technological contact with the West since the beginning of the nineteenth century. By 1845 Malagasy artisans were satisfying Madagascar's internal market for cannon, munitions, brick, porcelain, candles, lime, cement, ink dyes, lightning conductors and rum. By the last quarter of the nineteenth century, Malagasy architects were designing major urban structures.

Compulsory primary education in Madagascar dates back to 1880, two years before it was decreed in France. By 1895 there were 164,000 Malagasy in local schools. The missions responsible for the educational programs stressed theological and medical education as well as technical training. As of 1870, there were 25 ordained Malagasy ministers with university-level training. There were as well 2,000 native pastors with primary education. By 1875 Madagascar set up its own medical service and the first Malagasy doctors graduated from the University of Edinburgh in 1880.

Malagasy are born into centuries-old rice-growing and cattle-raising cultures--they do not need to be taught how. With the technologies and organization introduced by colonial conquest, Madagascar became a major exporter of beef, rice, exotic spices and minerals. Madagascar has the oldest agricultural research program in the African area and had a model extension service both in forestry and agriculture.

By 1905 Madagascar boasted an all-weather road from Antananarivo to Tamatave (Toamasina). Telegraph lines and postal services connected major cities. Port facilities were constructed at Tamatave and Majunga. Under further colonial expansion, a network of telephone, electric power and all-weather roads laced the countryside from Antananarivo north, south, east and west. Madagascar developed the world's largest canal system. Trade in agricultural products and minerals exited at ports of Tamatave, Majunga, Diego-Suarez, and Tulear.

In considering a development assistance strategy for Madagascar we should be aware 1) that we are dealing with an old and proud culture, 2) that its institutions once superintended a vigorous, productive economy, 3) that its basic material infrastructure was once extensive and adequate for productive needs, and 4) that much of this productive inheritance has been dissipated just during the last decade. The priority development task facing us in Madagascar is rehabilitation and restoration of existing institutions and infrastructure, not the creation of new ones.

The history of AID assistance to Madagascar is unclear, since few available records date back before our presence was terminated in the mid-1970's. After the still-existing bilateral assistance agreement was signed in 1961, AID economic assistance totalled $19.1 or $20.2 million between 1962 and 1978, with $9.1 of that Food-for-Peace grants, $5.0 million in AID grants (purpose unknown) and $5.0 or $6.1 million (records differ) in AID loans. There was a

$3.0 million two-step loan for railroad improvement and bridge construction obligated in 1966 and 70, and another $3.1 million two-step loan for telecommunications obligated in 1967 and 73. Prior to 1961, under the Mutual Security Act, Madagascar received $0.5 million in U.S. grant assistance. We shall attempt to learn more about previous AID assistance in coming months.

I. Executive Summary

Current economic and financial difficulties reflect longstanding weaknesses in the economy that have militated against more rapid and viable development. However, the sharp deterioration which began in 1979 and resulted in the serious pressures and disequilibria in external payments, public finance and domestic price movements are also to a considerable extent the consequences of the new economic initiatives begun in 1978, which relied heavily on external sources of financing to achieve a large expansion of public sector investment. Now the country is simultaneously implementing short-term corrective and stabilization measures and trying to deal with the more difficult underlying constraints to sustained long-term economic development.

The immediate short-term requirement to reduce the balance of payments deficit and the growth of foreign debt-service requirements has resulted in sharp reductions in imported equipment, spare parts and other inputs urgently needed in both the industrial and agricultural sectors. This has become a major factor in the decline of industrial production and the stagnation of the agricultural sector. The most urgent immediate need is for balance of payments support on concessional terms to finance priority production inputs.

The domestic transport situation is disastrous. The restrictions on imports have severely reduced the availability of spare parts for the existing vehicle fleet and the replacement of unserviceable vehicles with new ones. This sector is also suffering from years of inadequate attention to the maintenance of the rail and road networks. While parts and new vehicles can be provided in the short term with balance of payments support, the reconstruction and rehabilitation of the roads and railways will require much time and expense. Meanwhile, the transportation constraint will continue to inhibit the movement of export commodities, the distribution of critical production inputs, and the availability of consumer goods in rural areas, all of which discourage production for the market.

There is also an urgent need for greater technical, analytical, management, and planning expertise at all levels, both in and out of government. This is an underlying weakness inherited at independence with the exodus of foreign technical and managerial personnel. While the GDRM has made considerable progress in replacing critical skills with trained Malagasy personnel, the satisfactory resolution of this constraint is a long-term proposition.

On the positive side, the GDRM appears to have made genuine progress in providing social services on a more equitable basis. Its concerns with primary health care, including maternal and child health and proper nutrition, the provision of safe water, greater accessibility to schooling for children of both sexes, and functional literacy for adults have been translated into several ambitious programs over the past 6 to 8 years. Unfortunately, the high level of government expenditure to expand social services, while addressing important social, political and economic goals, combined with large investments (often not so well chosen) in the industrial and agricultural sectors to create the present fiscal and financial crisis.

The administrative organization of the GDRM remains complex. There are many areas of overlapping and shared responsibilities, particularly in the areas of transportation and other public works. There are also major difficulties involved in the GDRM attempt to decentralize certain economic planning and support activities to local government levels, and the operation of many government-owned or controlled enterprises and marketing systems has led to a great deal of inefficiency and reduced producer incentives.

However, the administrative reforms undertaken during the last two years have resulted in steady improvements and have increasingly placed more technically qualified individuals into decision-making positions. Many observers believe these administrative changes, together with the policy reforms discussed in the next paragraph, indicate a seriousness of purpose within the GDRM and a pragmatic willingness to try alternative means to achieve its goals that augur well for eventual success.

Many of the GDRM's policy reforms with respect to pricing, removal of subsidies on rice and agricultural inputs, the liberalization of marketing control, foreign exchange allocations, etc., are relatively recent and, therefore, their ultimate impact is difficult to evaluate, although the indications are that they have not yet gone far enough to achieve the desired economic effects. Nevertheless, there is a distinct impression that these measures are based on a realization that economic liberalization, combined with better selection and stricter control over investment and recurrent expenditures, offers a better environment for economic recovery. Government spokesmen seem to be making an effort, in their public pronouncements, to incorporate the pragmatic approach as a basic philosophical component of their socialist--ie., people-centered--revolution. One significant result of this pragmatism is the present de-emphasis of large state-operated farms and industrial parastatals, in view of their generally dismal record, in favor of support for small and medium-scale enterprises, artisanal production, and small-scale farming operations, along with an open recognition of the latter's importance in producing for both domestic and export markets.

Economic recovery in Madagascar depends on increasing production and exporting more of it. Production, in turn, depends on: 1) the availability of needed inputs, which are presently limited by import restrictions and by weaknesses in the domestic marketing system, including the transportation system; 2) production incentives, which involve both domestic price policies and the availability of incentive producer goods in local markets and which, for exports, are further limited by the steady revaluation upwards, in real terms, of the Malagasy franc and by an export marketing system that passes on to the producer a smaller proportion of the actual export price than necessary; and 3) market outlets for the goods produced, which in turn depend a) on the internal efficiency of the domestic marketing system, including transportation, presently hampered by government controls and direct involvement and, in the case of transportation, by years of maintenance neglect, and b) on demand for final consumption, for use as industrial inputs in domestic markets and for exports in the world market.

The prospects for recovery have been much improved by the various reforms and corrective measures already undertaken by the GDRM. Madagascar has adequate resources to sustain a much higher level of economic production than has heretofore been achieved, and additional economic reforms need to be designed to lay a better basis for long-run economic progress, as well as to stimulate short-term recovery.*

The economic and financial assistance provided by foreign donors can be used to encourage the design and implementation of further reforms, especially if it is directed at improving the internal GDRM capacity to analyze the probable effects of various policy alternatives, by providing appropriate technical assistance and training toward this end. A significant improvement in the transportation system will require technical assistance, foreign exchange for vital imports, and large amounts of capital for investment in transport rehabilitation and reconstruction and in equipment, all of which can be provided by foreign donors. Finally, many of the production inputs that

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* Needed reforms are discussed in the macroeconomic and sector sections below.

are currently in such short supply can be imported with the foreign exchange provided by foreign donors as balance of payments support, until the current account deficit can be satisfactorily reduced.

In sum, if the current pragmatic approach toward the choice of alternative solutions to Madagascar's economic problems can be sustained, the prospects not only for recovery, but also for more rapid economic development in the future are good; and there would appear to be much that the international donor community, including AID, can do to encourage that approach.

Indeed, the current reform, stabilization and rehabilitation program has been designed with considerable technical assistance from the World Bank and the IMF. This intensive and, within the GDRM, controversial effort culminated in the first Madagascar Consultative Group Meeting, sponsored by the World Bank in Paris in April 1983, at which the GDRM formally presented its program and asked for assistance from the international donor community. The U.S. representatives attending that meeting indicated their approval of the GDRM program and promised to consider an increased level of U.S. assistance in support of it, as a part of a larger, collective effort under World Bank and IMF guidance (an IMF Standby Agreement is currently under negotiation). This CDSS summarizes a careful review of the economic situation in Madagascar, its causes, and the adequacy of the reforms announced so far. Its recommendations for increased AID involvement are based on the conclusion that, while the reform program has not yet gone far enough to assure the successful achievement of the GDRM's recovery and longer-run development goals, it does represent an important step in that direction and deserves our strong support, especially if that support can result in an enhanced GDRM capability to analyze its economic problems, design, and undertake further reform measures.

There are also important political reasons for increased American support. Not only is it in our interests to support the GDRM's current efforts to encourage private enterprise and allow freer market forces to operate, after the failure of their socialist experiment, but the U.S. would also like to encourage a more genuinely neutralist political stance on the part of the GDRM, if not actually pro-West, in view of Madagascar's strategic location in the Indian Ocean and its potential influence in Southern Africa affairs.

This CDSS proposes to focus a new AID program in Madagascar on the agricultural sector for a number of reasons:

--Privately-owned, smallholder farms predominate.

--The major groups of poor are engaged in agriculture.

--There is good potential for improved production and productivity.

--Agricultural improvements can help meet the most urgent needs for increased export earnings, import substitution, and domestic industrial inputs.

--A commodity import program in support of agriculture and related activities can provide quick-disbursing and highly visible balance of payments support and can demonstrate USG good will and support in the current crisis.

--The U.S. has some comparative advantages in providing the kinds of technical expertise and training Madagascar needs to improve agriculture.

By the end of the FY 86 CDSS period, the proposed AID program should have helped the GDRM achieve the following agricultural sector goals:

1) Increase agricultural production.

2) Increase agricultural exports and import substitution.

3) Increase the domestic production of industrial crops.

4) Increase the per capita real income of small farmers and rural workers.

This will be accomplished by focusing the AID program on these objectives:

1) An easing of the foreign exchange constraint.

2) Improved Malagasy technical and institutional capability to analyze the effects of policy alternatives and to design effective development programs.

3) Improved Malagasy capability to conduct and utilize agricultural research.

4) Rehabilitation and sustained maintenance of rice irrigation systems.

5) Rehabilitation and sustained maintenance of selected rural roads.

6) Increasing GDRM awareness of the need for family planning activities to reduce the growth rate of the denominator of per capita income.

The activities AID could support in pursuit of these objectives include:

1. Balance of Payments Support

a. A Commodity Import Program to finance imports of critical spare parts and selected equipment for farm, road maintenance and transport activities, as well as key inputs needed by agriculture and small and medium-scale industries, including artisans, supporting agriculture.

b. Continued PL 480 imports.

2. Macroeconomic Policy and Sector Analysis and Management

a. Training and technical assistance in the identification and analysis of key macroeconomic and sectoral problems and policy alternatives affecting agriculture, supporting industries and related sectors.

b. Technical assistance and training to improve GDRM management of economic policies, planning and development programs.

3. Rice Research for Increased Yields

a. Training and technical assistance by IRRI technicians to test and select high-yield rice varieties.

b. A multi-donor program to rehabilitate and reorient the agricultural research system.

4. Rehabilitation of Selected Rice Irrigation Facilities to design and test mechanisms for sustained operations, maintenance, and cost recovery.

5. Rehabilitation and Maintenance of Rural Roads and/or Railroad Freight-handling Facilities to complement efforts in (4).

6. Support for Start-up Family Planning Activities upon request, in view of the importance of reducing the rate of population growth to the success of the

overall development effort, including the raising of rural per capita income.

The agricultural research components of this strategy will support AID's research priorities initiative. In addition, it is anticipated that support for GDRM-sponsored research on fuelwood problems will become part of the mostly centrally-funded initial work in the rural energy field.

With respect to the four priority areas of AID intervention, the entire strategy has been designed from the perspective of previous experience on what will lead to successful economic and social development in a situation like the one found in Madagascar, which confirms the importance of emphasizing these areas for priority assistance efforts. Clearly the policy framework in Madagascar deserves priority attention, and the strategy calls for collaborative analysis in the short term and training and institutional development in the longer term to improve the GDRM capacity to perform their own policy analysis. REDSO will continue to use PL 480 and the proposed CIP negotiations as fora to discuss and press for appropriate pricing and foreign exchange rate policy reforms. In view of the relatively small size of the anticipated AID program (and resident staff) and the nature of the bilateral relationship between the Malagasy and U.S. governments, the potential for much direct U.S. influence over GDRM policies will and should remain limited. The proposed approach, therefore, emphasizes the importance of improving the internal GDRM capacity for policy analysis and decision-making as the best way for AID to support continued policy reforms.

The strategy also emphasizes assistance to the agricultural sector, which harbors by far the largest portion of the private sector in Madagascar. In addition, the proposed assistance will help lay the institutional and manpower basis for more successful promotion of small and medium-scale industry and artisanal production, which is the second most important domain of the private entrepreneur in this country. An additional emphasis of the entire strategy is on technology transfer and research, as it is believed that Madagascar has a high absorptive capacity in this area and can benefit a great deal from efforts to improve indigenous technical capacity. Technical assistance will also be provided to help improve and streamline the GDRM institutional capacity to utilize technical expertise efficiently and to conduct agricultural and development-oriented research.

II. Analysis

A. General Background*

The people of Madagascar form an unusual and distinctive society which is a synthesis of Malayo-Indonesian, African and European (primarily French) heritage. Although Madagascar comprises a number of ethnic groups (typically identified as 20), it is, broadly speaking, a single culture with all groups sharing a common heritage and recent history. Its first inhabitants were probably Malayo-Indonesian-speaking mariners who migrated from Borneo to Madagascar, via the coast of East Africa, from the 10th century AD, picking up African traits through intermarriages enroute. Much of the basic culture and the national language suggests Malay origin.

Madagascar society is hierarchical in a number of respects. There are three rather rigid strata: nobles, commoners, and slaves (or the descendants of slaves). Regional differences are also important, especially the division between groups on the high Central Plateau, with their generally marked Malay-Indonesian appearance and legacy, and those along the Coast, where African strains predominate. The monarchial political organization of several ethnic groups supported the emergence of a royal class of ruling elite common throughout the island. Modern Malagasy society is characterized by a leadership based on a long tradition of education stemming from the 19th century.

French colonialism marked a period of extensive socio-economic change,

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* Summarized from Edward Greeley, op.cit., pp. 4-12.

with much of the dominant agricultural sector being commercialized and oriented toward export production for France. The French government imposed a labor requirement on the male population, abolished slavery, and outlawed polygamy. A dual system of public schools was established: elite schools reserved for the children of French citizens and indigenous schools for the Malagasy, the latter offering practical and vocational education but not preparation for leadership positions.

During the first decade after independence in 1960 strong ties with France and the West were maintained. The French-dominated economy, however, failed to benefit broad elements of the population, and the income disparity between the small European and Malagasy elite and the majority became increasingly pronounced. Country-wide student protests, following peasant uprisings in 1971, which led to the national emergency in 1972, were based on three principal demands: 1) voiding the extensive cultural cooperation agreements with France, 2) rejecting educational programs with a French orientation for those with a Malagasy orientation, and 3) increasing access to secondary-level institutions for under-privileged youth. The protests reflected a widespread discontent among the population as living standards declined.

For the next three years, a series of political changes followed the emergency, including a new government formed by the National Army, an attempted coup, and the assassination of an acting head of state. Political direction under a socialist orientation was finally established in 1975 when the current President, Didier Ratsiraka, assumed leadership and was elected to office for a 7-year period. A naval officer of East Coast origin, Ratsiraka has successfully taken the lead in negotiating Magagascar's changed relationship with France during the interim period following the strikes. His achievements as Minister of Foreign Affairs won him wide acclaim in Madagascar. Among his first acts as President was the establishment of a new Socialist

Program based on the Charter of the Malagasy Socialist Revolution, the major goals of which were a just social order and national autonomy.

The major program initiated under this Charter focused on expanding basic social services, especially education. The State also attempted to play an increasingly dominant role in the direction and management of the economy, although the great majority of producers, buyers and sellers remained in the private sector. The State expanded its role by nationalizing much of the industrial and financial sectors, regulating the prices of most commodities, and allocating capital from Government banks in accordance with national economic development plans. For example, the Government tried to replace the traditional small traders (many of whom were Chinese or Indian) with state-run marketing cooperatives and parastatals. Four large-scale parastatal agencies dominated import-export trade (taking over from the French), and others controlled the domestic trade of the staple foodgrain, rice.

Eight years later, the Government could take credit for meeting more of certain basic needs of the people with a significant expansion of the social services sector. However, it was widely recognized that its attempts to directly control many elements of the economy had resulted in enormous problems, especially given the unfavorable worldwide economic trends of the late 1970's and early 1980's.

B. Macroeconomic Analysis*

General Economic Situation. Madagascar is predominantly rural, with only 19 percent of its 9.5 million people residing in urban areas and 88 percent of all workers employed in the agricultural sector. Only 1.5 percent have jobs in manufacturing, 9 percent in the entire services sector, including government.

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* This section is summarized from Callison, C. Stuart, Colette Claude and Anthony Pryor, "Madagascar Economic Analysis," REDSO/ESA, Nairobi, December 1983 (DRAFT), which relies heavily on various World Bank and IMF reports on Madagascar. See this background document for specific data references.

Its 1981 per capita GNP of US $330 placed it among the poorest 25 percent of all countries. It is the world's fourth largest island, with a total land area about the size of Texas, of which a little over half is pastureland and only 5 percent, or 2.8 million hectares, is presently under cultivation (another 5.5 million ha. are considered cultivable but are not cultivated).

The climate is basically tropical, with high annual rainfall along the east coast tapering off to the west and south. The country's size, its mountainous interior, its extensive ocean coastline, and its location in an area of intense atmospheric activity, however, combine to give it a varied climate with considerable local contrasts. Since this is imposed on a wide variety of soil conditions, Madagascar is suitable for growing a wide range of different crops. Rice, the main crop, is grown on only one-third of the cultivated land and contributes only about one-third of the total value of agricultural production. While rainfed cultivation of most crops is possible in the north, east and highland regions, the southern and western regions require costly irrigation facilities able to withstand violent cyclones. The generally poor soils require fertilizer for most crops, except for the small percentage of alluvial soils found mostly in the large river basins of the western region. Development of the alluvial soils themselves is hampered by the need for extensive irrigation and flood control infrastructure in those areas. A rapid rate of deforestation and soil erosion pose serious problems for agricultural development, as does the physical isolation of most of the country due to the rugged terrain and the lack of adequately surfaced and maintained roads.

In addition to its predominance in providing employment, the agricultural, forestry and fishing sector contributes about 43 percent to GDP, compared with only 16 percent from industry and 38 percent from government and other services (1982). It also provides 83 percent of export earnings directly, or

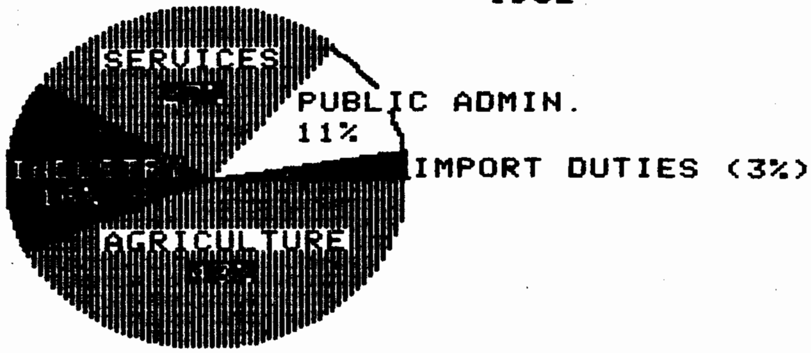
90 percent if processed goods are included.

The industrial sector is relatively capital intensive and too heavily dependent on imported inputs. Manufacturing is presently dominated by large parastatal agencies which suffer from inefficient technical, managerial and financial operations. The smaller, and more labor-intensive, artisanal and small-scale industry subsectors remain primarily in the hands of private entrepreneurs.

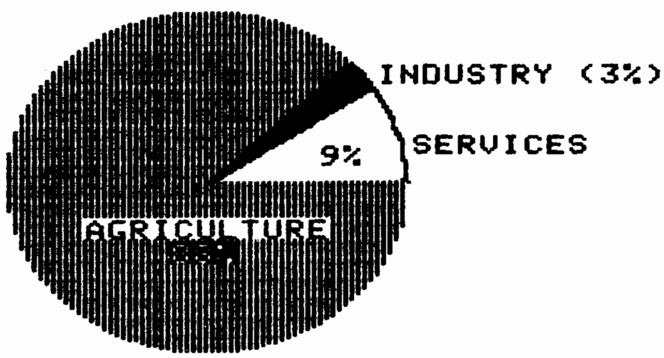
Economic production varied around a constant level through most of the 1970's until the 1979 surge in public investment stimulated a short-lived boom. Real GDP dropped precipitously after 1980, however, falling 10.4 percent in the next two years. Although the overall level of production in the dominant sector, agriculture, stagnated, most of the actual decline is attributable to the sharp one-third fall in industrial output. Real per capita GDP has fallen by an average of 2.9 percent annually since 1972, or by a total of 26 percent in one decade.

The balance of payments on current account declined from a modest deficit level of -91 million SDR's in 1978 to -374 million in 1979 and -464 million the following year. As a proportion of export earnings, this represented an increase from 26 percent in 1978 to 103 and 128 percent in following two years, and it has remained above 100 percent since then. In comparison with GDP, the deficit rose from 5.3 percent in 1978 to 17.3 percent in 1979 and 1980, and it was estimated at 12.7 percent in 1982. External financing of this deficit, much of it on commercial terms, has led to a rapid increase in total foreign debt outstanding and in debt service obligations. Total external debt rose from 18 percent of GDP in 1978 to 59 percent in 1982. Debt service requirements increased from 6 percent of export earnings in 1978 to 55 percent in 1982 and a projected 77 percent in 1983, before rescheduling. After rescheduling this ratio dropped to 34 percent in 1982.

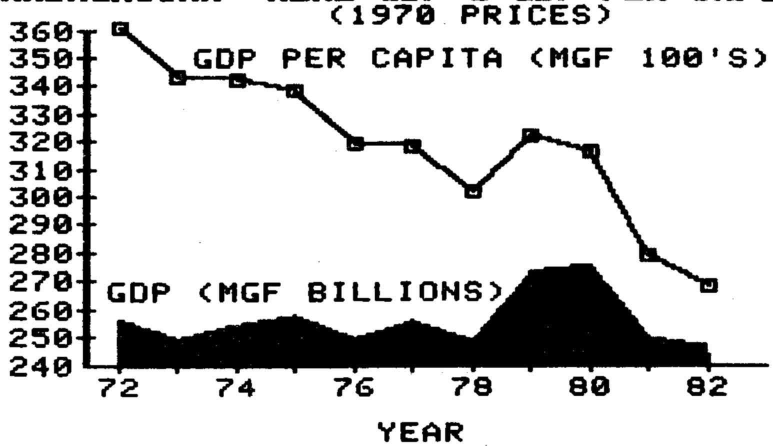
MADAGASCAR GDP BY INDUSTRIAL ORIGIN
1982



MADAGASCAR: EMPLOYMENT BY SECTOR, 1982



MADAGASCAR: REAL GDP & GDP PER CAPITA
(1970 PRICES)



Budgetary figures for 1978-82 reflect the rapid increase in public investment beginning in 1979, which rose from 4.3 percent of GDP in 1978 to 12 percent the following year, and the slow decline in the proportion of GDP collected as revenue from 20.3 percent in 1978 to 14.8 percent in 1982. Subsequent stabilization measures have curtailed the growth of expenditures, both recurrent and capital, and reduced the overall fiscal deficit from its peak of 18.4 percent of GDP in 1980 to an estimated 8.4 percent in 1982.

Domestic savings have declined continuously as a proportion of GDP from 11.3 percent in 1976 to 3.2 percent in 1982. The domestic resource gap increased dramatically as the 1979-80 public investment program was financed from foreign sources, reaching 17 percent of GDP in 1980. It declined to an estimated 10 percent in 1982, thanks both to reduced levels of public investment and to the import restrictions which have hampered domestic economic activity.

The surge in public investment raised gross capital formation from its average of 14 percent of GDP throughout most of the 1970's to 28 and 26 percent in 1979 and 1980, respectively. This level of investment could not be sustained, and it declined to 13.5 percent in 1982, below its earlier average. Rough estimates indicate that only about 14 percent of the ambitious public investment program was allocated to the agricultural sector, that transport and communications received the largest share (in part due to the acquisition of a Boeing 747 aircraft and a number of coastal shipping vessels), and that the social sectors were also favored.

Net domestic credit rose by about 50 percent in both 1979 and 1980 and by another 50 percent during the next two years. This expansion was due almost entirely to net government borrowing from the central bank. The net foreign asset position of the monetary system deteriorated rapidly from a positive 11 percent of net domestic credit in 1977 to a negative 35 percent in 1982, as both long-term foreign borrowing and arrears increased.

Of the total labor force of 4.0 million about 90 percent works in rural areas, mostly (88%) in agriculture. Estimates for 1976 indicate that only 7.4 percent of all workers hold jobs in the modern sector. Employment growth in the modern sectors seems to have stagnated in recent years, in part due to the relatively capital-intensive investments in large-scale manufacturing capacity (at an average cost of US$100,000 per job created as opposed to between $10,000 and $20,000 in most SME's) made under the 1978-80 Plan and to the agricultural emphasis on costly large-scale irrigation systems and mechanized farming. The annual growth of the labor force is projected to increase from the 2.1 percent rate of the 1970's to 3.0 percent during the next decade or two, requiring Madagascar to provide employment for between 120,000 and 200,000 new workers each year between now and the year 2000. Agriculture still has some room to expand, but the marginal land not yet under cultivation will require high levels of investment in water control and road access infrastructure. The most promising avenues for productive employment generation are in the more intensive use of labor on land already under cultivation, utilizing more productive agricultural technology, and in the promotion of the more labor-intensive small- and medium-scale industries, including, but not limited to, handicrafts and artisanal production and agro-processing.

The average annual rate of price inflation rose sharply from less than 8 percent between 1970 and 1978 to 23 percent between 1978 and 1982, a rate that continued, on an annualized basis, through the first third of 1983. Increasing pressure on the demand side, as the Government began to finance the huge public investment program, was met by increasing scarcity of basic food and consumer commodities on the supply side, due to the decline in domestic production incentives, market disruptions and the foreign exchange shortages that reduced imported commodities and inputs. Comprehensive data on actual wage rates do not exist for recent years, but it is fairly certain that real wages have declined.

<u>Causes of Recent Economic Decline.</u> Several factors have contributed to this poor economic performance, some of which, such as the recessionary demand for the country's exports and the resulting deterioration in terms of trade, as well as an occasional bad year for agriculture due to the weather, have certainly been beyond the control of the Government. Other factors have derived from the policies of nationalization and market control undertaken by the GDRM in its attempt to achieve greater control over the domestic economy for social and political goals. Still other factors have arisen, in combination with those just mentioned, from the effects of the expanded public investment program initiated in 1978, which was largely financed from foreign commercial sources.

Several parastatal marketing agencies were created in the early 1970's to control the transportation and marketing of key commodities. These have tended to be poorly managed and operationally inefficient and have resulted in serious disruptions of normal marketing activities. The government has also attempted to control both consumer and producer prices, which in a period of high inflation resulted in sharp declines in the real and relative prices of the goods controlled, as well as in disruptive shortages of key inputs and basic consumer goods, seriously reducing production incentives.

The high import requirements of the public investment program itself contributed substantially to the precipitous decline in the balance of payments on current account, as did the debt service requirements of the foreign commercial loans contracted to finance it. The consequent shortage of foreign exchange reduced the nation's ability to finance normal levels of essential spare parts, equipment and other inputs needed by the industrial and agricultural sectors, thus contributing to their declining output.

During this same period the GDRM, while concentrating on other priorities, neglected the maintenance of the basic road and railway networks upon which the economy depends, and they have deteriorated to the point where transport has become a severe economic constraint, further disrupting the supply and marketing of goods and increasing the cost and difficulty of export activities.

The worldwide recessionary demand situation of recent years has contributed to the declining level of export earnings and GDP. Valued in SDR's, commodity export earnings dropped by 15 percent in 1981 and recovered only slightly in 1982. The export contribution to GDP dropped from 20 percent in 1978 to 12.8 percent in 1982. The international terms of trade have moved against Madagascar every year since 1977, except for a small recovery in 1980, declining a total of 34 percent during the last five years. This has compounded the country's foreign exchange problems by increasing the foreign exchange cost of imports while reducing the earnings of exports.

Domestic incentives to most export producers have declined even more sharply than the terms of trade, however, due to the effects of the export marketing and price controls imposed by the GDRM and to the effective real revaluation of the Malagasy franc. Export price controls have resulted in significant declines in the percentage of the export price received by the producers. Domestic coffee producer prices have dropped from between 67 and 79 percent of the export price in the mid-1970's to 33 percent in 1983 (coffee is Madagascar's leading export, but has fallen from a peak of 53 percent of all exports in 1980 to 35-36 percent in 1981-82). Vanilla producer prices have fallen from 33 percent of the export price in 1973 to 21 percent, and those for cloves dropped from 43 percent to 16 percent.

Not only are export producers receiving a smaller proportion of the export price than before, but the francs they do receive are worth considerably less due to inflation and to the steady real revaluation of the franc, which results in fewer real francs (less actual purchasing power) received per unit of foreign exchange earned. The Malagasy franc has been revalued upwards, in real, trade-weighted terms, by 44 percent since 1978 (as of April 1983).* The occasional nominal devaluations, against the basket of currencies to which it has been pegged, have not been nearly enough to compensate for the higher rate of domestic inflation. This means that the value of the francs received by export producers and middlemen per dollar of foreign exchange earned is worth 31 percent less now than in 1978, in terms of its domestic purchasing power, even though the actual number of francs received per dollar would be 70 percent larger if the proportion of the export price received had stayed the same. The resulting decline in real domestic producer prices for most major export crops since 1978 has been precipitous: -43 percent for coffee, -45 percent for cloves, -49 percent for pepper, -25 percent for sugarcane, and -28 percent for lima beans.

With respect to the growing fiscal deficit, declining revenues were caused by the worsening economic situation, with import revenues dropping along with declining import volumes and domestic value-added and profit tax receipts falling along with declining domestic economic activity. Several measures have been introduced to raise more revenues and have helped to stem the decline. The initial increase in government expenditure was mostly for the capital investment program and an expansion of social services, notably education. Much of the capital investment has been for projects of doubtful economic productivity, due to inadequate prior planning and analysis. Other expenditures which have been increased dramatically have included on-lending to state enterprises, mostly for investment purposes, rice subsidies, and deferred payments, including arrears.

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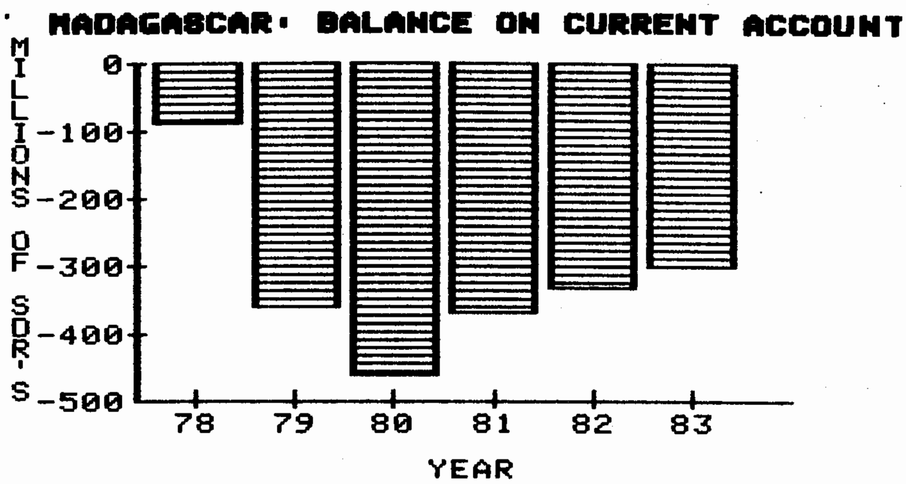
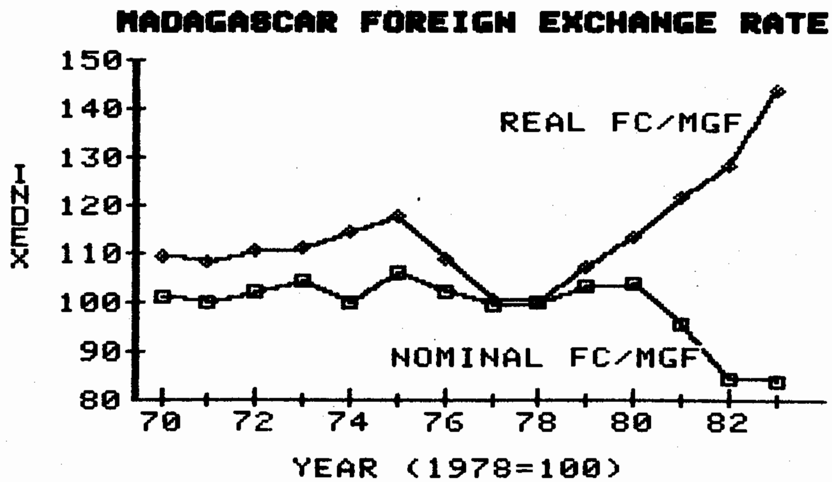
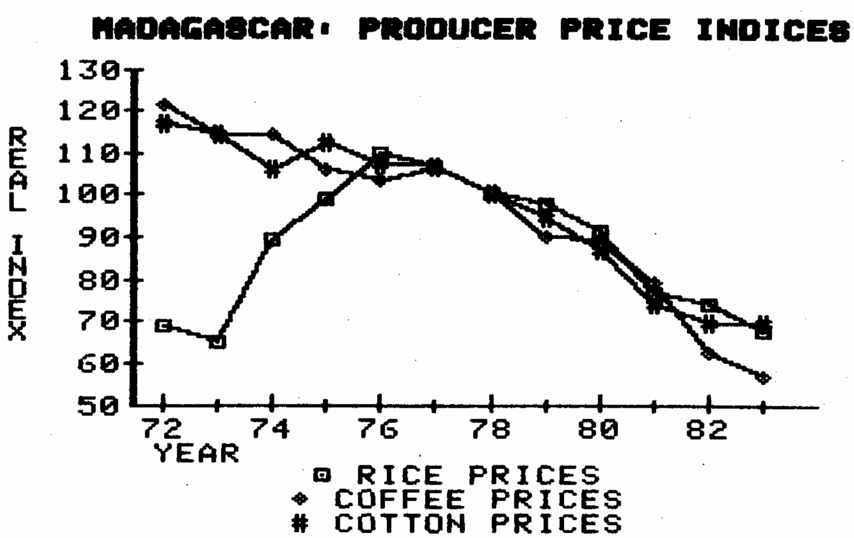
* See Callison, Claude and Pryor, op.cit., for the derivation of this index.


MADAGASCAR: BALANCE ON CURRENT ACCOUNT
MILLIONS OF SDR'S
0
-100
-200
-300
-400
-500
78
79
80
81
82
83
YEAR


MADAGASCAR FOREIGN EXCHANGE RATE
INDEX
150
140
130
120
110
100
90
80
REAL FC/MGF
NOMINAL FC/MGF
70
72
74
76
78
80
82
YEAR (1978=100)


MADAGASCAR: PRODUCER PRICE INDICES
REAL INDEX
130
120
110
100
90
80
70
60
50
72
74
76
78
80
82
YEAR
RICE PRICES
COFFEE PRICES
COTTON PRICES

Domestic savings has declined in part due to declining public savings rates, as fiscal revenues have been insufficient to cover current expenditures, and to declining profits, which have reduced savings and investment in agriculture and industry. Domestic interest rates controls have not encouraged private savings, either, since interest rates have remained negative in real terms despite recent increases in their ceilings.

The insufficient rate of employment generation has been due to the capital-intensive nature of industrial investment to date and to the agricultural emphasis on large irrigation systems and mechanized farms. This misdirection of investment resources is being corrected in the new Public Investment Program. A key constraint to the provision of sufficient jobs is the high growth rate of the labor force. The population of Madagascar is currently growing at an estimated rate of 2.8 percent, and this is expected to average an even higher 3.1 percent between now and the year 2000. The labor force is expected to increase by 3.0 percent annually. The lack of a GDRM policy promoting family planning, in response to this problem, is therefore a matter of concern.

B. Preliminary Sector Assessments

1. Agriculture*

Types and Scale of Activities. The primary crop is rice paddy, which contributes about one-third to the value of total agricultural output. Next in importance are livestock products, which contribute about 20 percent to the total, fruits and vegetables, about 17 percent, and the various industrial and export crops, contributing around 15 percent. Primary forest products are valued at around 11 percent and fishery products at 2.5 percent of the total. The value of pulses, roots and tubers grown is thought to be rather small,

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* This section is based largely on material contained in World Bank, Madagascar Agriculture and Rural Development Sector Memorandum, 3/29/83.

comprising only 1 percent of the total, although their tonnage is large.**

About 70 percent of the population is involved in rice paddy production, which covers an estimated 1.2 million hectares, or between one-third and one-half of all permanently cultivated land. Around three-fourths of the paddy area is cultivated by smallholders, and most of the rest is found in government-managed irrigation schemes.

The livestock industry is dominated by beef production, virtually all coming from small-scale, traditional producers operating extensive open range systems. Beef is an important part of the national diet and of export revenues. Madagascar has vast areas of good natural pasture, a large cattle herd (around 10 million head), and a strong tradition of animal husbandry.

Coffee is the most important of the several industrial and export crops, itself valued at around 7 percent of total agricultural output and contributing almost two-thirds of total agricultural export earnings. Other important export crops are cloves, vanilla, sisal, cocoa, and pepper, while significant industrial crops, the end product of which is also exported, include sugar cane and cotton. About half of the cotton area and virtually all the sugar cane cultivation is farmed in large private or government plantations, but the other half of cotton land and almost all of the export crop area is farmed by traditional smallholders, often on very small plots of land.

Natural forests cover about 12 million hectares, or 21 percent of the total land area, of which about 7 million ha. are accessible, exploitable and productive. Rapid deforestation has contributed to serious soil erosion and degeneration in many areas; but since so much of the population relies on fuelwood and charcoal for domestic energy, the process of deforestation is continuing and the country will soon face a serious fuelwood crisis. Man-made

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** The relative magnitudes of agricultural output value were calculated for 1977 production estimates. See World Bank, 3/29/83, op.cit., p. 6.

forests involve pine and eucalyptus plantations totalling some 260,000 ha., the former providing wood products for export, the latter mostly providing fuelwood and charcoal.

Although Madagascar has 4,000 miles of coastline, the coastal waters are not rich in fish. The total marine catch by traditional fishing, which is the main source of livelihood for only about 6,000 families, is about 10,000 tons a year. Fishing techniques are rudimentary, largely using nets and spears. Commercial fishing is almost entirely for shrimp and prawns, of which 5-6,000 tons have been caught annually in recent years. Prawn exports have been contributing about 4 percent to total export earnings, but have limited potential for expansion without overfishing. Development prospects for commercial deep sea fishing, however, particularly for tuna, are excellent. Freshwater fishing yields an estimated catch of around 58,000 tons annually and provides an important supplement to the diet in many parts of the country.

Institutions Involved. The Ministry of Agricultural Production and Agrarian Reform (MPARA) has been subjected to several reorganizations since 1960. Except for the 1979-82 period, however, it remained basically functional in structure, focusing on the traditional responsibilities of agricultural production, livestock, fisheries, water and forestry, with the more recent additions of implementing agrarian reform and supporting production cooperatives. Along with the GDRM's major attempt to decentralize authority in 1979, the Ministry was reorganized along a integrated model at regional levels, with all technical services grouped under the regional directors. While this reorganization had many worthwhile objectives--to better coordinate field services, to focus management and planning on local needs and conditions, and to promote closer cooperation with local leadership--it was undertaken without adequate preparation and resulted in a loss of technical discipline and authority, which caused a serious deterioration in the services provided. These difficulties eventually became so obvious that, in September 1982, the Ministry was again reorganized along centralized, functional lines, and further organizational changes were placed under administrative study. Still more recently it was split into two ministries, with the creation of a new Ministry of Livestock, Forestry and Fisheries.

The Government relies heavily on public enterprises (both publicly-owned and mixed capital companies) in the agricultural sector, with more than 90 publicly-owned institutions that employ two or three times as many staff as MPARA itself and account for more than half of the Ministry's budget allocations. They are involved in activities as diverse as direct production of crops and livestock, processing, marketing, input supply, extension services, and management of crop stabilization funds. With a few exceptions, the performance of these parastatals has been disappointing to the Government, since they have not fulfilled their basic objectives and have resulted in large and recurring financial losses.

Since 1972 the Government has undertaken to create a decentralized system of local government that would incorporate traditional institutions and practices and encourage popular participation in the development process. Called the "fokonolona" (village community) reform, this is an effort to strengthen local government institutions in reaction against the highly centralized administration inherited from colonial days, with its lack of concern for local needs and popular participation. The fokonolona institutions have played an important role in agricultural credit, marketing, jurisdiction over land tenure, and management of irrigation systems. Their actual role has varied widely, subject to local initiatives, and considerable uncertainties remain about their responsibilities and authority, such as, for example, the relationships between fokonolona elected officials and appointed officials of the central government within the same jurisdiction.

Recent Economic Performance. Agricultural growth has been subject to wide fluctuations due to bad weather and the vagaries of world market demand for certain export crops. Its overall performance has been disappointing, however, particularly since the mid-1970's. As estimated in constant price terms for the National Accounts, total agricultural production reached a peak value in 1974 that has never since been duplicated, let alone surpassed, with real production in 1982 still some 4 percent below that of 8 years earlier. Stagnation has been marked in the two most important single agricultural activities, rice and cattle production, which together account for over 50 percent of the total. Madagascar has ceased rice exports and has resorted to increasing volumes of imports to satisfy domestic demand (351,000 MT in 1982, 18 percent of domestic production and 21 percent of total import value). Meat production has grown very slowly and has failed to keep up with the growth of domestic demand, thus causing meat exports to decline.

Production of the major export crops, particularly coffee and vanilla, has continued to increase, though slowly, while the production of industrial crops, notably cotton and sugar, has been more severely affected by recent economic problems and has declined.

This record of general stagnation and decline is the result of several factors, all fairly serious:

1) Government pricing policies have reduced production incentives and efficiency and have adversely affected the marketing system.

2) The deteriorating transport, storage and marketing systems has increased the cost and uncertainties of marketing.

3) Government policies favoring the nationalization and control of production and marketing activities have resulted in major disruptions and inefficiencies in those activities.

4) The decentralization of administrative and economic services supporting

agriculture resulted in a serious decline in their quality and availability.

5) Shortages of foreign exchange have had a major impact on commercial farming and processing industries, reducing their ability to import vital spare parts, equipment and other inputs.

6) The lack of basic consumer goods in rural areas, due to import restrictions and marketing disruptions, has reduced incentives to produce for cash sales.

Government Objectives in Agriculture.* The GDRM is reformulating its policies and development strategy towards agriculture, in reaction to its poor performance and the resulting economic crisis. The efforts undertaken so far are substantial, and indicate a strong commitment to reform. The overall goals for agricultural development are:

1) Helping to achieve an improvement in the balance of payments, by promoting agricultural exports and achieving self-sufficiency in food production, especially in grains and oilseeds;

2) Achieving a better integration of agriculture with the rest of the economy, particularly through the expansion of agro-industrial crops;

3) Providing priority assistance to small and medium-scale farmers, to increase production and employment and raise rural income and living conditions.

These goals coincide closely with AID concerns for increasing food production and also for raising incomes of the poor majority, since the vast majority of the poor households in Madagascar reside in rural areas.

Corrective Measures Underway.** The Government has taken important steps to implement reform measures, including substantial increases in the consumer price of rice in May 1982 in an effort to eliminate the subsidy element, the MPARA reorganization of September 1982, and measures to strengthen agriculture

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*In addition to World Bank, 3/29/83, op.cit., pp. 95-6, see especially GDRM, Development Prospects, Policies and Programs 1983-1985, Antananarivo, March 1983, pp. 12-21 (The latter document was presented to the Madagascar Consultative Group Meeting in Paris held in April 1983.)

** GDRM, 3/1983, op.cit., pp.13-21; and World Bank, 3/29/83, op.cit.,pp.96-101.

sector policy coordination by giving MPARA responsibility for it. Management reviews and financial support measures have been undertaken to support key parastatals, and staffing levels have been significantly reduced in some parastatals and in MPARA itself. In addition, several in-depth studies and reviews have been initiated, with support from PL 480 counterpart funds and from IDA under the Agricultural Institutions Technical Assistance Project, to serve as the basis for policy reviews and reforms. Other recent measures include the transfer of the agricultural research institution (FOFIFA) first to MPARA and then to the newly created Ministry of Science and Technology, reductions in fertilizer subsidies and a decision to phase them out completely by 1984, passage of cost recovery legislation for irrigation systems, and several actions addressing problems in the livestock sector, including the establishment of the new Ministry of Livestock, Forestry and Fishing. Rice trade by private dealers has once again been legalized, and other market restrictions are under review.

The action strategy announced by the GDRM at the April 1983 CG Meeting stresses the importance of rehabilitating the existing productive capacity before the initiation of new projects, of institutional development, and of improving of the economic environment affecting production on small and medium scale farms, including incentive prices, marketing arrangements, input supply and distribution, the availability of essential consumer goods, better transport facilities, and the provision of supporting economic services. This strategy indicates that the GDRM is aware of the key problems outlined above and is planning to take further action on several fronts to address them.

Institutional and Policy Constraints. While the GDRM has recognized many of its institutional deficiencies and has begun to take action to improve the situation, the rebuilding of the key service institutions involved, the redefinition of roles and responsibilities of the large number of state enterprises and agencies, the satisfactory reform of disruptive policies, and the political need to reconcile such reforms with the guiding philosophy of the State will require careful analysis and planning, much interagency discussion and consensus-building, and a considerable amount of effort and time.

The lack of an adequate in-house capacity to conduct the needed analyses and planning activities to identify and compare the likely economic, social, and institutional effects of policy alternatives is itself a critical institutional constraint to improvement. In attempting to deal with these tasks, the GDRM will need to improve its institutional capacity for development policy analysis and planning in matters affecting agriculture, including the overall macroeconomic policies affecting foreign trade, export promotion, foreign exchange allocations for imported inputs, the foreign exchange rate, and the farmgate prices received by agricultural producers of both exportable and domestically-consumed crops.

Although the GDRM is beginning to reform many of its policies and institutional arrangements that have been constraining economic growth, the reforms have not yet gone far enough to completely remove them as serious constraints. Policies that continue to reduce production incentives and impede economic growth include 1) domestic producer price policies that result in declining real returns to production, 2) the relatively inflexible foreign exchange rate policy that results in the overvaluation of the franc and reduces real export earnings in terms of domestic currency, 3) the operation of export stabilization funds and the imposition of export duties, which further reduce the producer prices for export crops, and 4) market controls and restrictions on private sector trade and other economic activities, which disrupt the smooth functioning of market activities and reduce the scope for private initiative and investment.

Role of External Donors.** The GDRM is currently implementing over 90 separate projects in the agricultural sector. Foreign donors now working in Madagascar include UNDP/FAO, IBRD/IDA, the European Development Fund, Funds for Aid and Cooperation (FAC), Caisse Centrale de Cooperation Economique (CCCE), the Arab Bank for Economic Development in Africa (BADEA), the International Fund for Agricultural Development (IFAD), and the African Development Fund (AfDF), as well as the governments of France, Norway, Switzerland, China, Germany and North Korea. About 75 percent of the current projects have a regional focus, reflecting the diversity of Madagascar's agriculture and the difficulty of addressing problems on a country-wide basis. The emphasis is on rice and food crop production for domestic needs, particularly the development of new cropland in irrigation schemes, but there are also several projects focussing on industrial and export crops in specific areas, such as cotton, coffee, timber, cocoa and oil palm. The total estimated cost of the projects currently being implemented is about US $208 million. About 5 percent of the total is accounted for by livestock projects and 10 percent by forestry projects. IDA is preparing a new project, the Agricultural Technical Assistance Project, to help the GDRM review its agricultural research structure and prepare a rice research program. This would also involve the International Rice Research Institute (IRRI), which obtains some of its funding from AID, and ISNAR, both of which are or have recently been engaged in preliminary reviews to help the GDRM better define its agricultural research requirements.

The World Bank has prepared its Sixth Highway Project in Madagascar, with implementation scheduled to begin in January 1984, for funding jointly by IDA (US $45 million), AfDF ($19.2 million), IFAD ($1.4 million), and the GDRM ($16.1 million) at a total estimated initial cost of US $81.7 million, with other donors expected to add another $30 million. This project will concen-

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** World Bank, 3/29/83, op.cit., Annex 3, pp.247-264.

trate on the rehabilitation and maintenance of 1060 km of trunkline paved roads and about 2900 km of rural and feeder roads, out of the estimated 10,000 km of key economic roads in the country. In addition, three other proposed World Bank projects contain funds for the reconstruction and/or rehabilitation of feeder roads (the Lac Alaotra Rice Intensification Project, the Second Village Livestock and Rural Development Project, and the Cotton Development Project). These and other donor efforts will begin to address the severe transportation constraint presently impinging upon the agricultural sector.

The World Bank and the IMF are also assisting the GDRM in the analysis of its current macroeconomic problems, including those affecting the agricultural sector, and in the design of the policy reforms required to address these problems and begin the necessary process of structural adjustment.

<u>Assessment of Development Prospects.</u> The potential for agricultural production in Madagascar is much higher than has been achieved so far. Although its major foodgrain is rice, it has not yet utilized any of the high-yield varieties recently developed by IRRI and successfully adopted in many other countries, nor has it benefitted from higher yielding varieties already available for other crops, such as for sugarcane.* There is also considerable undeveloped potential for irrigated cultivation, although much of it will require considerable capital investment in water control and road access.

Although the various constraints discussed above still restrict agricultural growth, the prospects for more rapid improvement in the future are quite good if the GDRM continues on its present course of policy and administrative reform. Many of the policy constraints can be, and some of them are being,

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* One reason for the reluctance to use new hybrid strains developed elsewhere is the extremely cautious "island-oriented" attitude toward imported plant material and the related plant quarantine procedures. The quarantine constraint remains, at present, but visits to IRRI have begun to reassure high-level GDRM officials that modern internationally accepted quarantine procedures are not a threat to the island and that some relaxation of existing quarantine regulations can provide dramatic production increases.

addressed fairly quickly through administrative decisions and, while many of them may require some politically difficult compromises within the government, the possible improvement in the economic climate for agricultural production is considerable. Institutional development and training requirements will require more time and effort, as will noticeable improvements in the transport sector, but these constraints are also being addressed with important new initiatives. The foreign exchange constraint is susceptible to a better set of pricing, exchange rate and other policies designed to promote exports, together with a more rational system to allocate foreign exchange among competing domestic requirements. One crucial requirement for the continuation of economic policy reform is the improvement of the GDRM's own internal ability to analyze their economic problems and alternative policy choices.

Even the political constraints related to ideological considerations are being alleviated by a healthy dose of pragmatism in choosing how key social and political goals can be achieved. This is one of the more promising aspects of current trends in Madagascar for successful economic development.

Major Information and Analytical Gaps.* A program to improve the agricultural data base and the analytical techniques used in Madagascar is urgently needed and must be given high priority if serious planning and support activities are to be successful in this sector. Madagascar was once considered a leader in agricultural statistics and conducted extensive research into various agricultural problems. Considerable information still exists in some areas that is excellent and reliable, such as for exports and for certain industrial crops. The situation has deteriorated during the last decade or so, however, until at present there is a serious lack of reliable agricultural statistics and analysis needed for development planning. There seem to be three main problems:

1) The existing information and the results of past research are not located

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*See World Bank, 3/29/83, op.cit., pp.14-24.

in central offices and are difficult to obtain by potential users.

2) Data collection systems have virtually ceased to function, and the analysis and publication of data is long-delayed and is not comprehensive. Recent market data usually reflect official marketing only and ignore the large parallel markets. Despite the normal difficulties of obtaining reliable crop area, yields, and production data in a complex smallholder system, data methods have not improved and suffer the common problems of underpaid, poorly supervised staff with little training and no logistic support, utilizing unreliable sampling methods.

3) Basic data on resources and farming systems in Madagascar is very limited. There is no reliable system in place, for example, to monitor the average producer prices received at farmgate.

The FAO is providing some support and an Agricultural Census is currently underway. An IDA project contains funds for studies to improve the data collection and statistical system for rice. Much more is urgently needed, however, in the areas of land resources, general agricultural statistics, land use and ownership patterns, rural incomes and income distribution, nutrition, social factors, roles of women, etc. Basic land use data is badly out-of-date and unreliable, for example, and no systematic land use surveys or monitoring systems exist.

2. Artisanal, Small- and Medium-Scale Industry

Industrial production including mining accounted for approximately 18 percent of GDP during the 1970's and provided employment for an estimated 20 percent of the <u>wage-earning</u> population of 295,000 in 1976 (including part-time workers). With respect to the <u>total</u> active population, employment provided by formal sector manufacturing activities was in the neighborhood of only 1.5 percent. (Inclusion of informal sector manufacturing raises this figure to 4.5 percent.) Data for 1976 indicate that value-added in manufacturing alone represented about 13 percent of GDP. Production of many manufactured goods has stagnated (as in the case of cotton fabric) or decreased over time, particularly since 1980. Malagasy industry is highly dependent on imports of both capital goods and primary inputs. It has been severely affected by the import restrictions of recent years as well as by recent crop shortfalls--e.g. cotton and groundnuts. Production of such essentials as edible oils, soap, and batteries has decreased by almost 50 percent of the 1975 level.

Types of Activities. Malagasy manufacturing is dominated by production of consumer goods to satisfy local demand. Food processing (including beverages) and textile production are the dominant activities, accounting together for some 60 percent of value-added.

1) Food is processed for export as well as for domestic use. In 1979, exports of processed meat and shellfish accounted for almost 10 percent of the value of exports while other manufactures (including processed spices and textiles) amounted to only 6.5 percent. The need for soybean imports has taken on an added importance as inputs to a new oil mill (MAMISOA) for which domestic supplies are not yet available.

2) Industrial crop processing. The textile industry is an important part of Madagascar's manufacturing sector. Domestic raw materials (cotton, raffia, sisal) as well as some imported inputs (silk, wool, and cotton) are used. Other activities which make use of domestic resources are the wood-based industries, paper, lumber, and carpentry. In 1976 production in these three categories accounted for almost 7 percent of manufacturing value-added.

3) Leather products are also based on local materials. This activity does not seem to be exploited to its fullest potential due to shortages of chemical imports for tanning and dyeing. In a way similar to many of the activities previously cited, it lends itself to small-scale, artisan-type of work as well as to larger scale production.

4) Import-dependent manufacturing. Import dependence is characteristic of much of Malagasy industry, since capital goods and equipment are all brought in from abroad. It is particularly high in industries which also depend on imports of primary materials, such as those manufacturing metal products (e.g. agricultural implements), transport and electrical equipment, and chemicals, as well as edible oils. These industries have suffered most from the import restrictions of recent years and have a high level of unutilized capacity. A recent SERDI survey counted 304 recorded enterprises still operating. Of these firms, some 85 (or less than 30 percent) are said to produce approximately 80 percent of total output, indicating a relatively large scale of production. It is unclear whether mining and energy are included in these statistics. CENAM estimates indicate there are somewhere around 100,000 operating artisan production units, which provide employment for 120,000 people. Compared with the 304 factory production units of the SERDI survey, which employed only 54,500 people, this reflects the dominance of the artisanal occupations in providing industrial employment, if not final output. Although a variety of government agencies are responsible for collecting data on industrial activity, this does not appear to be done in a consistently comprehensive manner. For some time UNIDO has been assisting the GDRM in planning support for small and medium-scale industries (SME's). A survey to identify existing SME's has recently been completed and is currently being analyzed.

Ownership. Related to the question of size is that of the ownership of firms. Parastatal operations became important in the early 1970's as the government nationalized and made efforts to transform previously foreign-owned companies into Malagasy-managed ones. More recently it has been government policy to take over firms that were not performing well or in which improvements might involve reductions in the number of employees. Administrative arrangements regulating the different forms of state enterprises appear complex. Performance of the manufacturing parastatals varies and is not invariably poor.

Despite the reported dominance of parastatals in terms of output, there do seem to be a fair number of privately-owned firms in the manufacturing sector. Of a list of 144 firms recently provided by the Ministry of Industry, Mining and Energy, 88, or about 60 percent, were listed as totally privately-owned. Less than 20 percent had State participation (direct shareholding or through the intermediary of State-controlled agencies) of 30 percent or more. While private employment accounted for some 45 percent of the workforce of 40,000 covered by this data, the 70-odd private manufacturing firms employed only 25 percent of this workforce. Securing production data for these firms would help clarify the relative importance of the private sector.

<u>Artisanal/Informal Production.</u> There appears to be room for expansion of artisanal production of textiles, brick-making and utilitarian pottery (tiles and implements), and metalworking. The agency in charge of promoting such activities, CENAM (Centre National de l'Artisanat Malgache), contends that farm plows and other tools produced under its sponsorship are proving to be viable substitutes for the more expensive ones available from the two parastatals producing farm implements. CENAM has also, with UNIDO help, developed a flying shuttle loom to and encourage more efficient cottage-industry textile production. The goal of this agency is to assist artisans create cooperative workshops and produce locally needed goods.

<u>Trends in Manufacturing Production.</u> Output in factory manufacturing rose slowly over the decade beginning in 1970, but since 1980 it has declined sharply (by 28%). During the mid-1970's the GDRM nationalized many existing industrial enterprises and created many new state-owned production units. There was a preference for large, capital-intensive factories, which contributed to the dramatic increase in national import requirements and resulted in the slow growth of modern-sector employment. The growth of government para-

statals, many of which were inefficiently operated, also increased the recurrent and capital cost burdens on the national treasury, exacerbating fiscal deficits. The industrial sector is today largely overbuilt and underutilized. Recognizing the causal relationship to its current economic difficulties, the GDRM has halted its program of nationalization and has stopped investing in new factory production facilities.

While factory manufacturers are currently in difficult straits, this is not true of artisanal producers. Although no reliable figures are available, CENAM personnel indicate that artisanal activity has increased substantially during the last two years. They note that the present situation is reminiscent of the blossoming of Malagasy artisanal activity that occurred during World War II when imports and factory production were similarly constrained. Now, as then, the decline of both imports and factory production left large market niches unfilled, and artisans stepped forward to fill the breach by producing a wide range of products from lamps made of beer cans to furniture covers to plows. This asymmetry between artisanal and factory production trends provides an important reminder of why it is essential, when formulating industrial policy, to consider the separate implications for both groups.

There is substantial potential for expansion of industrial activity in Madagascar. First is the obvious possibility of recouping the recent decline in factory production. In addition, Madagascar has many underutilized natural resources on which manufacturing could be based. Recent studies by both UNIDO and the World Bank have pointed out the substantial potential for boosting agricultural production of inputs such as cotton, oilseeds, livestock and sugar, and they note the large unexploited potential in fishing and wood industries. In the longer term, minerals such as iron, coal and chalk could also provide the basis for industrial exploitation.

Madagascar also has substantial potential for market-based expansion of industrial activity. In artisan activities, for example, the demand for construction materials, textiles and milling services will probably increase considerably over time as both income and population increase. There also appear to be immediate opportunities for import substitution by both artisans and factory producers, particularly in the areas of textile, edible oils and paper and pulp production.

Resource Constraints. The two most important barriers to industrial expansion are: a) the shortage of foreign exchange, and b) the insufficiency of agricultural production on which most manufacturing is based. Foreign exchange, difficult to obtain and allocated on a quota system, is universally cited by analysts and industrialists as a crucial barrier to the smooth functioning of manufacturing enterprises. Quotas for imported parts cover only about 25% of requirements and an estimated 20 to 30% of underutilized industrial capacity has been attributed to the lack of spare parts.

The shortage of agricultural inputs is a second and very important constraint. Production of cotton, peanuts, sugar and fruits have actually declined in recent years. Growth in the output of other products, such as rice, has been very slow and has been far outstripped by growth in processing capacity. Given that the bulk of industrial activity in Madagascar revolves around agro-processing, the shortage of these important raw materials is a critical barrier to the growth of industrial production.

Several other factors have also reduced industrial growth. Deteriorating transport networks make it difficult to assure material input and output flows, particularly in agro-processing. The general business environment has deteriorated due to the increase of price, import, registration and other controls, combined with the 1975-80 wave of nationalizations, which make industrialists both weary and wary. Despite more recent signs of liberalization, potential investors have adopted a wait and see attitude. A final difficulty facing industrialists is the common one of insufficient technical and management skills. Although Madagascar is better endowed than most African countries, both technical assistance and improved mechanisms for technology transfer are badly needed, as is the improvement of management skills.

The key conclusion derived from this overview is that the main problems facing manufacturers in Madagascar lie either outside the industrial sphere (as with foreign exchange, agricultural production and transport difficulties) or at the policy level (as with the regulatory environment).

Policy Constraints. Significant policy changes have been initiated since March 1983. For the last decade Madagascar's industrial policies were based on the socialist philosophy of collective ownership of the means of production and were designed to promote state ownership or control of factory manufacturing and cooperative ownership of artisanal production units. State ownership of factory enterprises was actively promoted by programs of nationalization and public investment in manufacturing. Large-scale, capital-intensive units were favored. The GDRM also instituted a system of price controls for every item manufactured in Madagascar, based on production costs, which required lengthy government reviews of each request for price adjustments. In addition, the investment code involved "clumsy, protracted and uncertain" administrative procedures and was ineffective in stimulating local investment. No incentives were offered to stimulate manufactured exports, despite the worsening trade balance. In general, the management of industrial policy was backward and policymakers lacked coordination and sense of economic priorities.

In the forefront of the recent policy shifts, the programs of nationalization and public investment in manufacturing have ceased. The role of private entrepreneurs, particularly in small, medium and non-strategic industries, is to be enhanced and promoted. The Ministry of Industry, Energy and Mines (MIEM) has been moving to devolve a number of state-owned enterprises into mixed private/public ventures. It is currently evaluating private sector bids for participation in four manufacturing parastatals. The former emphasis on large, capital-intensive enterprises is being dropped in favor of the promotion of small and medium scale factories and artisanal production, which are to be privately owned and managed.

While the government has not renounced its right to manage industrial prices, it has committed itself to a streamlined and accelerated procedure and has relaxed price enforcement on goods neither considered basic necessities nor produced by monopolies.

The GDRM is also moving to revise the Investment Code. A team from the FED (Fond European de Developpement) will arrive in January 1984 to help make recommendations toward liberalizing the Code and on ways to reduce the heavily bureaucratic procedures now required. The GDRM has already instituted some measures to provide more incentives for manufactured exports.

One policy deficiency that has not yet been addressed is the failure to take the needs of artisan producers explicitly into account when formulating sector-wide promotion policies, investment codes, foreign exchange allocation systems, tax and tariff incentives, etc. Unless their importance is explicitly recognized, the revised Investment Code, for example, will in all likelihood favor factory enterprises and ignore the artisanal sector.

The new administration at MIEM has taken some important steps to liberalize the industrial policy environment and encourage greater private participation in the economy. Should this liberalizing trend continue, industrial promotion efforts in Madagascar could be quite effective. This shift in policy coincides with AID's interest in promoting the private sector, and it is a direction AID will want to encourage.

Two policy areas outside the industrial sector have a strong influence on manufacturing potential. At the macro level the balance of payments difficulties and the consequent shortage of foreign exchange critically hamper industrial performance. In the agricultural sector declining real producer prices have been largely responsible for the short supply of agricultural inputs into the industrial sector. Both of these are major causes of the currently high levels of excess capacity in manufacturing enterprises for which corrective policy measures must come from outside the industrial sector itself. Until these measures are taken, direct industrial promotion efforts will be of only limited effectiveness.

Institutional Framework. There are six key institutions involved in industrial promotion: the Ministry of Industry, Energy and Mines (MIEM), the Industrial Investment Bank (BNI), the National Center for Malagasy Artisanat (CENAM), the Economic and Technical Center for Artisans (CETA), the Society for the Study and Implementation of Industrial Development (SERDI), and the National Institute of Promotion Training (INPF). The functions of these institutions and their relationships with each other are described in "Recommendations on Potential USAID Assistance to Madagascar's Industrial Sector" by Steve Haggblade (REDSO/ESA, Dec. 14, 1983).

This institutional structure is still in a state of flux due to the recent (July 1983) creation of the MIEM, which is becoming the focal point for industrial promotion. It is responsible for policy formulation and for coordinating the work of the implementing organizations. The absorptive capacity of the six institutions supporting industrial development appears to be high relative to that found in other African countries, but any future support to them should be based on a careful examination of the currently evolving relationships and responsibilities and an assessment of staff qualifications and development needs.

Role of External Donors. There are three key donors in the industrial sector: UNIDO/UNDP, the ILO and the World Bank. UNDP is funding two projects implemented by UNIDO, one of which is designed to help the MIEM 1) define an appropriate policy and institutional environment for promoting small and medium-scale factories and 2) set up a section to promote small and medium-scale factories within the Directorate of Industry and Artisanat. In addition, UNIDO plans to bring a 3-person team to Madagascar in March 1984 to study the staffing and staff development needs of INPF and SERDI.

The ILO provides, through CENAM, the focus for promotion of artisan activities, and it also works with INPF. The ILO was largely responsible for launching CENAM, to which it continues to provide technical assistance. It also provides technical assistance to INPF, with another team scheduled to arrive in February 1984.

World Bank assistance to the industrial sector is currently limited to a line of credit at the BNI and assistance in accounting training, but they have played a lead role in lobbying for industrial policy reform. Periodic evaluation teams have conducted analyses used by the Bank to recommend reforms in industrial pricing procedures, regulatory procedures, export promotion incentives, and the devolution of parastatals to the private sector.

Major Information and Analytical Gaps. Three main information gaps are important for decisions on how and whether to intervene in the industrial sector. General information about the manufacturing subsector will soon be provided by a detailed study of factory manufacturing currently underway by SERDI, under contract to the UNIDO Small and Medium Industry Project. The results of this study are likely to be very valuable, since it is based on a nation-wide survey of 87% of all factory manufacturing establishments. It aims particularly at identifying the needs of small and medium-scale factory enterprises. The survey work on which the report will be based was completed in September 1983, so the information will be of recent vintage. It will provide the first breakdown of the characteristics and needs of small and medium as opposed to large-scale manufacturing.

The second information gap concerns the staff capabilities and development needs of the six key industrial promotion institutions. SERDI and INPF are to be the subjects of UNIDO and ILO studies during the first part of 1984, but the other four institutions remain to be analyzed.

A third information gap is important to any consideration of CIP assistance in support of manufacturing activity. For example, while metal imports for the manufacture of agricultural implements should probably be given some priority, it is important to ascertain whether in fact such metal and tools are in short supply, in view of some conflicting evidence in this regard. An estimate of the proportion and geographic distribution of agricultural tools produced by artisans and factory units would also be helpful.

3. Transport*

Types of Activities. The Madagascar road network consists of about 50,000 km of roads, of which less than 10 percent are listed as paved, slightly more than 10 percent are designed earth and gravel, and 80 percent are unpaved feeder roads and tracks. The main north-south artery, Route Nationale (RN) 4 and RN 7, stretches from the regional center of Mahajanga on the northwest coast, through Antananarivo, to the south-central regional center of Fianarantsoa, covering less than half the total length of the island. Other paved roads branch off of this central trunk or are found around the major coastal towns. All six regional capitals are connected with all-weather roads, but some productive and potentially productive areas on the east and west coasts are not. Most of the roads in the southern region are earth roads or tracks. Since the climate is dry they are usually passable by small vehicles, although

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*The discussion in this section is based primarily on material contained in two recent reports by the World Bank: Madagascar Transport Sector Memorandum, 2/4/83; and Staff Appraisal Report, Democratic Republic of Madagascar Sixth Highway Project, 6/2/83.

the larger ones may have more difficulty.

The country's total vehicle fleet is estimated at 30,000 vehicles, about 43 percent light and 57 percent commercial. Of the latter, there are about 11,000 utility, 1,000 buses and 5,000 heavy truck vehicles, and the heavy trucks carry about 80 percent of all freight. Since 1980 the severe shortage of imported spare parts has led to a sharp decline in the number of useable vehicles.

The road transport industry is composed of state-owned and private enterprises, a large number of individual owner-operators and a few cooperatives. The state owns about 40 percent of the heavy trucks; but it controls the movement of all basic commodities and has created a state trucking enterprise in each administrative region. The state enterprises generally lack adequate maintenance facilities and trained personnel, however, and their operations have not been efficient, while the magnitude of state involvement and controls have discouraged new private investment in this sector. Passenger transport is even more closely regulated. Individual carriers may operate independently for only one year, after which they must join a cooperative.

The railway consists of two, unconnected, single-track systems totalling about 860 km. The most important is the northern system of about 700 km which connects the capital region of Antananarivo to the principal port of Toamasina on the east coast, with spurs to Antsirabe, an industrial and population center south of the capital, and to Lake Alaotra, an agricultural region and the location of the chromite mines north of Moramanga. The southern system (163 km) connects the southern plateau agricultural region of Fianarantsoa to the southeastern port of Manankara. The rolling stock and locomotive fleet are adequate for the present traffic, although their condition and that of the track is very poor due to poor maintenance.

Madagascar depends on maritime shipping for almost all of its foreign trade and on coastal shipping for transporting goods between many areas of the country without all-weather road links. Four main ports handle about 85 percent of all the traffic: Toamasina on the east coast (66%), Mahajanga in the northwest (11%), Antseranana (Diego-Suarez) on the northern tip of the island (4%), and Toliara in the southwest (4%). Diego-Suarez is well known as one of the finest natural harbors in the world, which gives it some strategic military, as well as commercial, significance. The main international port of Toamasina serves the economic and population concentrations of the central highlands via the railway to Antananarivo. It has adequate equipment for present traffic levels, but the equipment of the secondary ports is mostly old and in poor condition.

Because of its large size, the distances between population centers, the rugged terrain and the poor condition of surface transportation infrastructure and vehicles, Madagascar has developed a dense domestic air transport network. It has 56 airports, of which 5 are suitable for international traffic, another 12 are built to all-weather standards, and the rest gravel or grass strips.

Institutions Involved. Several ministries and agencies share responsibility for the transport sector, but the two most important are the Ministry of Transport, Supplies and Tourism (Ministere des Transports, du Ravitaillement et du Tourisme, MTRT) and the Ministry of Public Works (Ministere des Travaux Publics, MTP). MTRT is responsible for road, rail, air and water transport. It operates all airports and ports, except the Port of Toamasina, and oversees several autonomous government transportation agencies. It is also responsible for transport safety, tariffs, regulation and control and for directing the transport of basic commodities to all parts of the country to prevent shortages. MTP is responsible for planning, building and maintaining highways, ports and airports.

Among the other agencies with responsibility for transport policy, operations and services, the most important ones are: 1) the Ministry of Industry and Commerce (MIC), which controls most of the state-owned enterprises that collect and market crops, determines, jointly with the Central Bank, foreign exchange allocations for importing road transport, maintenance and construction equipment and spare parts, establishes policies for the importation and assembly of motor vehicles, and controls the prices of basic commodities, thereby affecting transport tariffs; 2) and 3) the Ministry of Agricultural Production and Agrarian Reform (MPARA) and the Army operate the largest state-owned road transport enterprises; 4) the Directorate General of Planning determines inter-sectoral priorities; and 5) each regional government (faritany) operates its own regional trucking company.

State enterprises dominate the transport of commodities by road. Some are specialized by region or commodity, others are trading firms, such as those responsible for exports, that undertake the collection and delivery of the products they are concerned with. In principle there is free entry into the freight transport industry, but there have been no new private entrants during the last five years due to the unavailability of new vehicles, lack of spare parts, and the government's policies of greater state control. The existing private sector transport operators, for these same reasons, have experienced a sharp decline in their profitability, their operational fleet and the level of their activities.

The passenger transport system is mixed, consisting of private owner-operators, cooperatives and private, semi-public and public bus companies. Entry is fairly easy. Regulations and urban fares are fixed by the MTRT and inter-urban fares are based on an official minimum-maximum rate system.

The railway, the Port of Toamasina, the two main maritime and coastal shipping firms, and Air Madagascar are autonomous state enterprises. Other ports are administered directly by MTRT.

Recent Transport Problems. The existing road network has badly deteriorated during the last decade or more and is presently in very poor condition, in all parts of the country. In addition, as noted above, not all productive areas in the country are yet connected with all-weather roads. The deterioration is due to a combination of causes: accumulated weather-related damages, continual use by overloaded trucks, and an almost complete lack of maintenance. Many rural roads are only barely, if at all, passable by motor vehicles and, as a result, the distribution of agricultural inputs and incentive consumer goods and the collection of harvested crops is severely hampered.

The general scarcity of both investment capital and government operating funds is compounded by the high costs associated with the maintenance, rehabilitation or new construction of roads in Madagascar due to the ruggedness of the terrain and to the high annual rainfall patterns of many areas. The shortage of foreign exchange for equipment and spare parts and the lack of sufficiently qualified engineers and other technical personnel have also contributed to the problem.

The condition of the railway systems has also deteriorated and the efficiency with which they have been operated has declined during the last several years, causing a marked (25%) reduction in total freight carried between 1976 and 1981. Both the rolling stock and the track are presently in poor condition due to bad maintenance.

Government Objectives.* The key GDRM objective in this sector is "to satisfy transportation requirements, in terms of quantity, quality and frequency, at a reasonable cost to the population, while contributing to the development of the country as a whole." Its immediate priorities will focus on rehabilitation of existing capacity of both roads and vehicles (with priority foreign

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*Government objectives and plans for this sector are explained in GDRM, "Development Prospects, Policies and Programs 1983-1985," Antananarivo, March 1983, pp. 31.

exchange allocation for necessary supplies and spare parts), particularly on those routes serving productive agricultural and industrial areas. Also to be given priority are new or rehabilitated roads which will open up isolated regions and facilitate the supply of staple goods to local communities.

These sector goals and priorities correspond well with the AID desire to encourage a pattern of development that would simultaneously stimulate efficient growth of overall production and benefit the poorer elements of the population, who are mostly residents of rural areas. An improved transport system is also essential for the development of the private sector.

Corrective Measures Needed and Underway. The World Bank Transport Sector Memorandum identified the following six key requirements for sector improvements in Madagascar, listed in order of priority:

1) The need for financial recovery for transport enterprises, including the railways, the national airline and parastatal trucking companies;

2) The need for increased efficiency in the road transport industry, including the removal of excessive state controls and a clearer definition of the role of public and private sectors;

3) Improved pricing policy in the sector;

4) The need for a shift of emphasis from new investments to rehabilitation and maintenance;

5) Improvement of sector planning and coordination; and

6) The need for increased manpower training and technical assistance.

The World Bank-GDRM dialogue induced by the sector review resulted in a substantial change in the Government's transport sector strategy. It has stated its intention to permit private transporters to compete on equal terms with the public sector, to reduce public trucking fleets by selling those trucks assigned to the provincial trucking companies, and to deregulate freight transport by December 31, 1984. There has been a marked shift in planning emphasis from new investment to rehabilitation and maintenance, particularly of roads.

The GDRM has selected a limited road network of about 10,000 km, or one fifth of the total, representing the key economic roads of the country, for priority rehabilitation and maintenance. The World Bank-supported Fourth, Fifth and Sixth Highway Projects in Madagascar are assisting in this effort.

The Sixth Highway Project also includes US$5 million in foreign exchange allocated for spare parts to meet the immediate needs of private truckers, and the GDRM has decided to allocate at least US$15 million annually to meet the normal, recurrent spare parts needs of the commercial vehicle fleet. Additional assistance with the recurring foreign exchange requirements is expected to be provided by FAC.

Technical assistance, manpower skills training, and improved investment planning and coordination are being undertaken in various programs assisted by the World Bank highway and railway projects and by FAC projects.

Institutional and Policy Constraints. Efficient investment and operations in the transport sector have been hampered by the lack of coordination among the numerous agencies with overlapping responsibilities for various activities within the sector. While a recent GDRM decision to increase the status of the Planning and Programming Unit in the MTRT's Directorate of Transport, which is charged with transport sector planning, and the recent transfer of the DGP, which determines inter-sectoral priorities, from the Ministry of Finance to the Office of the President will help achieve better coordination, the overlapping responsibilities of several different agencies will continue to delay decisions and hamper needed activities.

The continued state control over the movement of goods and tariffs will constrain the development of a more efficient transport system until the sector is deregulated at the end of 1984. Even after such deregulation, however, it will be difficult to achieve commercial-level efficiency of operations (as is planned) among the large trucking parastatals remaining under government control, although the private sector should be able to improve.

The lack of adequately trained and experienced technical and managerial personnel will continue to hamper the achievement of efficient transport operations and maintenance, particularly in the public sector. Although several technical assistance and training programs are either currently underway or planned, the needs are still greater, and it will take several years for the impact of such training to be felt.

Finally, economic, foreign exchange allocation and fiscal policies are to a significant degree responsible for the critical resource constraints represented by insufficient foreign exchange, capital and operating expense funds for necessary investments in rehabilitation, maintenance, construction, and for the importation of needed equipment and spare parts. Improvements in the transport sector will continue to be constrained until adequate policy reforms are implemented to reduce the fiscal and balance of payments deficits.

Role of External Donors. The road transport portion of the 1983-85 Public Investment Program includes 18 priority sub-projects or programs for which external financing has already been obtained, representing about US$140 million, or three-fourths of the total amount planned. Seven of these are ongoing activities financed by the World Bank Group, AfDF, Kreditanstalt fur Wiederaufbau (KfW), the Norwegian Agency for Development (NORAD), and China. China, for example, is financing the realignment and reconstruction of the "lifeline" highway from the Port of Toamasina to the capital city, which parallels the old railroad. The other eleven sub-projects are proposed for funding by the World Bank Group, FED, AfDF, CCCE, FAC and the USSR in a coordinated effort led by the World Bank. Those projects not yet funded, about US$42 million, will have to be deferred unless additional sources of external funding are found. In addition, the World Bank and FAC are helping to finance the rehabilitation of the railways, including technical assistance and training to improve overall management, operations and maintenance.

In addition, both the World Bank and FAC have been assisting the GDRM to reappraise its transport sector strategy and policies; and they are providing technical assistance and training to help upgrade the GDRM capacity for transport sector planning, coordination and management.

Since the key resource constraints are foreign exchange and investment capital, the role of foreign donor funding is critical to the overall effort.

Assessment of Development Prospects. The institutional constraints and physical difficulties facing road and railway rehabilitation and development are severe, but given sufficient time, persistence and funding they can be overcome. The presently high priority assigned by the GDRM to the necessary tasks and its willingness to review current policies and institutional arrangements with an eye to further significant reforms, in addition to those already undertaken, together with the substantial financial and technical support being received from foreign donors, bodes well for eventual success in the medium-term effort of rehabilitation and improved management. In the longer term, the key constraint to opening up isolated areas and linking all potentially productive areas to their markets is likely to be insufficient investment capital for upgrading existing dirt tracks and farm-to-market roads.

Major Information and Analytical Gaps. This sector has been subjected to considerable analysis from the GDRM and its principal donor agencies during the last few years. Both the FAC and the World Bank Group have provided technical assistance to help the GDRM conduct its own analysis, and the World Bank has conducted extensive analyses of its own in preparation for its *Madagascar Transport Sector Memorandum* and its Sixth Highway Project appraisal, both of which were completed in early 1983.

The major remaining gaps in information pertaining to the transport sector have to do with the lack of good data on land use and agricultural potential in the various areas competing for improved or new roads, upon which more rational road building and maintenance priorities could be based.

D. Poverty Groups and Their Current Situation

Considerable efforts have been made over the last two decades to expand the public education system and raise the adult literacy rate. The primary school enrollment ratio was increased from 52 percent in 1960 to 100 percent in 1980, while the secondary school ratio went from 4 to 12 percent. An acute shortage of trained teachers has been reflected in the persistence of a high (61) pupil-teacher ratio in primary grades, and the education system suffers from poor quality in other respects, as well. The adult literacy rate was estimated to be around 50 percent in 1980, up from 39 in 1970.

Life expectancy at birth remains short, at 48 years in 1981 (up from 37 in 1960), and it compares unfavorably with the 58-year average of all low-income countries. This plus other evidence indicates that, despite the government's recent efforts to improve living conditions--and much has been accomplished during the last several years--the overall health status of the population leaves much to be desired. The crude death rate is relatively high at 18 per thousand, compared with an average of 12 in low-income countries, although this is down from 27 in 1960. Official infant mortality figures show considerable improvement in dropping from 109 per 1000 live births in 1960 to 69 in 1981, and the latter compares favorably with the average of 99 for all low-income countries.* Some analysts believe it is more likely to be still around 147, however.** It is still unnecessarily high, whichever figure is more nearly accurate, since a large portion of the deaths result from prevent-

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*World Bank, World Development Report 1983, World Development Indicators Annex
** Greeley, Edward, op. cit., pp. 17-18.

able diseases. Despite its relative poverty, and thanks partly to the efforts of the government to assure that satisfactory supplies of food are always on hand, even if it requires the expenditure of scarce foreign exchange for imports, the overall per capita calorie supply has remained high (at 109 percent of nutritional requirements in 1980, for example). Estimates of actual nutritional status countrywide are conflicting, but moderate malnutrition seems to be prevelant among a large portion of the child population, probably due to both maldistribution of income and socio-cultural factors.*

There are no published income distribution data in Madagascar for recent years. Tabulation, analysis and publication of the 1978 Household Income and Expenditure Survey, conducted by the Central Bureau of the Census, has been delayed for lack of funds and qualified personnel. The World Bank has published an estimate indicating that half of both urban and rural populations receive incomes below the absolute poverty income level. There is no indication how these estimates were derived, however.**

The same incidence of poverty for both urban and rural areas would imply that roughly 81 percent of all poor households presently reside in the rural areas, and the remaining 19 percent in the urban areas. Within the urban areas, it is perhaps not so coincidental that roughly half of the workforce is classified as deriving its main source of income from the non-modern sectors or as unemployed.

Within the rural sector there are few data to indicate whether certain categories of farmers or workers are significantly worse off than others, but one can presume that those in the "modern" rural sector receive somewhat higher incomes than those in the "intermediate" or traditional sector. The former accounted for only an estimated 2.7 percent of total rural employment

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* Ibid., p. 19.

** World Bank, Madagascar Economic Memorandum, 11/3/81, "Madagascar - Social Indicators Data Sheet" in 1976. Of the more traditional activities, 92 percent of the employment was provided by agriculture, and, although small pockets of poverty no doubt exist among families employed in other rural activities, it is fairly clear that the vast majority of the poor in Madagascar live in traditional farm households.

Until the 1978 Survey can be properly tabulated, published, and analyzed there is no way to compare the relative incomes of the different farming, forestry and fishing categories to determine which groups in which parts of the country might be better or worse off than the others. We do have, however, at least rough estimates of the proportions of farmers who derive their income mainly from the principal crops.

About 84 percent of all families in Madagascar farm, even though some members of those families may also be engaged in other economic activities as well, especially during the off-seasons. It is thought that about 70 percent of all families, or 83 percent of all farm families, grow the staple foodgrain of rice on farms that average less than 1.0 hectare each. Around 20 percent of all farmers are engaged in coffee production, also almost entirely on small farms of between 1.0 and 1.5 hectare each (of which an average of 0.6 ha. is devoted to coffee). About 14 percent grow the other export crops of cloves, pepper, vanilla and/or cocoa, also on very small plots of land. Cotton hectarage is almost evenly divided between large plantations averaging 170 hectares each and around 10,000 smallholder plots averaging less than 1.0 hectare. (The large plantations account for about three-fourths of total production, however, achieving much higher yields than the smallholders.) Sugar cane is grown almost exclusively on four large government-operated estates.

Traditional fishing families number only about 6,000, less than half of one percent of the number of farming families. The number of families that raise livestock is quite large, since the cattle herd itself numbers more that 10 million and most of them are in traditionally small herds raised in conjunction with crop farming. No estimate of the actual number of families raising livestock could be found, however.

E. Foreign Donor Assistance

Aggregate data on foreign assistance to Madagascar after 1981 is not available. For the four year period 1978-81, Table 1 shows that total official development assistance (ODA) commitments decreased after 1980, although some donors, notably France and the U.N. agencies, increased their concessional assistance throughout the period.

France has traditionally been the largest bilateral donor of external concessional assistance to Madagascar. Between 1978 and 1981 French ODA commitments averaged about 25 percent of all bilateral and multilateral ODA combined, and almost 50 percent of bilateral ODA. Indeed, Madagascar has become the second largest recipient of French aid, after Senegal.

Over 80 percent of French aid (excluding a structural adjustment loan) was concentrated on three sectors in 1982:*

1. Rural Development, including support for agricultural production and research, as well as water and forestry resources. Among others, FAC produced a study on the supply of inputs to the rural sector.

2. Industry, in particular agro-industries such as sugar and flour milling. France also extended support to the textiles and paper industries and provided loan money for small industry. France is supporting the extension of the oil refinery and has participated in the financing of the Andekaleka Hydroelectric Project.

3. Transport and Communications. France's contribution in the transport sector has been focused on railroads, providing railroad construction and maintenance equipment as well as rolling stock and spare parts. Technical assistance has also been provided to encourage improvements in railroad man-

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*Fonds D'Aide et de Cooperation, Report on 1982 French Assistance to Madagascar

Table 1. MADAGASCAR: ODA Commitments by Major Donor
(in millions of U.S. dollars)

	1978	1979	1980	1981
France	36.9	48.2	62.5	70.1
Germany	1.3	23.4	6.4	12.5
Switzerland	10.7	1.0	2.3	4.4
U.S.	1.4	2.1	--	10.7
OPEC Bilat.	24.0	34.2	9.4	--
Subtotal (Bilateral)	99.7	123.1	105.1	121.1
EEC (FED)	14.1	12.3	55.8	19.1
IBRD	33.0	49.0	61.5	29.9
AfDF	--	6.1	--	19.3
U.N.	4.4	7.2	10.4	12.4
OPEC Multi.	10.0	6.5	5.0	10.0
Subtotal (Multilat.)	61.5	87.6	132.6	90.8
Total ODA	161.2	210.7	237.7	211.9

Source: OECD, Geographical Distribution of Financial Flows to Developing Countries, 1982.

agement practices and to help in the development of a transportation plan.

France has also been active in telecommunications, assisting in the rehabilitation of the telephone system and providing a regional transmitting system in the southern part of the country.

The DGP provided a list in August 1983 indicating that about US $200 million of ODA is committed to current projects.* About half of this amount is earmarked for agricultural production, including related infrastructure rehabilitation (e.g. irrigation networks) and livestock. Education and training (US $30 million), forestry (US $23 million), rural credit (US $16 million), and health (US $11 million) account for most of the remainder. Project-related technical assistance, technical studies, commodity imports, and emergency relief operations amount to US $11 million.

In terms of exposure by donor, the IBRD is the most heavily involved in

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* A few projects of under US $100,000 were omitted.

projects, at a level of US $120 million committed over an average period of four years. The other major donors are the AfDF ($26 million), France ($17 million), IFAD and the UN agencies (approximately $14.5 million each), and Germany ($6.7 million).

Surprisingly, the information provided makes no mention of projects undertaken in the transport sector. These would include at a minimum World Bank and Chinese-assisted highway projects as well as French assistance to the railroads, mentioned above. Current IBRD transport sector funding alone (Highway Projects V and VI) amounts to almost $70 million, and three other projects not mentioned (Industrial Bank Credit, Heavy Oil Exploration, and Water/Sanitation) total another $37 million.* Thus the information provided in Table 1 and on the IBRD exposure reported above appears to be understated by over $100 million.

As of this writing we have no information about possible new credits which might be made available for Madagascar by the IMF.

III. Program Alternatives and Strategy

As indicated in the analysis summarized above, the most urgent needs faced by Madagascar today are 1) to increase the availability of foreign exchange for priority imports and 2) to increase agricultural production for export, for industrial use as inputs, and for food import substitution. Even in the industrial sector, which should be counted on for long-run growth and productive employment generation, the most urgent current needs are the same: 1) foreign exchange for imported spare parts, equipment, and other vital inputs and 2) higher levels of locally produced agricultural inputs.

In selecting the areas of possible AID support, the legislation requiring AID to focus on the problems and improving the economic situation of the poorer majority of the population must be considered together with 1) the need

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* IBRD, "Madagascar, Cotton Development Project Report," 12/5/1983, Annex II.

to respond to the country's most urgent assistance requirements--balance of payments support, economic stabilization and rehabilitation--and 2) the desire of the U.S. Government, as articulated by the Ambassador and his staff, to show visible and timely support for the GDRM's recent opening to the West and for its significant program of economic reforms, which are beginning to mitigate the formerly militant socialist policy stance with a more pragmatic and realistic approach. In response to these considerations, this CDSS proposes to focus the AID program on the agricultural sector for a number of reasons:

1) Privately-owned, smallholder farms predominate.

2) Even with inadequate data on group rankings, it is clear that the major groups of poor are engaged in agriculture and reside in the rural sector.

3) The potential for improved production and productivity in agriculture appears to be good.

4) Such improvements can help meet the most urgent needs for increased export earnings, import substitution, and domestic industrial inputs.

5) Quick-disbursing and highly visible balance of payments support, currently sought as a priority form of assistance by the GDRM, through the recommended Commodity Import Program in support of urgent agricultural requirements, can demonstrate USG good will and political support in the current crisis.

6) The U.S. has some comparative advantages in providing the kinds of technical expertise and training Madagascar needs to improve its agricultural production, particularly in macroeconomic and agricultural sector policy analysis, farming systems research, rice cultivation, and in the construction and maintenance of small-scale water control and rural road infrastructure.

By the end of the five-year FY 86 CDSS period, which will be FY 1990, the proposed AID program should have helped the GDRM achieve the following agricultural sector goals:

1) Increase agricultural production.

2) Increase agricultural exports and import substitution.

3) Increase the domestic production of industrial crops.

4) Increase per capita real incomes of small farmers and rural workers, which involves the equitable distribution of increased production returns (the numerator) and a reduction in the population growth rate (the denominator).

In addition, the AID program will have demonstrated friendly, sensitive and perceptive U.S. Government support, in collaboration with other foreign donors, for a technically sound, socially beneficial, and politically attractive agricultural development program. It will also have helped improve the institutional capability of the GDRM itself to analyze and manage its macroeconomic, agricultural, and supporting sector policies and development programs.

It is expected that this can best be accomplished by focusing the AID program of assistance on the following specific objectives:

1) An easing of the foreign exchange constraint limiting imports of farm, road maintenance and transport equipment and spare parts and of key inputs for agriculture and industries supporting agriculture.

2) Improved Malagasy technical and institutional capability to analyze problems and policy alternatives and to design effective development programs.

3) Improved Malagasy capability to conduct and utilize agricultural research to increase yields on existing farms.

4) Rehabilitation and sustained maintenance of selected rice irrigation systems.

5) Rehabilitation and sustained maintenance of rural roads and railway freight-handling facilities servicing selected rice and export crop areas.

6) Increasing GDRM awareness of the importance of family planning activities to the success of raising per capita incomes and of the overall development effort, and, as desired by the GDRM, improving the technical expertise of government and voluntary agency personnel working in family planning programs.

The activities AID could support in pursuit of these objectives include:*

1. <u>Balance of Payments Support</u>

a. A Commodity Import Program to finance imports which could include critical spare parts and selected equipment for farm, road maintenance and transport activities, as well as key inputs needed by agriculture and small and medium-scale industries, including artisans, supporting agriculture. In view of the urgency and the political, as well as the economic, importance of this type of support, AID should make every effort to secure early ESF funding for it, beginning even in FY 1984 if possible. (CIP)

b. Continued PL 480 imports of selected food commodities required to cover shortfalls in domestic production, with careful attention to their effect on domestic production incentives. (PL 480)

2. <u>Macroeconomic Policy and Sector Analysis and Management</u>

a. Training and technical assistance in the identification and analysis of key problems and policy alternatives affecting agriculture and livestock production at the macroeconomic level and at the agricultural sector level, also with respect to supporting industries in agro-processing and agricultural inputs, in related forestry, environment, and rural energy fields, and in rural road construction and maintenance--all such programs designed to improve GDRM institutional capacity to conduct such analysis and training itself. Such assistance can include:

1) Selected graduate-level and other technical training abroad. (AMDP, DA, LC)

2) Short-term in-service training in country. (DA, LC, AMDP)

3) Collaborative studies done with foreign and local technical assistance. (DA, LC)

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* Suggested funding modalities are indicated in parentheses--DA, development assistance project; CIP, commodity import program; AMDP, African Manpower Development Program; PL 480, Public Law 480 concessional food imports; and LC, local currency generations from CIP and PL 480 programs.

4) Assistance to the National Institute of Statistics and responsible Ministries to upgrade the quality and timeliness of data needed for problem and policy analysis and for the necessary monitoring and impact evaluation of the GDRM development program (DA, LC)

b. Technical assistance and training to improve GDRM management of economic policies, planning and development programs at macro, agricultural and related sector levels (including agro-industry, transport and rural energy activities). Such assistance can include:

1) Improved management training programs for the DGP and Ministry-level officials dealing with agriculture, livestock, industries, public works, and energy, possibly working through IMaTeP (Insitut Malgache des Techniques de Planification), which has recently been established by the GDRM to conduct such training. (DA, AMDP)

2) Improved domestic capacity to provide management, skills training, and other forms of technical assistance to artisanal, small and medium-scale industries processing agricultural products or providing farm implements, etc., possibly working through INPF, SERDI, private voluntary organizations (PVO's), and/or private consultants. (DA, LC)

Both b.1) and b.2) could include:

a) Selected long-term training abroad. (DA, AMDP)

b) Short-term in-country training in critical skills. (LC, DA)

c) Funding of feasibility studies and technical consultants in critical fields (including parastatal divestiture if desired). (DA, LC)

d) Technical assistance for collaborative studies into training and technical needs. (DA, LC)

3. <u>Rice Research for Increased Yields</u>

a. Training and technical assistance by IRRI technicians to test and select off-shelf rice varieties for immediate use by Malagasy farmers to increase yields under existing farmer systems, followed by additional recommendations on the modifications in current farming practices needed to maximize utilization and productivity of existing and introduced rice varieties. This could include:

1) Short-course training of FOFIFA staff at IRRI on rice production. (DA, AMDP)

2) Short-term in-country training in rice research and production.(DA,LC)

3) Technical assistance from IRRI to do varietal selection and testing for general distribution. (DA, LC)

4) Multiplication for distribution of selected rice varieties.(LC,DA,CIP)

b. Multi-donor program (possibly U.S., World Bank and France) to rehabilitate and reorient the agricultural research system with a initial effort on developing a farming system approach to rice production research. This effort could include:

1) The rehabilitation of research station infrastructure (labs, housing, experimental fields). (CIP, LC)

2) Selected graduate-level and other technical training for existing staff. (AMDP, DA, LC)

3) Research management, administration, accounting and other supportive training abroad and in-country. (AMDP, DA, LC)

4) Technical assistance in reorganizing and restructuring the agricultural research system. (DA)

5) Recurrent cost funding of operational costs for diagnostic, production and basic research, field trials and outreach programs. (LC)

4. <u>Rehabilitation and Maintenance of Selected Rice Irrigation Systems.</u>

Rehabilitation of selected small and medium-scale rice irrigation facilities to design and test more effective local administrative and social mechanisms for sustained operations, maintenance, and cost recovery. This would involve:

a. Local self-help and contract efforts for rehabilitation. (LC)

b. Technical assistance in water management and organization. (DA)

c. Replication of lessons learned through management training as in 2b above. (LC, DA)

5. Rehabilitation and Maintenance of Rural Roads and/or Railroad Freight-handling Facilities serving rice production and export crops, with emphasis on those needed to complement efforts in (4). (This assistance can be tailored to support other elements of the program and can utilize CIP for equipment, spare parts and hand tools, DA and AMDP for training and technical assistance, and LC for local costs.)

6. Support for Start-up Family Planning Activities upon request, responding to requests for technical assistance and training from centrally-funded population programs whenever possible. (DA)

The modest and carefully focussed program described above would be feasible for AID with the limited annual funding levels suggested below and with only a small AID staff based in Antananarivo, with support from REDSO/ESA. It will involve a continuation and possible expansion of current AMDP and PL 480 programs, with some redirection of the training and the uses of the local currency generations. It will also involve a continuation of the recently approved support for IRRI activities in Madagascar.

The potential for a coordinated foreign donor effort in Madagascar is fairly good. The World Bank and U.N. agencies are doing a fair amount of coordination already, with the World Bank leading the Consultative Group Meetings and presently coordinating a multi-donor effort in road rehabilitation and maintenance and with the ILO and UNIDO taking the lead in efforts to support small and medium-scale and artisanal industries. The major Western donors appear to be in agreement about the need to encourage Madagascar to continue economic policy and marketing reforms. Whatever projects and technical assistance AID decides to support, it must be careful to do so in close coordination with the other donors.

FY 85 Development Assistance. The proposed FY 1985 DA project is predicated on the assumption that the availability of CIP funds in FY 1984 will continue in FY 1985, thus relieving the political pressure to use FY 85 DA funds for quick-disbursing, visible, productive or balance of payments support activities so that they can be directed toward longer-term development objectives.

The CDSS team recommended that the FY 1985 DA project begin the process of institutional development by supporting a series of selected and coordinated training, data collection and analytical activities, including possible pilot and experimental interventions into the agriculture and/or transport sectors. Possible sub-activities could include: rehabilitation of small irrigated rice perimeters combined with organizational experiments to determine socially and economically viable arrangements for sustained maintenance (possibly under PVO management); rehabilitation and maintenance of feeder roads with emphasis on determining how to achieve sustained maintenance efforts; support for priority data collection and statistical analyses; and training to improve institutional capacity in policy and project analyses, as well as other similar activities not yet identified. Such activities would tend, in and of themselves, to be discrete and self-contained, but would also serve as building blocks for follow-on projects during the CDSS period. At the same time, should it become necessary, such activities could be readily terminated without reducing the value of the work already done. REDSO/ESA plans to submit the PID for this project for AID/W approval in June 1984 and, assuming PID approval, will prepare the project paper by March of 1985.

PL 480. From the middle 1960's to 1981, PL 480 assistance to Madagascar has been in the form of a Title II food program implemented by Catholic Relief Services (CRS). CRS presently provides food assistance totalling US$1.13

million to 62,200 recipients through its MCH, school feeding and food-for-work programs. Bilateral Title II programs were initiated in 1981 and 82 as emergency relief following drought and severe flooding.

PL 480 Title I programming began in 1981, with $5 million of rice. A similar agreement was entered into in 1982. In 1983 two agreements totalling $8 million were signed for $7 million of rice and $1 million of vegetable oil. The initial 1984 allocation is $8 million, but end-year programming might permit $10 million of rice and vegetable oil.

For 1985 Title I assistance totalling $8 to 10 million is proposed, with larger quantities of vegetable oil and perhaps wheat. The CRS program is expected to remain at about the current level, and The Seventh Day Adventist World Services (SAWS), is expected to begin a small MCH program in 1985, using $280,000 worth of PL 480 commodities.

For the 1986-1990 period, continued Title II support to SAWS and/or CRS activities and concessional Title I sales of $8 to 10 million annually are recommended as balance of payments and development budget support, with wheat and vegetable oil gradually replacing rice, which will be phased out by 1988. Local currency PL 480 counterpart funds will continue to be programmed to support the PIP, economic stabilization, and the rehabilitation and expansion of the productive sectors of the Malagasy economy as before, but will be refocused to support the assistance strategy outlined above and to complement the activities funded from the DA account.

<u>PL 480 Issues.</u> Madagascar will need to continue importing rice for the next few years, hopefully on a declining basis, until domestic rice farmers respond to the pricing and marketing reforms with sufficiently greater production to satisfy domestic demand. Rice imports declined from 357,000 MT in 1982, or 22 percent of total consumption, to 195,000 MT (more than half of it on concessional terms) in 1983, or about 13 percent of total consumption. Imports

of vegetable oil amounted to 14,255 MT in 1983, with only 10 percent of it concessional. Madagascar now imports about 70 percent of its vegetable oil, domestic production having declined by more than 50 percent since 1973, due largely to price disincentives.* Very little wheat is grown in Madagascar, and imports of wheat flour averaged 41,700 MT annually from 1977 to 1979.**

There is some question as to whether concessional rice imports have had a negative effect on production incentives. Responding to the question requires conjecture about what would have happened in the absence of concessional imports. A direct disincentive effect would exist if concessional imports resulted in a greater supply of rice and a lower producer price for paddy than would have been the case without concessional imports. If, in the absence of concessional imports, the GDRM would have increased commercial imports by an equivalent amount and sold them for the same prices, there would be no direct disincentive effect. Looking at the evolution of imports over the past five years leads one to believe that concessional imports may well have had a direct disincentive effect. The last two years, with large amounts of concessional rice imports, have also been the years with the highest total imports. There is general agreement that 1982 rice imports exceeded needs, and concessional imports accounted for a substantial portion of the total. Parallel market prices for rice were depressed in 1983 when some of the surplus was dumped on the market.

An indirect disincentive effect can occur when concessional imports permit a government to postpone making needed policy reforms. If government policies, such as the maintenance of low domestic prices and an overvalued exchange rate, are discouraging production and leading to increasing imports, concessional food aid reduces the foreign exchange cost of those policies,

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* IMF, "Madagascar - Recent Economic Developments," Dec. 2, 1983, p. 8; and Don Brown and David Atwood, <u>op.cit.</u>, p. 4 and Table 4.
** World Bank, "Madagascar Economic Memorandum," Nov. 3, 1981, p. 65.

making it easier for the government to postpone policy reforms. It does not appear this has occurred in Madagascar. Policies blamed for discouraging rice production were initiated and sustained during a period of rising commercial imports when there were no concessional rice imports. On the other hand, the recent growth in concessional imports immediately preceded a significant redirection in rice marketing, pricing and exchange rate policies.

While concessional rice imports may have had a direct disincentive effect over the past two years, this effect could be prevented in the future if the GDRM would agree to two conditions in the sale of such imports on the domestic market. First, the domestic retail price of concessional imports should equal the cif cost of commercial imports plus internal transportation, storage and marketing costs, and the producer prices for paddy should reflect these import values less the cost of milling. Secondly, the foreign exchange rate, through which the world market price is converted into domestic currency, should reflect a realistic domestic value of foreign exchange. To the extent the Malagasy franc is overvalued domestic rice prices ought to be higher than cif import price levels by the same proportion, to reflect the true value of rice production to the Madagascar economy.

These two conditions should be incorporated into the PL 480 negotiating process. It will probably be easier to obtain agreement on the first condition than on the second, although from an economic standpoint they are equally important if production disincentives from concessional imports are to be prevented. In the absence of such an agreement, the commodity mix of the PL 480 program in Madagascar ought to be moved away from its staple grain crop.

Of course, the alternative of using PL 480 funds to import other commodities that are either grown in Madagascar or for which close substitutes can be processed from domestic crops, such as vegetable oil, merely shifts the possibility of production disincentives to other crops. Domestic vegetable oil production itself, for example, has been declining largely due to very low official prices. The only way to prevent the direct and indirect disincentive effects of concessional imports would be to condition such aid on appropriate domestic price and exchange rate (or shadow price) agreements, in order to assure that producers receive a realistic economic value for their crops.

Local Currency Generations. During the period FY 81-83 PL 480 Title I and II generated a total of US$14 million equivalent of Malagasy francs (FMG) for local development projects. Currently all FMG generated by PL 480 from FY 81 and FY 82 have been programmed for specific project use by the GDRM and approved by AID. The FMG generated by FY 83 PL 480 ($5.6 million) is currently in the process of being programmed. REDSO/ESA has, over the past year, become increasingly involved in the sector and project selection process, in reviewing project documentation, and in making visits to project sites. In response to this increasing AID interest and involvement, the GDRM has agreed to program funds in ways consistent both with their 1983-85 Public Investment Plan (PIP), and with the mutually approved self-help provisions. AID involvement in the programming of these funds will be enhanced with the installation of a local AID office. While acknowledging that the ownership of local currency rests with the GDRM, REDSO will negotiate for agreements to utilize such funds in ways that will support the activities identified for AID funding in the CDSS, as well as the GDRM's PIP, stabilization and rehabilitation programs.

One way to achieve this is through careful review of the annual PL 480 self-help measures, which for the FY 1984 program are expected to include:

1. Continue to support food production, particularly rice, through completion of repair and rehabilitation of irrigation canals and structures serving at least 40,000 hectares operated by small private farmers by February 1985.

2. Improve access to isolated agricultural areas through construction and rehabilitation of roads and bridges.

3. Implement a number of micro-development projects by February 1985.

4. Stimulate rice research activities by supporting the national rice research effort and team activities in liaison with the International Rice Research Institute.

5. Provide support for appropriate local training and/or analyses associated with agricultural production, road maintenance or small private enterprise initiatives.

PVO's and Peace Corps. PVO involvement in AID-supported activities already exists with CRS (soon to be joined by SAWS) implementing MCH and school feeding programs under PL 480 Title II. Given the receptive cultural atmosphere, the historical presence of Western churches and the limited AID management capabilities, the use of PVO's for project implementation is most appropriate. A recent exploratory visit by the Lutheran World Relief (LWR), looking into activities not directly tied to food assistance indicates that PVO involvement may expand into the implementation of regular development projects. Compared with other countries is Africa, however, present PVO involvement in Madagascar is very limited. It is probably premature, however, to consider involving the Peace Corps until stronger U.S.-GDRM political and Western-oriented development ties are forged and AID-supported rural development projects are initiated that can benefit from Peace Corps assistance.

Preparations for Complete FY 1987 CDSS. Before the next CDSS document is due REDSO plans to send a team of specialists to Madagascar 1) to assess the availability and quality of data currently collected in agriculture and the energy/natural resource field, 2) to look at what can be done to assist the National Institute of Statistics and Economic Reform finish tabulating the 1978 household income and expenditure survey and get it published in a useful format for analysis, 3) to assess the institutional capability to analyze problem areas and policy alternatives in agriculture, energy/natural resources, industrial promotion and macroeconomic areas. This team will be composed of a statistician, a specialist in assessing institutional capabilities and staff development needs, an agricultural economist, an energy/natural resources analyst, and an economist familiar with household economics and poverty group analysis. Some of these specialists can be funded through existing projects (like EIA) or RSSA's (with the U.S. Bureau of Census), others might be AID direct hire (the economists), while one or two will be financed from the PD & S account. The team will not only gather information needed for the CDSS, but it will also identify specific institutional training and technical assistance needs, as well as computer hardware and software, for data collection, processing and analysis which can be provided through the FY 85 DA project described above, in preparation for the project paper.

IV. <u>Resource Requirements</u>

The financial resources required for the proposed activities both prior to and during the FY 86 CDSS period are shown in Table 2. Both foreign exchange and local currency availabilities are indicated. Assumptions on funding are considered to be conservative, basically using FY 1984-85 figures straight-lined over the period. Should the current political and economic situation alter radically these figures could be increased or decreased.

<u>Economic Support Fund.</u> The assumption is made that ESF (as CIP) will be available at a nominal level throughout the period. Utilization would be for quick disbursing, balance-of-payments support activities such as the importation of spare parts or agro-industrial inputs.

<u>PL 480 Title I.</u> It is assumed the current level of $8 million annually will be continued through FY 1988, increasing to a nominal $10 million after that.

<u>PL 480 Title II.</u> A modest PVO program will continue throughout the period.

<u>Development Assistance.</u> DA funding levels have been straight-lined for the CDSS period at $3 million annually. Utilization varies each year between

ARDN, EHR, and SDA activities and continued support for IRRI. The proposed use of DA funds emphasizes ($12 million out of $17.5 million) the agricultural sector, with an important secondary emphasis on training, data collection and analytical activities. A nominal amount is proposed to assist transport and private enterprise activities supporting the agricultural interventions.

Regional and Centrally-funded Projects. With the establishment of a local AID office it will become possible for Madagascar to benefit from appropriately selected subsidiary activities of regional and centrally-funded projects, in addition to using existing AMDP funding. Early candidates are the Energy Initiatives for Africa (EIA) Project for mini-hydroelectric potential and several population training and technical support activities.

It should be noted that local currency generations from both PL 480 and CIP's are integrated into the proposed resource requirements. As noted above, AID intends to play an active role in assuring that these funds are appropriately directed to support CDSS activities.

The funding assumptions for the FY 86 CDSS period tend to run at an annual level of $25 to 28 million, which is only modestly higher than the FY 84 level of $17 million. This increase is consistent with the decision to renew development and ESF assistance to Madagascar and to encourage the GDRM's apparent desire to re-establish closer economic and political ties with free-market countries.

The direct hire staffer presently being recruited for assignment to Madagascar this summer, with the FSN administrative assistant/secretary presently on board and two additional FSN employees--another administrative assistant/secretary and a driver--should be adequate, with REDSO/ESA support, for the next year or two. Staffing requirements for later years will be considered in the FY 87 CDSS.

Table 2. Madagascar: Projected AID Funding Levels, FY 1984-FY 1990
(US$ millions or FMG equivalent)

Funding Source	FY 1984 FX	FY 1984 LC	FY 1985 FX	FY 1985 LC	FY 1986 FX	FY 1986 LC	FY 1987 FX	FY 1987 LC	FY 1988 FX	FY 1988 LC	FY 1989 FX	FY 1989 LC	FY 1990 FX	FY 1990 LC
ESF	2.0	--	3.0	2.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
PL 480 I	8.0	5.6	8.0	5.6	8.0	5.6	8.0	5.6	8.0	5.6	10.0	5.6	10.0	7.0
II	1.4		1.5		1.5		1.5		1.5		1.5		1.5	
DA:														
ARDN			.5		--		3.0		--		2.0		1.5	
EHR			1.5		.5		--		1.0		.5		.5	
SDA			.5		.5		--		--		.5		--	
IRRI			---		2.0		---		2.0		---		1.0	
Total DA			2.5		3.0		3.0		3.0		3.0		3.0	
Regional Projects*	.2		.3		.3		.3		.3		.3		.3	
TOTAL AID	11.6	5.6	15.3	7.6	15.8	8.6	15.8	8.6	15.8	8.6	17.8	8.6	17.8	10.0

* AMDP, EIA, POP