EVALUATION OF THE FOOD FOR PROGRESS RICE PROGRAM IN MADAGASCAR

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EXECUTIVE SUMMARY

The Madagascar Food for Progress (FFPr) Agreement was signed between the United States Government and the Government of the Democratic Republic of Madagascar (GDRM) on August 8, 1986 for a three-year period covering FY 1986-89. A major objective of the FFPr program was to provide the necessary resources to support the continued implementation of rice marketing liberalization in the context of the GDRM's broader commitment to economic reform. The supply of FFPr rice was used to establish a buffer-stock program to help maintain stable consumer prices on the open market during the traditional periods of scarcity.

Even though the Madagascar FFPr Agreement was signed for a three-year period, only the first year was funded: good harvests and large carry-over stocks obviated the need for further shipments. As of July 1988, all of the stocks supplied have been utilized and no further FFPr rice has been requested. A first evaluation of the Madagascar FFPr program was undertaken in June 1987. The justification for carrying out an evaluation in the current fiscal year, despite the fact that no rice was provided and therefore no formal evaluation is required, is that an evaluation would underline USAID's continuing concern and improve its understanding of the policy environment governing the restructuring of the agricultural sector in Madagascar and the continued role of the buffer-stock mechanism. An evaluation would also document the disposition of the 14,381 tons of FFPr rice that were utilized during the final year.

The FFPr program, although providing rice only during its first year, was able to play a considerable role in USAID's support to the GDRM's overall structural adjustment program in which the liberalization of the rice sector was a major component.

The progress toward decontrol of rice movement and free market access in the past three to four years has been significant. The last regional monopolies on rice distribution have been removed, the trade restrictions have been substantially reduced, and the elimination of the Official Distribution System in June, 1987 has led to unrestricted competition in the retail market. As a result, rice mills have flourished, the number of rice assemblers has increased significantly, and competition among traders improved to unprecedented levels.

Liberalization resulted in immense benefits to producers. In the Antananarivo province for instance, farm prices rose in both nominal and real terms between 1984-88. Real prices increased by a substantial 22 percent on average and by as much as 88 percent in 1986. A more fundamental result is that the gains to producers have outweighed the losses incurred by consumers. In effect, owing to a more competitively efficient marketing system, farmgate prices have increased on average by 32 percent while retail prices have risen by only 24 percent, for a net gain of 8 percent. Moreover, the 32 percent retail price increase that occured after liberalization represented a 20 percent <u>decrease</u> in real terms, thus contradicting

initial beliefs that liberalization would be associated with soaring rice prices and would contribute to the decline in consumers' purchasing power.

The 1987 Evaluation noted that the physical management of FFPr rice stocks presented serious inadequacies, and that USAID's monitoring capability needed strengthening. This evaluation notes that a potential disaster for the spoilage and/or wasteage of FFPr stocks was averted due to the relatively efficient steps taken by local officials to sort, treat, exchange and transfer the infected stocks, and to USAID's improved monitoring and oversight. As of July 1988, no rice stocks remained and the Office of Food Security (DSA) has provided final reports on the utilization and reconciliation of the FFPr rice, indicating that out of the total consignment, losses in delivery, spoilage and handling amounted to only 4.2 percent.

The success in Buffer-Stock price management has been mixed. The Buffer Stock was established in 1986 to moderate abnormal price fluctuations that would cause severe hardship to urban consumers. Even though Buffer-Stock supplies were only a small fraction of total rice availability, most observers believe that the Buffer-Stock mechanism played a decisive role in stabilizing prices during the 1986-87 lean period. However, rice intended for the Buffer-Stock was sold in 1987-88 below both the 480 FMG/Kg trigger price and the prevailing market price. This decison together with other evidence suggests that the GDRM used the supplies intended for the Buffer Stock in 1987-88 to keep prices low in major urban centers.

Traders' uncertainty about the role of the Buffer Stock has been exacerbated by inappropriate communication of the Buffer-Stock target price prior to harvest to guide traders' buying and selling decisions. The increased risk associated with price uncertainty has lead since 1987 to a contraction in private-sector participation and to a considerable increase in the quantities of rice handled by the public sector.

Although there have been a few steps backwards in rice marketing liberalization, especially with regards to the pricing structure and use of parastatals, the overall direction of agricultural market liberalization continues to point forward. In addition to removal of severe constraints to private-sector participation in the marketing system, significant reforms have continued to be achieved in exchange-rate management, foreign exchange allocation and agricultural export liberalization. Food aid assistance can play a major role in sustaining these reforms.

Further shipments of FFPr rice have not been requested. In a GDRM/IBRD agreement, the target price for imports in 1988 was set at 60,000 tons. Realized imports as of July 1988 are 56,000, just below the agreed limits. It was also learned during this evaluation that an additional 30,000 tons had been requested from the World Food Program to support both the Buffer Stock and targeted feeding programs. It is, therefore, highly unlikely that further supplies of FFPr rice will be requested in 1988. However, other food-aid programs continue to provide a significant portion of the US development assistance to Madagascar. To maximize the potential benefits of these programs, the following recommendations are suggested:

1. Timing of shipment:

Appropriate timing of shipments would help overcome local transport, storage and other logistical constraints.

2. Pricing of food-aid commodities and timing of their release:

More quantifiable requirements for the pricing of the commodity and the timing of its release would facilitate the policy dialogue with the GDRM. These requirements should be clearly stated in the food-aid program agreement itself or, preferably, in an attached Memorandum of Understanding. The Memorandum of Understanding may be revised, subject to A.I.D. approval, in the light of experience.

3. Private-sector participation:

Stocks distributed through commercial channels should be sold in an open, competitive auction providing ample opportunity for private-sector participation, and not only marketed by parastatal companies.

4. Reporting/accountability requirements:

The GDRM should be required to submit, in a timely fashion and on a regular basis, a) reports that provide detailed and consistent information on commodity utilization, and b) a detailed inventory of remaining stocks including storage location and conditions.

5. Strenthening of USAID monitoring and management of food-aid programs:

* Continue the scheduling of regular visits by a Regional Food for Peace Officer.
* A Foreign Service National (FSN) should be identified to monitor the storage/handling and utilization of imported PL 480 commodities. The FSN should be given appropriate training in monitoring and management requirements, to provide an on-going capacity in food-aid program supervision. (S)he could also be responsible for collecting and updating essential agricultural and other data of relevance to USAID's program in Madagascar.

1.0. INTRODUCTION

The Government of the Democratic Republic of Madagascar (GDRM) has been engaged, since the early 1980's, in a far-reaching economic reform program. The program has included fiscal, monetary, exchange-rate and trade reforms, but special efforts have been directed toward the agricultural sector and the rice market more particularly. In the rice sector, subsidies have been eliminated, decontrol of rice marketing adopted, market pricing policies introduced and market competition encouraged. These efforts have been part of a broader agricultural policy reform program intended to 1) encourage market-determined prices and marketing regimes; 2) reduce public-sector involvement in rice distribution and sales; 3) expand the licencing of eligible traders and allow all licenced rice traders to buy and sell rice at any price or location throughout Madagascar; and 4) more generally, reduce public-sector intervention in the economy, enhance the role of the private sector in agricultural input supply, and improve private-sector access to domestic bank credit and foreign exchange for imports.

To support the continued implementation of the GDRM rice marketing reform program, the United States Government arranged for shipment to Madagascar of approximately 30,000 tons of rice under a Food for Progress (FFPr) Agreement. The agreement was signed on August 8, 1986 for a period covering three fiscal years.

The FFPr program was intended to help the GDRM undertake its rice marketing reform by participating in the implementation of a Buffer-Stock program to stabilize open market prices during the lean season. Subsequent tranches under the FFPr Agreement were contingent upon demonstrated performance in the following areas:

> the operation of the buffer stock should not interfere with private marketing channels;
>
> competitive private marketing of rice should continue to be encouraged;
>
> there should be evidence that the volume of public distribution is decreasing over time ...;
>
> appropriate pricing policies for imported and domestic rice and corresponding release price targets for the reserve stock should be followed; [and]
>
> by the third year of the program, increased domestic production of rice should be demonstrated and should satisfy a larger proportion of domestic needs.[1]

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(1) Madagascar Food for Progress Agreement: Program Description, Item III, p.3.

Even though the Madagascar FFPr Agreement was signed for a three-year period, only the first year was funded: good harvests and large carry-over stocks obviated the need for further shipments. As of July 1988, all of the stocks supplied have been utilized and no further FFPr rice has been requested. These two factors should preclude the need for a formal evaluation in the current fiscal year. Justification for carrying out the present evaluation was that it would: 1) underline USAID's continuing concern, 2) improve its understanding of the processes at work in restructuring the agricultural sector in Madagascar, and 3) document the disposition of FFPr rice supplies that were utilized during the final year.

The present report is an evaluation of GDRM performance in the rice market and the agricultural sector more generally, in light of the criteria listed in the Program Description of the Madagascar FFPr Agreement. The report is organized into five chapters including this introduction. Chapter 2 investigates Buffer-Stock performance through an assessment of physical stock-management, pricing decisions and the impact of rice sales through the Buffer-Stock mechanism on private marketing channels. Chapter 3 analyzes current efforts to liberalize the rice market and their effects on principal market participants, and points out remaining constraints to improved market efficiency. Chapter 4 explores the impact of liberalization on rice production. Progress toward reform and liberalization of the agricultural sector is evaluated in the last chapter.

2.0. THE BUFFER STOCK

2.1. Rationale

The Madagascar Food For Progress (FFPr) Agreement was signed by the United States Government (USG) and the Government of the Democratic Republic of Madagascar (GDRM) on August 8, 1986 for a three-year period covering FY 1986-89.

A major objective of the FFPr program was to provide the necessary resources to support the continued implementation of rice marketing liberalization in the context of the GDRM's broader commitment to economic reform.

The supply of FFPr rice to the Buffer Stock program was intended to stabilize the rice market for both consumers and producers allowing the GDRM to proceed with its economic reform, and creating the proper conditions for an increase in per-capita rice production.

A major goal of the Buffer-stock program was to help maintain stable consumer prices on the open market during the traditional periods of scarcity. Rice production and prices in Madagascar are highly seasonal. Prices begin to fall in April with the first rice from the new harvest, and reach their lowest level between May and July. They are highest during the lean or soudure season between November and April. Due to the rice market liberalization, especially the removal in June 1985 of the retail price ceiling, and to inappropriate management of imports[1], the 1985-86 soudure was characterized by unusually high prices. As a result, many urban consumers were unable to afford rice at 700 Malagasy Francs (FMG)/Kg or above, and severe hardship was experienced in Antananarivo and other cities. In an effort to prevent a similar situation from recurring in 1986-87 and subsequent years, the GDRM and the donor community agreed to establish a Buffer Stock. The FFPr program provided 30,000 tons of rice between November, 1986 and April, 1987 to be used for Buffer-Stock sales. The World Food Program (WFP) provided an additional 5,000 tons for the 1987-88 soudure.

2.2. Physical Management

2.2.1. Physical Management

The Directorate of Food Security (DSA) in the Ministry of Agricultural Production and Agrarian Reform (MPARA) was appointed to implement the Buffer-Stock program. Two parastatal companies, SINPA and SOMACODIS were charged by DSA with Buffer-Stock sales.

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(1) Eliot Berg. Report on Mission to Madagascar, January 19 to February 6, 1985. Feb. 17 1986, p.14.

The DSA had overall responsibility for the management of the rice stocks, including all stocks in the port of Tamatave, and for all decisions concerning the rice prior to its release to the parastatals for distribution. Both parastatals were responsible for management of rice stocks they had removed from the port to their warehouses or other facilities for sale or storage. SINPA was designated in charge of Buffer-Stock sales in Tamatave, wile SOMACODIS was to be in charge of Buffer-Stock sales in Antananarivo. In addition, SINPA was under a contract with MPARA to manage the National Silo in Antananarivo.

A total of 29,999 tons of FFPr rice were shipped to Madagascar between November 16, 1986 and April 3, 1987 but only 29,823 tons were received. Of the 29,823 tons received, 15,311 tons were utilized in November 1986-April 1987, while the remaining 14,381 tons were used in the 1987-1988 soudure.

In June 1987, members of the 1987 FFPr Evaluation team visited the port of Tamatave warehouses. Inspection of the remaining rice revealed serious inadequacies in physical stock management and oversight. In the SINPA warehouses, there were no grills on the windows, no dunnage was in use and evidence of significant theft was observed. In addition to substantial insect infestation, there was also evidence of bird entry and rats. Sheds at the port of Tamatave were found equally inadequate.

These findings lead the 1987 Evaluation team to recommend two urgent actions: 1) remaining FFPr rice stocks should, in accordance with GDRM agreement to maintain FFPr rice in sound condition, immediately be treated for insect infestation before they were safely and more adequately stored; and 2) USAID/Madagascar should take all appropriate steps to ensure immediate and proper implementation of the above program.

Prompted by the growing concern over FFPr rice following the June 1987 Evaluation, USAID and other donors pressed the GDRM to sort, transport, treat and store remaining stocks in safer and more sanitary conditions (e.g.; through two letters from the USAID Representative to the Minister of Agriculture, dated Spetember 27 and October 27, 1987).

It was during this time that USAID/Madagascar made arrangements to hire a short-term Personal Services Contractor (PSC) to assist in monitoring and management of the remaining FFPr stocks. The Minister of Agriculture, following the findings of a special FAO Mission, responded to the donor community by letter on September 23, 1987 accepting the need for an emergency program to treat and dispose of infested rice.

Two solutions were considered. The first solution called for the re-export of the rice in favor of famine areas on the African continent. The second solution called for rotating stocks by selling the (FFPr and WFP) rice imports and replacing them with an equivalent tonnage of paddy rice which was fresh and had a longer shelf life. The Minister of Agriculture endorsed the second solution in his September 23 letter. The A.I.D. Representative responded by letter on September 27: first, supporting the stock rotation plan and agreeing to the use of counterpart funds from FFPr or Section 416 for emergency handling and treatment; and second, stating that the USG was willing to consider re-export of FFPr stocks in favor of famine areas on condition that a way be found to adequately treat the rice and that title to the rice be returned to the USG with no obligation for repayment.

In the meantime, USAID/Madagascar executed a two-month Personal Services Contract (PSC) (beginning Oct. 6, 1987) with Steve Brown (former CRS/Rwanda Director) to assist in monitoring the storage, management and end use of both FFPr and PL 480 Title I commodities imported during FY 86/87. After an initial visit to the port, PSC S. Brown observed that storage problems were not a result of poor warehouse construction or lack of space, but rather a lack of inadequate levels of warehouse and stock management. (1)

Following a number of discussions held between early October and early December 1987 with the GDRM and the donor community, the GDRM began to take definitive steps to deal with the deteriorating rice stocks by treating them and transferring a large portion to the National Silo in Antananarivo (9,175 mt). By the end of November 1987, a total of 1,029 mt were sold, including 983 mt in good condition at market price (340 FMG/kg) and 46 mt as animal feed. The FFPr stocks remaining (approximately 12,800 mt) included 2,705 mt in good condition which were to remain in the port silo until needed. The 9,175 mt (from Solon Turman shipment) were in the process of being treated and transferred to the National Silo in Antananarivo. That left 650 mt in fair to poor condition along with 280 mt which had been sucessfully treated but needed to be transferred.2

In a meeting with donors during November, the Minister of Agriculture requested that one spokesman, the World Bank, represent the views of the donors regarding the marketing of the imported rice. Consequently, both USAID and WFP met with the local IBRD officer to make clear their desires: 1) that present (FFPr and WFP) rice stocks be exchanged for paddy, which had a much longer shelf life , and 2) that present stocks be sold on the open market at current prices, but be reclaimed in such a way as to not depress prices or adversely affect traders.

(1) Steve Brown, Third Report, PL 480 Import Commodity Management, USAID/Madagascar, November 21, 1987.

As a result of continuing discussions between the GDRM and concerned donors (World Bank, USAID, WFP and FAO), the GDRM accepted responsibility for the treatment and transfer of FFPr and WFP rice stocks from the port. By the end of November, the majority of the rice stocks were being transferred to the Antananarivo silo for treatment, aeration and sale. The worst of the FFPr rice stocks had already been fumigated and sold, or disposed of as animal feed. The GDRM also supported the option of exchanging surplus rice imports (including FFPr and WFP stocks) with freshly-milled paddy rice.

Owing to good harvests, carry-over stocks and large imports, Madagascar was, by the end of September 1987, in a substantial surplus position. To prevent the release of additional stocks from depressing market prices in Tamatave and Antananarivo, The GDRM agreed [1] to sell 10,000 to 20,000 of FFPr and WFP rice within a Decentralized Buffer Stock arrangement (i.e., supplies were to be sold in markets other than Antananarivo and Tamatave - hence, the "Decentralized" Buffer Stock). The Decentralized Buffer Stock, or regional sales, offered the additional advantage of enabling the GDRM to fill the gap that had resulted from closing off the Official Distribution System in June, 1987.

It was also agreed that sales to regional markets should follow free market strategies, either by free auction to traders in the port of Tamatave for sale in the provinces or by GDRM shipment of stocks to provinces for auction to wholesalers there. Both strategies would serve to allot a free market price rather than to uphold a price imposed, as in the past, by the central government.

To implement the program, the DSA auctionned 13,195 tons of the surplus (FFPr and WFP) rice stored in Tamatave (December 14, 1987 letter from the Minister of Agriculture to the IBRD Representative). Remaining stocks in Antananarivo and Tamatave were exchanged for freshly-milled paddy rice and then sold throughout Madagascar during the 1987-88 <u>soudure</u>.

Implementation of the sales/exchange program, as described above, raises the following two concerns:

(1) The auction as described in the December 14, 1987 letter from the Minister of Agriculture to the IBRD Representative resulted in the allocation of this amount between two parastatals - SINPA and SOMACODIS - at the minimum auction price. Other traders were never

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(1) IBRD CASA Supervision Mission of October 19-23 1987; November 2, 1987 letter from the IBRD to the Minister of Agriculture; and December 14, 1987 letter from the Minister of Agriculture to the IBRD Representative.

given an opportunity to participate in the bidding. Private traders interviewed during this evaluation reported being told that the public sector was the exclusive distributor of this as well as any other imported rice. SINPA and SOMACODIS, who purchased the surplus rice at 283 FMG/Kg, were to progressively take a given tonnage of this rice which would be replaced, within a two-month period, with newly-milled paddy. The parastatals were able to sell the surplus rice at 360 FMG/kg. The DSA would later arrange for transport of the newly-milled rice to the provinces at government expense, where it would be sold back to the parastatals at the agreed purchase price (283 FMG/Kg). The parastatals would then in turn sell the rice at market rates. Thus, due to the absence of any private competition, both SINPA and SOMACODIS and, to a lesser extent, PROCOOPS (see Annex 2) were able to extract economic rent from both transactions.

(2) As of July 1988, all of the rice supplied under the FFPr program had been utilized. Utilization of FFPr stocks during the 1987-88 soudure (Table 1) shows that more than 7,000 tons were sold in Antananarivo and Tamatave, contrary to GDRM/donor agreements, and that peripheral markets accounted for only 45 percent of total sales. (Release of FFPr rice as well as WFP surplus stocks in the Antananarivo and Tamatave markets during the 1987-88 soudure and their effects on prices will be investigated in Section 2.3.1.2).

Table 1. Utilization of FFPr rice[1] (in metric tons): 1986/87 - 1987-88

	Sales	Losses[2]	Total
1986/87	15,311	131	15,442
1987/88	13,429	952	14,381
	Antan./Tamatave (7,370)		
	Peripheral Markets (6,059)		

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(1) For a detailed description of the utilization of FFPr stocks, refer to Annex 2.
(2) Losses include: unfit (363mt), losses in reconstitution of sweepings (70mt) and losses unaccounted for (650mt).

Source: MPARA/DSA (8/88)

2.2.2. Assessment of FFPr-Rice Handling

An apparent lack of communication and cooperation between DSA, SINPA, the Port Authority in Tamatave and the National Silo in Antananarivo resulted in a confusion over the responsibilities for the storage and handling of the FFPr stocks. Over 13,000 tons of rice were held for several months in warehouses which were not meant for medium- or long-term storage. There was also apparently little recognition by A.I.D. personnel of the unsanitary and unsafe conditions in which the rice was stored until the middle of 1987. However, once A.I.D. became aware of the situation, the GDRM began to take remedial actions and, considering local logistical and personnel constraints, relatively efficient steps were taken.

Earlier reports on arrival and utilization of FFPr rice stocks were confusing. Discrepancies between varying reports from the agencies involved in FFPr rice management could be found. In July 1988, the DSA compiled a number of reconciliation reports which now provide a consistent accounting for the FFPr rice program since November 1986.

Clearly the hiring by USAID of a contractor in October, 1987 was the catalyst for the GDRM accepting responsibility and taking action on the treatment and transfer of the remaining rice stocks. A potential disaster in the spoilage of large amounts of FFPr rice was averted and, in the end, only 4.2 percent of the total consignment was lost.

To avoid a similar situation from occuring in future food-aid programs, the following recommendations are suggested:

1. USAID should consider providing training and possibly technical assistance to the Port Authority and DSA in proper storage, handling and fumigation methods. FAO should also be consulted regarding any possible training and technical assistance in these areas.

2. Port warehouse facilities should not be used for anything more than short-term transit operations.

3. A better timing of shipments would help overcome local logistical constraints.

4. Stocks should be sold in an open, competitive auction providing ample opportunity for private-sector participation.

5. AID/Madagascar should ensure that it has the capacity to adequately monitor and evaluate the physical management of PL 480 commodities by the DSA and consignees. The scheduling of regular visits by a Regional Food for Peace Office should be continued. A Foreign Service National (FSN) should be given the responsibility for monitoring the storage, handling, and utilization of PL 480 commodities and be provided with appropriate training.

2.3. Price Management

2.3.1. Buffer-Stock Pricing Policy

2.3.1.1. Decisions

As explained in Section 2.1, the Buffer Stock was established in 1986 with the collaboration of the donor community to moderate abnormal price fluctuations that would cause severe hardship to urban consumers. The Buffer Stock mechanism was to be guided by a target or trigger price. Open-market sales from the stock were to commence when retail prices reached a predetermined level. This price was to be set high enough so as to 1) enable the Government to recover the full cost of the program, 2) safeguard farmer incentives, and 3) encourage private-sector participation.

The trigger price was set for the 1986-87 <u>soudure</u> at 480 FMG/Kg. It was calculated using the average farmgate market price during the 1986 pre-harvest season and allowing for transport, storage and other marketing costs. The Buffer-Stock intervention price for 1987-88 was determined at 480 FMG/Kg, the same level as for 1986-87. In a Memorandum of Understanding between representatives of the World Bank and the GDRM on March 14-17, 1988, it was decided that the reserve price for 1988-89 would be at least 400 FMG/Kg, adjustable in the light of experience in order to provide support for a producer price of at least 180 FMG/KG.

It was also decided that the trigger price would be communicated to the public in April of each year, prior to harvest to guide traders' buying and selling decisions.

2.3.1.2. Implementation

<u>1986-1987</u>

* <u>Price</u>

Buffer-Stock rice sales began on November 5, 1986 at 480 FMG/Kg. However the price was reduced in March - April 1987 to 360 FMG/Kg with World Bank concurrence. It was argued that a lower pre-harvest price would convince traders of the need to sell off the last of their rice stocks and reduce the gap between post-harvest price and the price prevailing during the 1987-88 <u>soudure</u>, thus enhancing the profitability of acquiring new stocks.[1]

[1] World Bank Memorandum, July 6, 1987.

* Announcement of the 1987-88 reserve price

The situation was summarized in the 1987 FFPr Evaluation as follows:

> The GDRM has not effectively communicated the 1987-1988 buffer stock release price to the public... Most of the principal traders and parastatal oficiais interviewed for this evaluation either believed that the price would be 360 FMG/Kg (closing price in 1987) or that no intervention price has yet been established.(1)

1987-1988

* Price

The GDRM, in consultation with donors, agreed to a Buffer-Stock trigger price of 480 FMG/kg. However, in an announcement to the press in early December 1987, President Ratsiraka promised that rice prices would not be permitted to rise above 360 FMG/Kg. The announcement was repeated in the President's New Year's address to the nation in January 1988.

The DSA began sales of FFPr and WFP rice donated to the Buffer-Stock program in December 1987 and continued such sales through June 1988 at 340 FMG/Kg to wholesalers and 360 FMG/Kq to consumers. These sales violated the spirit of the agreements with the donors, to the extent that sales occured in Antananarivo and Tamatave rather than in regional markets and were made at below market prices. Average rice prices throughout the country were above 400 FMG/Kg during the same period.

* Announcement of the 1988-89 reserve price

In June 1988, the target price for 1988-89 was announced in Midi Madagasikara, a local newspaper, as follows:

> Imported rice will be sold in Toamasina (Tamatave) at a wholesale price of 400 FMG/Kg (reserve price). The State may, as needed, select other distribution centers.

The above pricing decisions and their implementation raise the following concerns:

1. The trigger price was set at 480 FMG/Kg for the last two years, and at 400 FMG/Kg for 1988-89. This price rule implies a fall in real prices and is at variance with the long-term objectives of the rice program (i.e., that prices should show upward adjustment over the years until they reflect world prices).

(1) Richard Hough, Jerry Martin and Nicholas Jenks. Madagascar Food for Progress Evaluation, June 1-14, 1987, pp. 7-8.

2. The March-April 1987 price reduction was unjustified. As pointed out in the 1987 FFPr Evaluation,

> It is hard to understand why private traders would need to be pushed to sell their 1986 stocks just as the 1987 harvest was beginning. The most disturbing aspect of the price reduction is that the "rules of the game" were changed in mid-stream leaving great uncertainty among traders about the role of the Buffer Stock.(1)

3. Traders' uncertainty about the role of the Buffer Stock has been exacerbated by inappropriate communication of the Buffer-Stock target price. Ineffective communication of this price in 1987 has been already mentioned. Even though the trigger price for 1988-89 was announced in the local press, it was inadequately publicized. Traders interviewed during this evaluation were, with the exception of parastatal officials, unaware that such an announcement has been made. The detrimental effects of this uncertainty will be explored in section 2.4.

4. Rice intended for the Buffer-Stock was sold in 1987-88 at 360 FMG/Kg, below both the 480 FMG/Kg reserve price and the prevailing market price. This decision, together with other evidence (see points 5-6 below and Section 3.3.) suggests that rice supplies intended for the Buffer Stock in 1987-88 were used to set rather than stabilize prices. Such a price manipulation obstructs free market functionning and represents a patent deviation from the Buffer Stock's objective.

5. Even though the 1987-88 soudure market was characterized by plentiful supplies, approximately 18,000 tons of FFPr and WFP rice were released. As explained in Section 2.2, donors assented to these sales, but only within a "Decentralized" Buffer Stock arrangement. In effect, the GDRM decided with World Bank concurrence to supply 10,000 to 20,000 tons of Buffer-Stock rice to provincial markets (i.e., other than Antananarivo and Tamatave) during the 1987-88 soudure. These supplies were deemed necessary to fill the gap that resulted from closing off the Official Distribution System in June, 1987. However, as shown in Table 2, more than 50 percent of the Decentralized Buffer-Stock rice was sold in the central markets of Antananarivo and Tamatave, thus contributing to the price decline in these markets.

(1) Richard Hough, et. al., Op. Cit., p.8.

Table 2 Buffer-Stock Sales in Central and Peripheral Markets: 1987-1988

	Tons			
	FFPr	WFP	Total	% of Total
Total	13,429	5,000	18,429	
Antananarivo and Tamatave	7,370	3,000	10,370	56
Peripheral markets	6,059	2,000	8,059	44

Sources: World Food Program (WFP) rice: WFP estimates; FFPr rice: MPARA/DSA

6. Another indication that the FFPr and WFP imports were used in 1987-88 to keep prices low in urban centers is that they were on the market through June 1988, two months after the April closing date corresponding to the end of the soudure.

2.3.2. Buffer Stock Impact on Prices 1986-1987

1986-1987

As apparent in Table 3, average monthly retail prices were 658 FMG/Kg between November 1985 and April 1986, and exceeded 700 FMG/Kg in 3 out of 6 months. Average prices were 487/Kg in the corresponding period in 1986-87 or 25 percent lower than in the preceding soudure.

Table 3. Monthly Price for Rice in Antananarivo (FMG/KG)

Month	1985	1986	1987	1988
Jan.	325	769	515	435
Feb.	397	714	507	439
Mar.	423	690	457	374
Apr.	381	486	391	360
May	292	419	340	376
June	284	420	324	412
July	309	486	322	
Aug.	369	527	323	
Sept.	406	537	323	
Oct.	482	554	339	
Nov.	563	530	375	
Dec.	724	525	405	

SOURCE: MPARA/DSA

It is interesting to note that the 1986-87 average prices (487 FMG/Kg) were approximately equal to the Buffer-Stock trigger price (480 FMG/Kg). However, ascribing the price decline solely to the operation of the Buffer Stock would be erroneous. In addition to an increased harvest, both the public sector and private traders were holding larger supplies than in 1985-1986. Fearing a price rise similar to that of November 1985 - April 1986, the GDRM imported (including donor imports) 160,000 tons or 50 percent more than in 1985. Meanwhile, prompted by the previous year's high prices, private traders accumulated unusually large stocks. Given that Buffer-Stock rice was only a small fraction of total rice availability, it would be inaccurate to attribute the stable and declining prices observed in 1986-87 solely or primarily to Buffer-Stock sales. Nevertheless, the widely-publicized commitment by Buffer-Stock management to sustain its selling price may have played a decisive role in affecting market conditions by inducing traders to release most of their inventory, with an ensuing effect on prices.

1987-1988

As can be calculated from Table 3, average monthly prices in Antananarivo in 1987-88 were approximately 400 FMG/Kg with a high of less than 440 FMG/Kg in February. Retail prices followed similar trends in Tamatave and other cities.

Due to a 1987-88 abundant harvest and large public stocks, the 1987-88 soudure was also characterized by unusually large supplies. Excess stocks, estimated at 100,000 to 110,000 tons[1], caused rice prices to decline by 20 and 60 percent relative to November-April 1986/87 and 1985/86, respectively.

The fact that retail prices were 20 percent below the 480 FMG/Kg trigger price provides a strong indication that the Buffer-Stock mechanism was not tested in 1987-88. That average prices never exceeded the trigger price even when they were highest in February also demonstrates that Buffer-Stock rice should not have been released and that its release could have only contributed to the price decline.[2] GDRM officials argue that the Buffer Stock did not open in 1987-88 because the trigger price was never reached. However, whether what was sold was Buffer-Stock rice or rice intended for Buffer-Stock sales is clearly a question of semantics, and the fact remains that FFPr and WFP rice donated to the Buffer-Stock program was sold by the GDRM in the the two locations - Antananarivo and Tamatave - where the official Buffer-Stock program was intended to operate.

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(1) World Bank, CASA 1 Rice Program - Supervision Mission 2/88
(2) Traders interviewed for this evaluation reported they had a meeting in MPARA headquarters in which they requested, to no avail, from MPARA officials to withhold Buffer-Stock sales during the 1987-88 soudure. They were reportedly told that their request was an indication that they were a "hoard of speculators with little concern for consumers".

2.4. The Impact of Rice Sales through the Buffer-Stock mechanism on Private Marketing Channels.

Assessing the impact of rice sales through the Buffer-stock mechanism on private marketing channels, the 1987 Food for Progress Evaluation states that:

> There is no reason to believe that the operation of the Buffer Stock adversely affected... private marketing channels.(1)

Or in a positive form:

> Urban retail rice traders in Antananarivo and Tamatave benefitted substantially from the Buffer Stock. The Buffer Stock provided them with an assured supply of rice from November through April. Their margin of 20 FMG/Kg remained constant even as the price of Buffer-Stock rice dropped by 25 percent.(1)

A second study reports that:

> The Buffer Stock was a source of supply open to all buyers, established and new. It thus encouraged entry and increased competitiveness of rice marketing. (2)

This section argues against both propositions in light of more recent experience and suggests, in contrast, that Buffer-Stock sales in 1986-87 and sales of the rice intended for the Buffer-Stock program in 1987-88 (1) have not affected the retail channel in any fundamental form and (2) may have had significant adverse effects on the private wholesale market.

2.4.1. The Retail Channel

Even though the beneficial effects of the general reforms that have been implemented in the rice sector since 1985 on the retail marketing channel are irrefutable (see Section 3.1 below), a cause-and-effect relationship between the Buffer-Stock mechanism and the increase in the number of retailers cannot be established with certainty. Buffer-Stock rice was a source of supply open to all retailers, but so were other imports and local rice. The release of Buffer-Stock rice increased available supplies. However, more abundant supplies do not by themselves encourage entry or increase competition. Assuming unconstrained market access, the degree of competition is primarily a function of the retail margin or the returns per unit of rice marketed in the retail channel. Buffer-Stock rice would have enhanced competition among retailers were a retail margin of no more than 20 FMG/kg not strictly enforced. A fall in the marketing margin below 20 FMG/kg would have provided an indication that Buffer-Stock sales contributed to increased competition among traders. However, the marketing margin was too low to allow such a fall.

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(1) Richard Hough, et. al., <u>Op. Cit.</u>, p. 15.
(2) Elliot Berg, <u>Report on the Economic Reform Program in Madagascar</u>, USAID/Madagascar, October 1987, p. 9.

The limited impact of the Buffer-Stock mechanism on the retail channel was a product of inappropriate management at the wholesale level. As explained in Section 2.2, Buffer-Stock rice was sold in both 1986-87 and 1987-88 to two parastatals (SINPA and SOMACODIS) and PROCOOPS at below market price. Such low prices provided a basis for the establishment of a fixed margin at the wholesale and retail levels. A more competitive auction would have obviated the need for this intervention and increased competition among wholesalers as well as retailers.

2.4.2. The Wholesale Channel

As pointed out in Section 2.3, a number of shortcomings in the Buffer-Stock management can be cited:

1. The trigger price has not been announced at the beginning of each buying season or, when announced, has not been adequately publicized.

2. The minimum release price was lowered in March 1987, mindway through the 1986-1987 <u>soudure</u>.

3. Imported rice was sold in 1987-88 at below market prices, thus undercutting private traders.

4. Buffer-Stock rice has not been distributed on a competitive basis at the wholesale level.

The non-competitive conditions in which Buffer-Stock rice has been sold have limited the opportunity for improving the private wholesale market. More important, the policies described in 1-3 above have increased uncertainty and risk for wholesalers, with negative effects on the wholesale market.

Wholesalers connect producers and retailers by being willing, for an economic return, to pay the farm price for the product in order to sell it to the consumers through the retail marketing channel. Wholesalers mediate against price differences across space and time by moving commodities from low- to high-price markets. They are buyers who transport and store a commodity in order to sell it to the consumer in the time and place desired.

The performance of a wholesale marketing system is dependent on both the transport and storage functions. For a given road network and a given degree of market access, mediation over space is a function of <u>actual</u> prices: market participants respond immediately when they notice that prices in two markets are sufficiently different that profits can be made by buying in the low-price market and selling in the high-price market. Efficiency in storage is, in contrast, a function of <u>expected</u> prices. Hence, uncertainty and risk are fundamental determinants of the demand for storage. To the extent that uncertainty and risk increase the price of the purchased commodity, the higher price will lower the demand for rice devoted to storage. Since parastatals often have better access to government information or are less sensitive to risk, uncertainty about future prices will inhibit private-sector participation and strengthen the role of the public sector.

This relationship between risk and private-sector participation is not only theoretical. As shown in Table 4,

Table 4. Collection of Rice Paddy by Parastatal Companies: 1981/1982 - 1987/1988

Year	81/82	82/83	83/84	84/85	85/86	86/87	87/88
('000)Tons	123	108	107	113	90	75	134

Source: MPARA/DSA

the role of parastatal companies in the collection of locally-produced rice declined during the 1985/86 campaign.This decline reflects greater participation of the private sector due to the removal of the retail price ceiling. The role of the public sector was reduced even more substantially in 1986/87 when the last two regional monopolies on rice distribution were eliminated. However, the increased uncertainty associated with rice imports (see section 3.3.2.1) and Buffer-Stock management decisions led to a considerable increase (approaching 80 percent) in the quantities of rice handled by the public sector. Given the perverse role played by PROCOOPS in 1987/1988 (see section 3.3.2.1), and the higher degree of uncertainty associated with the upcoming elections, the shift toward greater private sector involvement at the wholsale level in the 1986-87 and 1987-88 campaigns is unlikely to be reversed in 1988/89. All traders interviewed for this evaluation voiced strong reluctance to inventory accumulation.

3.0 MARKET LIBERALIZATION IN THE RICE SECTOR: POLICIES AND THEIR EFFECTS

3.1. Progress toward Decontrol of Rice Movement and Free Market Access

Decontrol of rice movement began in 1983 when the restrictions on inter-regional transport of rice were removed in all but the Lac Alaotra and Marovoay regions which accounted for 25 percent of marketed rice production. In June 1986, the monopoly on these two geographic areas was eliminated. Even though the 1986 requirement by some Fokotany(1) that all paddy traders maintain a proportion of their rice as a security stock has been rescinded, two Fivondronana(2) roadblocks were notorious in the Faritany(3) of Antananarivo during the 1987 marketing campaign. In January 1988, a new decree(4) granted Fokotany officials unlimited power to prevent shipment of rice out of their Faritany during periods of scarcity. As a result, noticeable restrictions appear to have occured in Mahabo (Morondava), for instance, where local authorities admitted restricting shipment of rice out of their Fivondronana to prevent temporary shortages. The same authorities admitted preventing imported rice from reaching their area to protect local production.

As a result of the first steps toward a freer marketing system, large rice traders (riziers) regained a full status in the liberalized areas and a large number of small-scale mills (decortiqueries) were allowed to operate. In 1985, a decree suspending the establishment of new mills was issued. In spite of this decree, the number of mills expanded by more than 30 percent between 1985-1987 (Table 5 below). It must be noted that most of the mills created after issuance of the decree were owned either by political parties or the Decentralized Collectivities (local governments). Unauthorized mills are flourishing, however. In one of the Fivondronana visited, local officials maintained that while 20 mills were authorized, more than 40 were operating.

Table 5 , Number of Mills in Madagascar: 1983-1987

Year	1983	1985	(Sept.) 1987
Number of mills	999	1577	2119

Source: Banque des Donnees de l'Etat (BDE)

(1) Village
(2) Region
(3) Province
(4) Gazetim Panjakanan'ny Repoblika Demokratika Malagasy (official Journal), Feb. 8 1988, p. 211.

Although a decree expanding the number of authorized mills is under preparation, restrictive criteria such as production capacity as well as the number of existing factories in each area will remain a constraint.

Table 6 indicates that the number of rice assemblers increased only modestly between 1984-1987. However, these figures

Table 6. Number of Registered Rice Assemblers in Madagascar 1982-1987

year	1982	1983	1984	1985	1986	(Sept.) 1987
Assemblers	124	152	168	195	218	230

Source: BDE

show only assemblers who have both a Red Card (trade licence) and a non-mandatory Statistical Card. According to the Banque des Donnees de l'Etat (BDE) officials, only 10 percent of the assemblers who have a Red Card are registered in their files. Complaints by large traders that too many small-scale assemblers are operating in their areas corroborate this assessment.

Prior to 1983, nearly all rice sales in urban areas passed through the Official Distribution System at highly subsidized prices. As shown in Table 7 below, the role of this channel declined slowly but steadily between November 1982 and January 1985, and more rapidly between January 1985 and November 1986, before it ended in July 1987. As a consequence, the number of retailers has been growing throughout the country. Licenced retailers in Antananarivo, for instance, increased in number from less than 4000 in 1982 to more than 9000 in 1987.

Table 7. Proportion of Rice Provided by the Official Distribution System in Urban Areas: 1982-1987

Month and Year	Percent
Nov. 82	88
Aug. 83	76
Jan. 84	75
Jan. 85	67
Nov. 86	36
June 87	0

Source: MPARA/DSA

In sum, the progress toward decontrol of rice movement and free market access has been real: the regional monopolies have been removed, the trade restrictions have been reduced and the elimination of the official distribution system has led to unlimited competition in the retail market. Despite these far-reaching reforms, local government officials have retained the potential to interfere with the free movement of rice and an actual power to protect established millers from would-be competitors. Though such cases do not appear to be widespread, this power carries considerable potential for abuse and must be guarded against.

3.2. Effects of Liberalization on Price Behavior

Price reforms in the rice sector in Madagascar began in 1982 with an increase of more than 80 percent in official retail prices, and continued in June 1985 when the retail price ceiling was eliminated . The effects of these policy measures will be investigated through an analysis of retail prices, farmgate prices and the behavior of the marketing margin. The analysis will be performed through a comparison of each of these three elements in 1984 and between 1985-1988, or before and after elimination of the retail price ceiling.

3.2.1. Antananarivo Province

3.2.1.1. Retail Prices

Table 8. Retail Prices of Rice in Antananarivo: 1984-1988

Year	Consumer Price	Nominal Prices		Real Prices	
	Index (1984=100)	FMG/kg	Index	FMG/kg	Index
1984	100	295	100	295	100
1985	111	413	140	372	126
1986	127	555	188	437	148
1987	146	365	127	250	85
1988 (1)	169 (2)	399	135	236	80

(1) January-June
(2) The same rate of increase as in 1987 is assumed

Sources: Retail prices and retail price index: computations using data provided by MPARA.
Consumer price index (for a "traditional basket"): index constructed using Table A.8 in GDRM, Direction Generale du Plan, Rapport economique et financier, 1987

Retail prices increased by 35 percent in nominal terms between 1984-1988 (Table 8). After an initial increase of 40 percent and a subsequent increase of 34 percent following elimination of the price ceiling, prices decreased on average by 11.5 percent between 1987-88. The 1985 and 1986 price increases were due to the unusual price hike that occured during the 1985-1986 soudure period. Between 1987-88, prices dropped by 34 percent then increased slightly. Lower price levels during the last two years were analyzed in Section 2.3.2.

It is important to note that the 35 percent price increase that occured after liberalization represented a 20 percent decrease in real terms (Table 8 and Figure 1). This drop is explained by the fact that the price of a "traditional basket" increased by 69 percent, and that general local food prices increased by 44 percent over the same period, rates unambiguously above those which occured in the rice sector. This comparison demonstrates that the share of rice in consumers' expenditure was - holding consumption patterns constant - lower in 1988 than in 1984. Put differently, consumers were able to buy for the same amount of money adjusted for inflation more rice in 1988 than in 1984. This finding is in sharp contradiction with the widely-shared belief that rice liberalization in Madagascar was associated with soaring rice prices and greatly contributed to the decline in consumers' purchasing power.

3.2.1.2. Farm Prices

Table 9. Farm Prices of Rice in Antananarivo: 1984-88

Year	Nominal Prices			Real Prices	
	FMG/Kg(2)	As % of Retail Prices	Index (1984=100)	FMG/kg	Index (1984-100)
1984	120	41	100	120	100
1985	137	33	114	123	102
1986	286	51	238	225	187
1987	186	51	155	127	105
1988(1)	262	66	218	155	129

(1) January-June
(2) A conversion rate of .67 is assumed in calculating rice price for paddy equivalent.

Sources: computations using data provided by MPARA for 1987-88, and Table 1, p. 7 in Eliot Berg, OP. Cit., for 1987-88

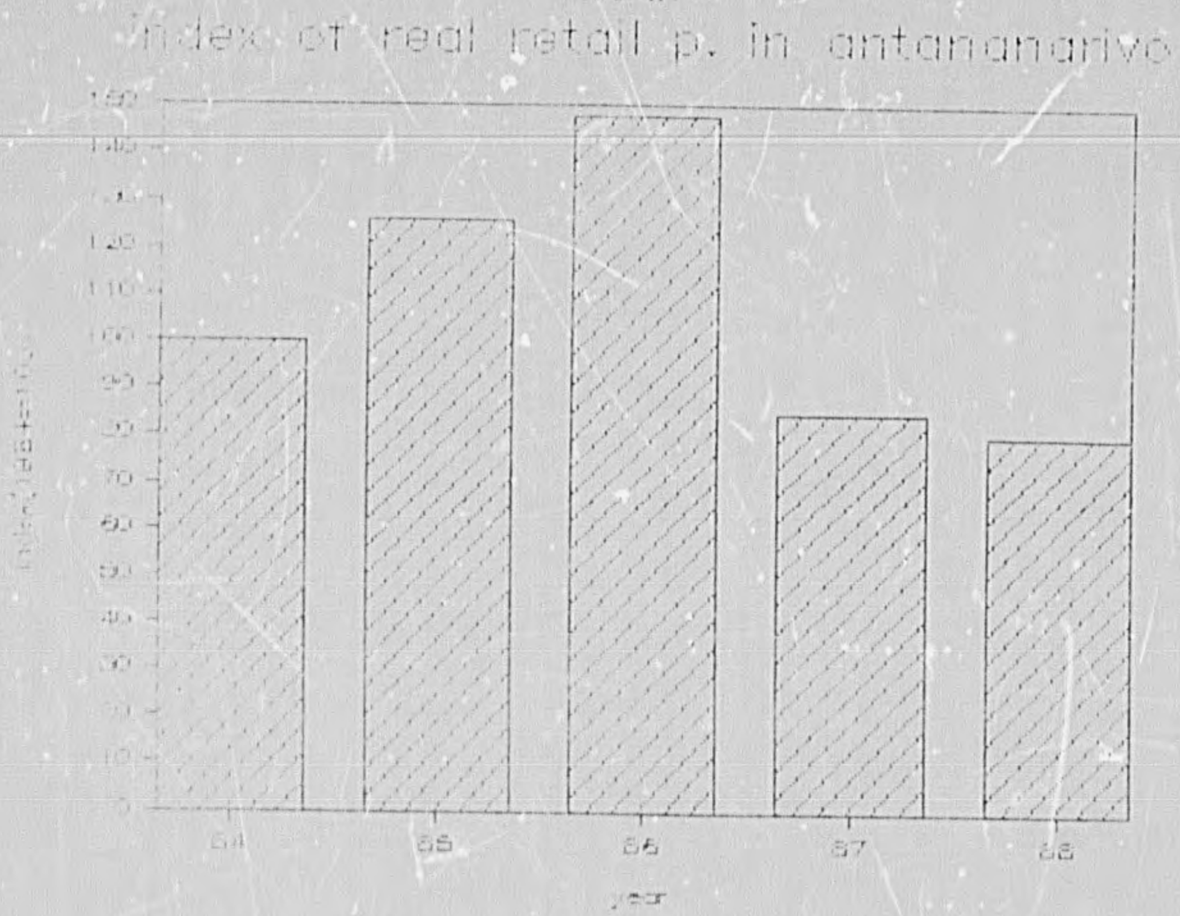

FIGURE 1

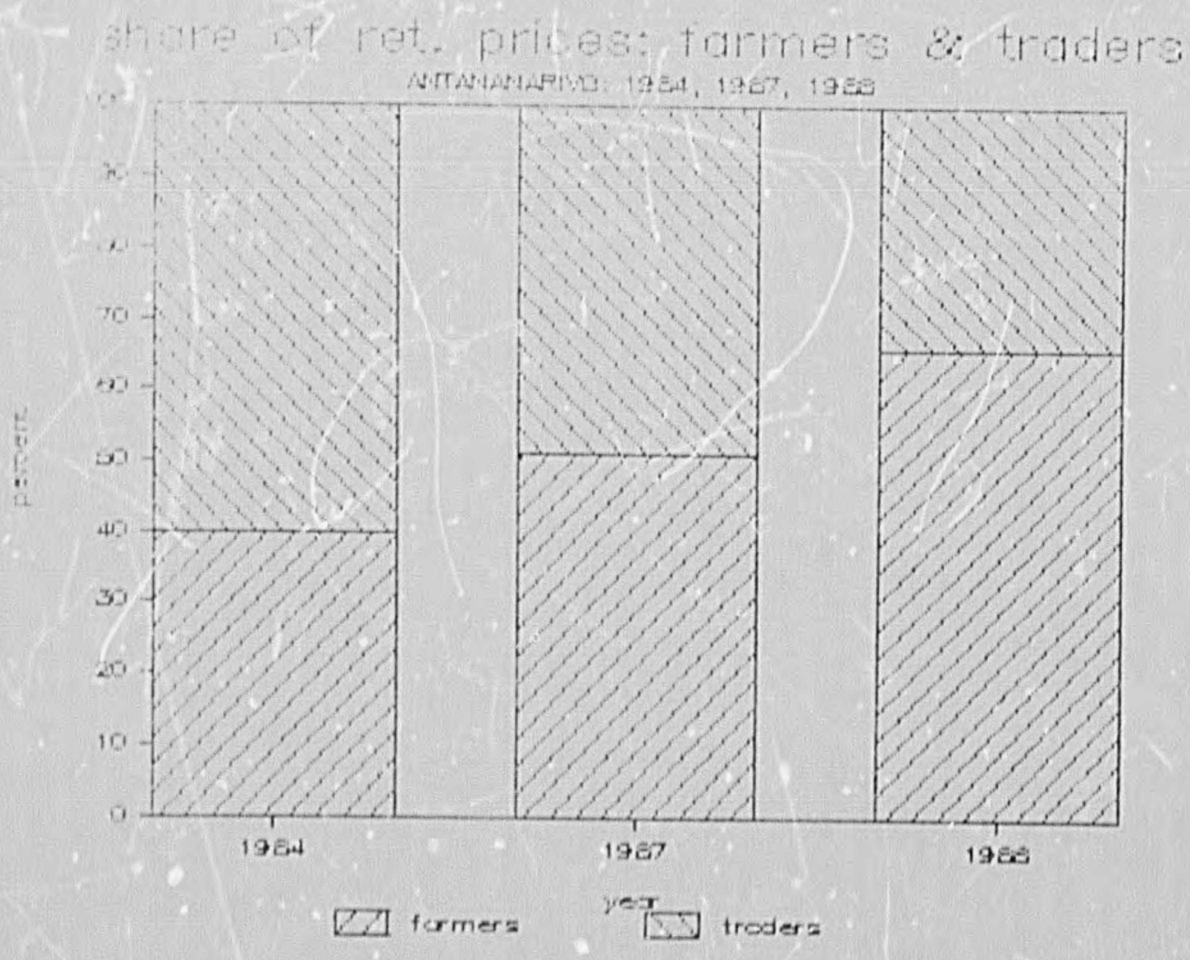

FIGURE 2

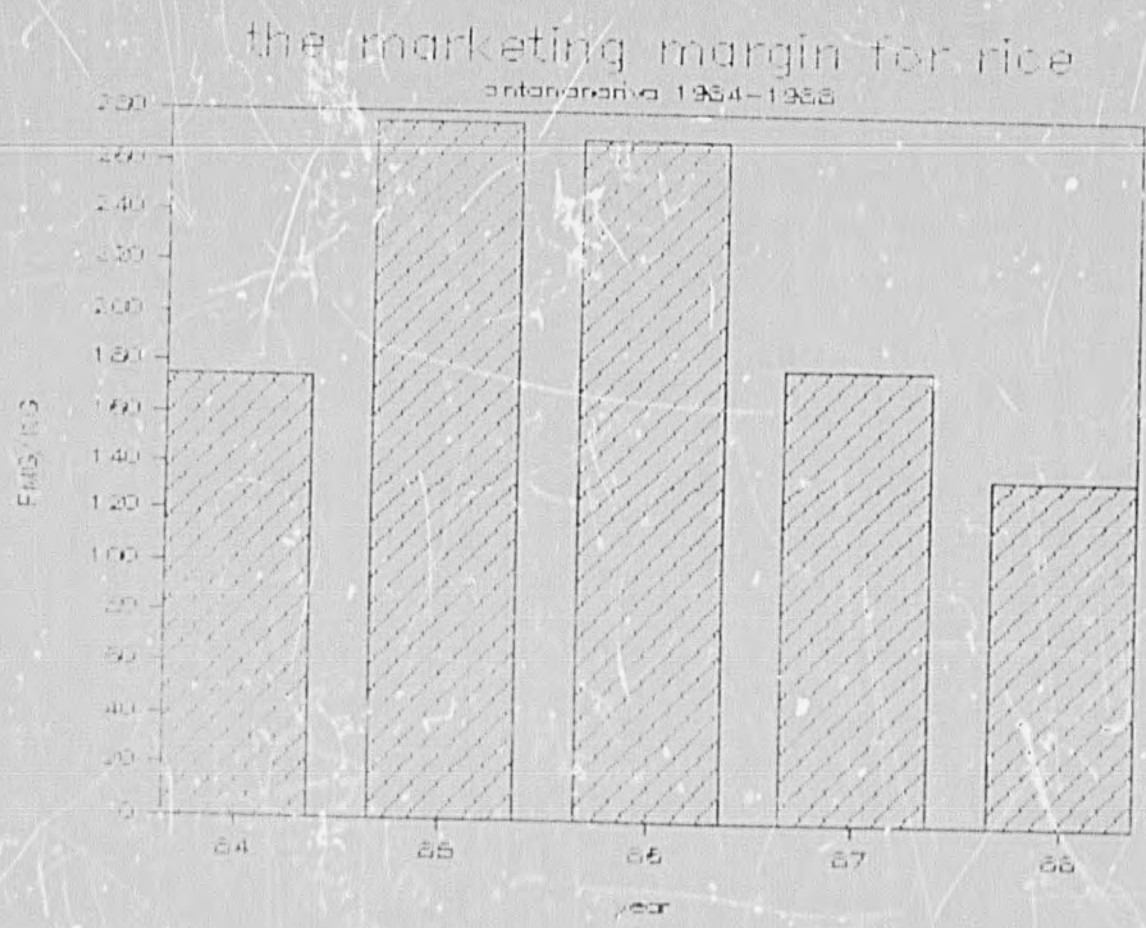

FIGURE 3

FIGURE 4

As shown in Table 9, producer prices more than doubled between 1984-88, for an average increase of 32 percent. This increase was, however, unevenly distributed. After a slow increase in 1985, prices more than doubled in 1986, then declined by more than 30 percent in 1987. Between January-June 1988, the increase was above average.

The slow increase in 1985 may be explained by traders' uncertainty about the behavior of the market following the elimination of the price ceiling. Traders probably elected to proceed with caution initially and did not venture to pay unusually high prices to farmers. When retail prices surged to unprecedented levels between December 1985 and March 1986, traders' demand for rice increased sharply causing producer prices to exceed double their 1985 level. Prices declined in 1987 due to abundant public stocks and the 1987 bumper crop, then picked up rapidly in the first half of 1988.

Examination of Table 9 shows that liberalization brought immense benefits to producers. Farm prices rose in both nominal and real terms between 1984-88. Real prices increased by a substantial 22 percent on average and by as much as 88 percent in 1986. Even when prices dropped by more than one-third in 1987, producers were, as indicated by the real price index, better off than in 1984.

It is important to note that these benefits to producers were to a large extent due to an increase in producers' share in retail prices (figure 2). This share grew from 41 percent before liberalization to 66 percent in 1988, for an average of 56 percent between 1986-88 or 48 percent if the 1985 transition period is included. This increase indicates that liberalization has improved the rural-urban terms of trade in favor of producers. This is a significant outcome in a society where more than 70 percent of the population is engaged in rice production. A more fundamental result is that the gains to producers have outweighed the losses incurred by consumers. This proposition can be verified in Tables 8 and 9. An examination of the two tables reveals that farmgate prices have increased on average by 32 percent whereas retail prices have risen by only 24 percent, for a net gain of 8 percent. Similar results can be obtained by comparing changes in real prices between 1984-1988.

3.2.1.3 The Marketing Margin

Table 10 below and Figure 3 indicate that the marketing margin(1) increased initially, then fell sharply as the market adjusted and competition among traders increased. A further drop in 1988 brought the marketing margin to more than 20 percent below its original level.

(1) Defined as the difference between retail and farm prices.

Table 10. The Marketing Margin for Rice in Antananarivo: 1984-1988

Year	1984	1985	1986	1987	1988*
FMG/kg	175	276	269	179	137

* January-June

Source: Tables 8 and 9

The decline of the marketing margin to below its pre-liberalization level shows that the returns per unit of rice marketed were lower after than before liberalization. This decline carries a strong presumption of a more competitively efficient marketing system and runs counter to the popular belief that liberalization has meant the simple replacement of state monopoly with private monopoly and has benefitted only middlemen.

3.2.2. Other Provinces (1)

Table 11 presents farmgate prices, retail prices and the marketing margin in Ambatondrazaka (Lac Alaotra) and Marovaoy (Majunga province) before and after liberalization. Ambatondrazaka and Marovoay are two major producing areas of particulaler relevance to the rice market liberalization in Madagascar. Rice production in the two areas was for many years marketed by the two regional state monopolies: SOMALAC and FIFABE, and it was only in June 1986 that these two monopolies were eliminated.

Examination of Table 11 shows a striking similarity between these two regions and the province of Antananarivo. Given this similarity and given that prices and margins were investigated at length in the previous section, the analysis in this section will be limited to a summary of the main conclusions:

1\. Owing to both the removal of the retail price ceiling and the elimination of the SOMALAC and FIFABE monopolies on rice assembly and sales, farmgate prices in Ambatondrazaka and Marovoay rose by 165 percent and 120 percent respectively between 1984-1986. In 1987, farm prices continued to rise in Ambatondrazaka, but decreased slightly in Marovoay. The substantial benefits that accrued to producers due to liberalization of the marketing system are apparent not only in the significant increase in producer prices, but also in farmers' share of consumer prices. This share increased by 43 percent in Ambatonrazaka and 30 percent in Marovoay between 1984 and 1987.

(1) Due to the lack of sufficient data in other provinces, the analysis in this section will be limited to the Lac Alaotra and Marovoy areas. However, these two provinces together with Antananarivo account for more than 40 percent of total rice

Table 11. Farmgate Prices, Retail Prices and the Marketing Margin in Ambatondrazaka (Tamatave) and Marovoay (Majunga): 1984-1987

	Ambatondrazaka			Marovoay		
	Nominal	% of Retail	Real(c)	Nominal	% of Retail	Real(c)
Farmgate Prices (1)						
1984(2)	120	54 %	120	120	53 %	120
1986	319(b)	---	251	266(b)	---	209
1987	286(a)	77 %	199	230(a)	69%	226
Retail Prices (a)						
1984	221		221	225		225
1987	369		259	332		227
Marketing Margin (3)						
1984	101			105		
1987	83			102		

(1) A conversion rate of .67 is assumed in calculating rice paddy equivalent
(2) Floor prices for 1984. However, due to the SOMALAC and FIFABE monopolies, floor prices were also market prices.
(3) Difference between retail and farmgate prices.

Sources:
(a) SUTIS/MPARA
(b) Charles Rabenarivo, Report on the Lac Alaotra Region. USAID, May 1988; and Report on a Status of Rice Market Liberalization in the Marovoay Plains. USAID, March 1988.
(c) Real prices are calculated using the consumer price index in Table 8.

2. Consumers were in 1987 almost as well off as in 1984. Retail prices increased in real terms by only 17 percent and by less than 1 percent in Ambatonrazaka and Marovoay, respectively, between the two periods. This result corroborates the evidence found in the Antananarivo province that producers did not benefit at the expense of consumers.

3. The net gains to the regional economy were even higher in the two areas than in Antananarivo. In Marovoay, farm prices increased after liberalization by 120 percent in Marovoay whereas retail prices increased only by 47 percent, for a net gain of 70 percent. These gains were even higher (approching 100 percent) in Ambatondrazaka.

4. Similar to Antananarivo, liberalization has not resulted, as contended by detractors, in the simple replacement of state monopoly with private monopoly. The retail margin fell slightly in Marovoay but significantly (18 percent) in Ambatondrazaka, reflecting increased competition in the marketing system between 1984 and 1987.

3.3. General Pricing Policy

3.3.1. Evidence

As explained in Section 3.2.1 and as apparent in Figure 4, retail prices increased in 1985 and 1986 by 40 and 34 percent respectively. The trend was reversed in 1987 when retail prices dropped by 34 percent. Prices increased slightly between January-June 1988. However, owing to the upcoming Malagasy elections, many observers believe that prices will be much lower by the end of 1988.

There is evidence to suggest (see Section 2.3. and Section 2.3.1 below) that the 1987 price decline was not only due to the increased rice harvest but also to deliberate policy measures aimed at lowering consumer prices following their steady increase between 1984-1986. It was shown in Section 3.2.2. that the price rise has been transmitted back to farmers, thus providing strong incentives to increased production. Unwillingness to sustain a steady increase in prices will erode these incentives. It will also undermine the reform's initial objective to allow rice prices to show a steady upward adjustment over the years until they reflect their international opportunity cost. C.I.F. (Tamatave) rice prices are estimated at 550 FMG/kg[1] (equivalent to $350/mt). Retail prices in Antananarivo and Tamatave have averaged in 1988 less than 400 FMG/kg, or approximately 30 percent below world prices.

(1) Discussions with WFP Representative in Antananarivo

3.3.2. Policy Instruments

The policy instruments used by the GDRM to keep rice prices low in major urban centers in 1987-1988 include import and export management policies, PROCOOPS, and parastatal marketing companies -SINPA and SOMACODIS.

3.3.2.1. Management of Imports

Import management is a critical component of Madagascar's rice marketing system: imports above domestic shortfalls or untimely release of imports can have negative effects on price levels and provide strong disincentives to local production.

Table 12 below shows the evolution of rice imports between 1982-1988. With the exception of 1982 and 1986, imports have tended to decrease. In a series of discussions with the World Bank held in Washington D.C. in August 1987, the GDRM agreed on a target for imports below 90,000 tons in 1987. Realized imports were about 94,000 tons, just above agreed limits. Nevertheless, despite a foreseen excess of stocks, the GDRM was unwilling to curtail imports below 90,000 tons. Unwillingness to curtail imports together with the carry-over stocks and an abundant harvest led to a sharp decline in domestic prices in 1987.

Table 12. Rice-imports in Madagascar: 1981-1984

Year	81	82	83	84	85	86	87	88
('000) Metric Tons	193	351	179	114	106	162	94	56(1)

(1) As of June, 1988
Source: MPARA/DSA

In a Memorandum of Understanding following discussions held in Washington D.C. between a GDRM delegation and the World Bank on March 14-17, 1988, it was decided that the target for imports in 1988 was 60,000 tons which would cover all categories of imported rice with the exception of commercial imports. Realized official imports as of July 1988 are 56,000 tons, just below the agreed limits; yet it was learned during this evaluation that the GDRM had requested 30,000 tons of rice from the World Food Program to be allocated to vulnerable groups and the 1988/89 Buffer-Stock program. Moreover, 1988/89 being an election year, many observers believe that there will be additional imports of rice by political parties from overseas supporters. If true, this scenario would reverse the slight increase in farmgate prices that has occured since January and would cause a decline in rice prices for the second consecutive year, with detrimental effects on production and rural income.

3.3.2.2. Attitude toward Exports

Exports can be used to take advantage of international price variations or to regulate the domestic market. Even in a deficit country such as Madagascar exports can be a useful policy instrument. Just as imports and the Buffer Stock can be utilized in a period of scarcity to avoid excessively high prices or stabilize seasonality, exports may provide a means to garantee a minimum price to producers when the economy moves to abundance, and need not hurt consumers.

Such an opportunity presented itself to Madagascar at the end of 1987. Following an analysis of market conditions in Madagascar by the World Bank and a GDRM delegation in August 1987, it was agreed that promoting exports of 30,000 tons of rice presented the greatest scope for solving the problem of surplus stocks. However, an export program of this magnitude never materialized, due to the inability of Malagasy rice to meet the quality standard required for the market and to uncompetitive prices.

Various options to safeguard the infected Buffer-Stock rice were investigated by the end of 1987 and early 1988. One of the options was to fumigate the rice, and then arrange for quick reexportation of as much of it as possible. The option offered several advantages: it had no direct effects on local market conditions and provided for alleviation of storage problems. In his December 14, 1987 letter to IBRD, the Minister of Agriculture explained that several attempts were being made to find a foreign market for surplus rice. When the GDRM rapidly discovered that no foreign market existed for less than luxury-grade Malagasy rice, which was available only in negligible quantities, USAID suggested the possibility of repossessing FFPr rice for export to Mozambique. However, this alternative was not accepted. Another offer by the Italians to purchase up to 10,000 tons for food relief in Ethiopia was also rejected.

3.3.2.3. PROCOOPS

PROCOOPS is a strictly private-sector company dealing with a wide variety of consumer items through its wholesale and retail operations. It has more than 300 retail outlets throughout Madagascar and conducts a 17,000-ha farming operation in various provinces. PROCOOPS is also an import-export firm controlling or sharing a number of lucrative markets such as cement imports and the export of live lobster and precious stones. Private though it may theoretically be, its shares are said to be owned by the President's relations. PROCOOPS is also believed to be AREMA's[1] implementing arm. Describing itself alternatively as "a private company with a social mission", "a private firm with a human face", or a business operation driven by "a fundamental concern for consumers", it appears able to cross-subsidize its operations in order to undercut traders in selected commodity markets.

[1] Andrin'ny Revolisiona Malagasy (AREMA) is President Ratsiraka's party

PROCOOPS was able to intervene in the rice market during the 1987-88 soudure by selling 10,000 tons of North Korean rice donated to AREMA. The North Korean rice was sold through PROCOOPS's outlets and the KOPAREMAs (AREMA's cooperatives) at below market prices. The proceeds were subsequently used to subsidize additional rice sales, for a total believed to approximate 40,000 tons or 30 percent more than total FFPr rice shipments to Madagascar in the last two years.

PROCOOPS has produced, on average, 3,000 to 5,000 tons of paddy rice per year in recent years, and was the only private company allowed to handle FFPr rice in both 1986-87 and 1987-88 (for details on the quantities of FFPr rice handled by PROCOOPS, see Annex 2, Table 17).

3.3.2.4. Parastatal Marketing Companies

The ultimate objective of the rice reform program is to move to a complete privatization of the marketing system. However, to avoid short-term disruptions, it is desirable to begin the transition to an open economy with a temporary dual private and public system. Considering that this transition should gradually lead to increased private-sector participation, a number of concerns regarding a possible reversal of policy toward greater reliance on parastatal companies in Madagascar must be raised. Impediments to a more privatized rice sector include 1) the quasi-exclusive role of SINPA and SOMACODIS in the distribution of the Buffer-Stock rice (see Section 2.2.), 2) the larger share of the public sector in the assembly and distribution of local rice production in 1987/88 (see Section 3.3.2.) and 3) the ambiguous role played by PROCOOPS during the 1986/87 marketing campaign (see previous section).

4.0. IMPACT OF LIBERALIZATION ON RICE PRODUCTION

As Table 13 shows, production decreased during the last three years by an average approaching 0.9 percent. It is evident that this decline does not indicate a perverse relationship between liberalization and recent production performance, but reflects

Table 13. Rice Paddy Production in Madagascar: 1966-1988

Year	MT ('000)	% increase
Av. 1966-1984	1912	2.3
1985	2178	2.2
1986	2230	2.3
1987	2300	3.1
1988	2235	-2.8
Av. 1986-1987	2265	2.7
Av. 1986-1988	2255	0.9

Source: Computations using data provided by MPARA/DSA

the negative effects of the 1987/1988 drought. During the two years preceding the drought, production increased on average by 2.7 percent. Yet, this rate was not considerably higher than the 2.3 percent average increase achieved between 1966-84. Moreover, the highest yearly rate of increase realized after liberalization (3.1 percent in 1987) was exceeded in 9 out of the last 20 years. A survey conducted for this evaluation shows that area cultivated has expanded considerably in the recently-liberalized areas, Ambatondrazaka and Marovoay. However, the expansion in area cultivated in these two regions has not translated into an equivalent expansion at the national level.

Several reasons account for these inconclusive results:

1. The price ceiling was eliminated only in June 1985 and the regional monopoly of the two rice parastatals were terminated only in April 1986. A longer period is needed to assess the impact of liberalization on rice production.

2. Farmers react more to expected than to actual prices in their planting and cultivating decisions. Even though farmgate prices have risen in recent years, uncertainty about policy and market conditions is still prevalent among farmers.

3. Various technical relationships, the output price producers expect as well as the prices of inputs are all weighted in the farming decision. The decision of how intensively to use factors of production depends on the relative prices of inputs to output. This ratio has been negatively affected in Madagascar by the sharp increase in input prices, particularly fertilizer and pesticides, owing to the successive devaluations of the FMG between August 1986 and June 1987.

4. Higher production levels are determined not only by upward movement along the supply curve but also and more importantly by productive investments improving agricultural technology and moving the supply curve to the right. Technical change is the source of most productivity growth in the longer run, as continued investment in traditional technology very quickly faces marginal returns. Rice production in Madagascar can profitably expand utilization of fertilizer and improved seeds, inputs which can bring quick output response. In this as well as other areas, the full contribution will not be possible without the rehabilitation and expansion of the existing irrigation system and without an improvement in road infrastructure to move rice supplies from surplus to deficit areas at a lower cost than currently.

In sum, liberalization of the rice sector has been in effect in Madagascar for only two to three production seasons. Given that agricultural production is influenced not only by price incentives but also by several other variables such as weather variations, input prices and public investment in production and marketing infrastructure, it is too early to assess with accuracy the impact of liberalization on rice production. However, current GDRM efforts to improve agricultural infrastructure and services together with a more effective management of present market-oriented policies will undoubtedly pay high economic dividends in the medium to long term.

5.0. PROGRESS TOWARD REFORM AND LIBERALIZATION OF THE AGRICULTURAL SECTOR

Following the false starts of the 1970's, the GDRM has engaged since the early 1980's in a variety of far-reaching reforms to improve the performance of the agricultural sector. These reforms have included public investments in production and marketing infrastructure and services, and a set of positive incentives to market participants. A brief description of the various projects to improve infrastructure and agricultural services is provided as an annex to this report. The following sections will summarize Madagascar's progress toward liberalization and assess GDRM commitment to reform.

5.1. Exchange-Rate Reform

The GDRM launched in the late 1970's an ambitious development program that relied heavily on external commercial borrowing. Since many of the projects were insufficiently studied and poorly managed, they became by the early 1980's a drain on public debt servicing. In 1980, inflation and the budget deficit reached respectively 30 and 18 percent of GDP. In 1981, the debt service ratio rose to 30 percent. The monetary policies applied to this deteriorating situation resulted in an overvaluation of the FMG. Trade deficits increased as exports fell and imports rose. Foreign exchange shortages were controlled by management of imports and foreign exchange.

As part of the macro-economic reform introduced with IMF assistance, the GDRM has taken strong exchange-rate reform measures. The FMG was devalued by 20 percent in August 1986, 5.2 percent in February 1987 and 30 percent in June 1987. The successive devaluations have reduced the implicit tax on agriculture and, by raising prices of agricultural commodities, shifted the rural-urban terms of trade in favor of producers.

5.2. Trade Reform

5.2.1. Foreign-Exchange Allocation

The foreign exchange regime has moved gradually from a rationing system where political rather than economic considerations were overriding to a free access to foreign exchange. Export retention accounts were introduced in 1983 allowing exporters to retain a portion of their foreign exchange earnings which would be used to import needed inputs and consumer goods. In January 1987 a Liberalized Import Regime (LIR) was established. Under the LIR, importers paid a 10 percent non-refundable fee of the amount of foreign exchange they requested. Allocation among applicants was then calculated by dividing the amount of foreign exchange available by the total amount requested by traders. Each applicant received a percentage of the amount requested according to foreign-exchange availability and the amount requested by all importers.

Although the LIR system was more equitable than the export retention scheme, it was associated with high costs and uncertainties to importers. Realizing the LIR's shortcomings, the GDRM introduced in February 1987 the first phase of the present Open General Licence (OGL) system which was fully implemented in July, 1987. Under the OGL system, importers have illimited access to foreign exchange at the official floating rate. The system is backed by GDRM commitment to adjusting the exchange rate if demand exceeded a predetermined level of foreign-exchange reserves.

5.2.2. Trade Liberalization

The OGL market-determined foreign-exchange policies have been accompanied by elimination of export taxes on most export crops, removal of government monopolies on key agricultural exports and easing of administrative procedures for exporters.

Until recently, an export licence issued by the Ministry of Commerce was required. The licence was valid for a one-year period and renewed only upon satisfactory export performance. Since January 1988, minimum export values are no longer required, the system of trial periods for new exporters has been eliminated and the time limit within which export sale proceeds have to be repatriated was extended from 30 to 90 days.

5.3. Commitment to Liberalization: an Assessment

Despite the progress that has been made, many observers of the Liberalization experiment in Madagascar note that "there exists in Madagascar very little intellectual support for the free market idea outside the World Bank office and the U.S. Embassy"(1), or that "policies are changing, but the mentality is not."(2)

While a variety of documents and official statements to support this proposition can be easily found, recent experience indicates that the free market idea is gaining ground.

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(1) Eliot Berg, Op. Cit., p.15
(2) Tamara J. Duggleby and Sandra Gloshgarian, A private Sector Development Strategy for Madagascar with Business Climate Update. International Science and Technology Institute (ISTI), June 1988

Answering a question associating high inflation rates with liberalization and privatization, a member of the Supreme Revolutionary Council, the country's highest decision-making body, explains:

> Only the law of supply and demand will enable us to redress the present situation, not decrees and ordinances... Any other policy will be a step backward.[1]

Arguing that current reforms are more a product of necessity than a forced response to donor demands, he continues:

> Were we forced to implement the measures prescribed by these two financial institutions [the WB and the IMF]? the new economic program designed to bring about a real recovery calls for a fundamental change... Had the WB and the IMF not imposed these reforms, we would have implemented them anyway.[1]

Assessing recent production performance in the rice sector, the Minister of Agricultural Production and Agrarian Reform (MPARA) explains:

> Rice production has been increasing slowly in the last two years, but the progress has been steady and encouraging. From the 90,000 tons imported last year only 60,000 tons were used... This outcome was partly due to liberalization of rice marketing, the effects of which have started to materialize.[2]

The case for market-oriented economy is also increasingly being made in the local press. The following is a recent example from a leading newspaper:

> Those who, 5 or 6 years ago, contended that liberalization was doomed to failure will have to retract. Inflation has been contained, shortages have disappeared, and production and GNP have been increasing... We have not yet reached the end of the tunnel, but only further market liberalization will help us overcome the remaining constraints.[3]

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(1) Madagascar Matin, May 9 1988
(2) Madagascar Matin, February 15, 1988
(3) Midi Madagasikara, August 3, 1988

Such statements may not be a turnaround or a reversal of ideology. They are at least indicative of increased tolerance for policies featuring market orientation, privatization and price incentives. The overwhelming challenge is to help both government officials and the intellectual elite convert this tolerance into conviction.

The false starts and dead-ends of past policies are increasingly being recognized. Sound macro-economic, trade and other policies are being implemented. As documented in chapters 2-3 of this report, frustration over slow progress or political reality will at times tempt officials to question these policies, but donors' patience and persistence will be critical to the long-run vitality of Madagascar's agriculture and national economy.

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Table 14. RECONCILIATION OF FFPr RICE STOCKS

VESSEL	ARRIVAL DATE	CONSIGNED	OFF-LOADED	LOSS	SOLD 86-87	SOLD 87-88	DECLARED UNFIT	LOST RECONSTITUTED SWEEPINGS	UNACCT LOSS IN STORAGE	TOTAL UNACCT. LOSS	% UNACCT. LOSS AMT. OFF-LOAD.	% UNACCT LOSS OF CONSGMNT.
		AMOUNT (IN METRIC TONS)										
NANCY LYKES	11/16/86	6.000	5.970	30	5.367	[illegible]	67	[illegible]	[illegible]	37	0.1	0.6
RUTH LYKES	12/13/86	6.623	6,232	22	6.032	140	27	54	148	170	2.2	2.5
MARJORIE LYKES	01/10/87	4.358	3.149	32	3.149	1.065	0	6	104	136	2.4	3.1
SHIRLEY LYKES	02/06/87	1.018	63	0	63	925	0	0	30	30	2.9	2.9
SOLON TURMAN	04/03/87	12,000	11,908	92	9	11.278	269	0	362	454	3.0	3.7
TOTAL		29,999	29,823	176	15,311	13.429	363	76	651	827	2.1	2.7

SOURCE: MPARA/DSA (AUG, 1988).

TABLE 15. UTILIZATION OF FFPr RICE (IN METRIC TONS) 198[illegible]

86-87 SOUDURE:

ORIGINAL CONSIGNMENT	AMOUNT OFF-LOADED	EXCHANGE USSR RICE	BUFFER STOCK	DECLARED UNFIT	LOSS RECONSTITUTION	TOTAL ACCTD.	TOTAL REMAINING
29.999	29.823	13.397	1.914	61	70	15.442	14.381

87-88 SOUDURE

BEGINNING STOCKS	SOLD IN PROVINCES	EXCHANGE CONTRACT	DECLARED UNFIT	TOTAL ACCOUNTED FOR	UNACCOUNTED FOR LOSSES	TOTAL REMAINING STOCKS
14.381	8.622	4.806	302	13.730	651	0

SOURCE:MPARA/DSA (7/88)

TABLE 16. FFPr RICE - SUMMARY OF LOSSES

TYPE	PERCENT
1. Loss in off-loading at port (176/29.999):	0.5%
2. Unaccounted loss in handling (651/29,823):	2.1%
3. Amount declared unfit (363/29,823):	1.2%
4. Loss in reconstitution of sweepings (70/314):	22.2%
5. Total uncaccounted losses (827/29,999):	2.7%
6. Total losses, accounted and unaccounted (1260/29,999):	4.2%

SOURCE: MPARA/DSA (7/88)

TABLE 17. FFPr RICE SALES, BY FARITANY AND MARKETING AGENT 1986-87 AND 1987-88

FARITANY	1986-87 SINPA Tons	1986-87 SINPA %	1986-87 PROCOOPS Tons	1986-87 PROCOOPS %	1986-87 TOTAL	1987-1988 SINPA Tons	1987-1988 SINPA %	1987-1988 PROCOOPS Tons	1987-1988 PROCOOPS %	1987-1988 TOTAL	TOTAL SINPA Tons	TOTAL SINPA %	TOTAL PROCOOPS Tons	TOTAL PROCOOPS %	TOTAL TOTAL
1. Antananarivo	10.508	100	0	0	10.508	5.248	100	0	0	5.248	15.756	100	0	0	15.756
2. Toamasina	1.914	100	0	0	1.914	207	10	1.915	90	2.122	2.121	53	1.915	47	4.036
3. Diego	694	93	50	7	744	1.066	95	100	5	1.166	2.760	95	150	5	2.910
4. Manakara	394	100	0	0	395	0	0	0	0	[illegible]	395	100	0	0	395
5. Tolagnaro	0	0	440	100	440	0	0	1.000	100	1.000	0	0	1.440	100	1.440
6. Mananjary	394	100	0	0	394	0	0	0	0	0	394	100	0	0	394
7. Vohemar	0	0	200	100	200	0	0	0	0	0	0	0	200	100	200
8. Fianarantsoa	248	100	0	0	248	0	0	0	0	0	245	100	0	0	248
9. Sambava	0	0	0	0	[illegible]	845	100	0	0	845	845	100	0	0	845
10. Tulear	468	100	0	0	468	2.045	100	0	0	2.048	2.516	100	0	0	2.516
Total	14,621	95.4	690	4.6%	15.311	10.414	78	3.015	22%	13.429	25.035	87	3,705	13%	28,740

Source: MPARA/DSA

Annex 3. Main Agricultural Projects in Madagascar

I) IRRIGATION

Project	Organization*	Activity	Location
1. Lake Alaotra Irrigation Scheme	FAC/CCCE	Network rehabilitation	Lake Alaotra (Faritany of Tamatave)
2. Lower Betsiboka Irrigation Scheme	GTZ	Network Rehabilitation	Marovoay area (Faritany of Majunga)
3. Small-Scale Irrigation Network	FAO	Network rehabilitation	National
4. Small-Scale Irrigation Network	CCCE	Network rehabilitation	Highlands (Faritany of Antananarivo)
. Small-Scale Irrigation	EDF	Establishment of small-scale irrigation schemes	National, but concentration on the Faritany of Fianarantsoa and Tulear

II) THE ROAD NETWORK

Project	Organization*	Activity	Location
1. Seventh Highway Project	IBRD	Emphasis on secondary roads of importance to agricultural production	National
2. Road Rehabilition Project	WB	rehabilitation - feeder roads	National
3. Network Expansion	FAO	Expansion feeder roads	National, but concentration on the faritany Antananarivo

Annex 3 (continued)

III) RESEARCH

Project	Organization	Activity	Location
1. Rice Research	IRRI/A.I.D.	New rice varieties. Technical assistance to FOFIFA	national
2. Rice Research	FAC/CCCE	Technical assistance to the CMS of Anosiboribory and to SOMALAC	Anosiboribory Lake Alaotra
3. Agricultural Research	IBRD	Research needs	national

IV) EXTENSION

1. Lake Alaotra Rice and Agricultural Extension Program	FAC/CCCE	Fertilizer use	Lake Alaotra
2. Extension Service Rehabilitation	IBRD	Fertilizer use - emphasis on efficient farming practises	National
3. Andapa Region Development Project	EDF	Rice and major export-crops	Andapa (Faritany of Antsiranana)
4. Extension/ Training Program	IBRD	Training of extension personnel - MPARA	MPARA
5. Malagasy Fertilizer Program	FAO	Research on fertilizer needs and use	National

Annex 3 (end)

V) INPUT DELIVERY

Project	Sponsor	Nature of activity	Location
1. Commodity import Program	IBRD	Import of agricultural equipment, spare-parts fertilizer and pesticides	
2. Input Delivery system	A.I.D.	Development of a private-sector distribution system for fertilizer	

* For a list of acronymns, refer to Annex 5

Annex 4. List of Persons Contacted

Secretary General of MPARA	Mr. Daniel Ramarokoto
USAID	Ms. Donna Stauffer
World Bank	Mr. Kenneth Sigrist
FAO Representative	Mr. Jacques Lepissier
World Food Program Representative	Dr. Paul Vanbever
Director General, Ministry of Plan	Mr. Jean Robiarivony
Director General of BDE	Mr. Armand Randrianarivony
Director of Computer Department of BDE	Mr. Rakotomahefason
Director of DSA	Mr. Vololona Radanielson
Director of Agricultural Statistics (MPARA)	Mr. Theophile Rambinintsoa
Director General of Procoops	Mr. Olivier Andriamalazaony
Director of Marketing of SOMACODIS	Mr. Simon Randriamialison
Assistant Director of marketing of SINPA	Mr. Nelson Rasoloharijaona
Various private traders in Antananarivo	

Annex 5. Glossary

DE	Banque des Donnees de l'Etat (National Statistics Bureau)
CCE	Caisse Centrale de Cooperation Economique. (French Development Bank)
SA	Direction de la Securite Alimentaire. (MPARA)
DF	European Development Fund
EC	European Economic Community
AC	Fonds d'Aide et de Cooperation (French bilateral aid program)
AO	Food and Agriculture Organization
FP	Food For Progress
MG	Franc Malagasy (local currency; 1$ = 1500 FMG, Jul. 88)
OFIFA	National Center for Applied Research on Rural Development
DRM	Gazetim-Panjakanan'ny Repoblika Demokratika Malagasy (GDRM Official Journal)
DP	Gross Domestic Product
DRM	Government of the Democratic Republic of Madagascar
NP	Gross National Product
TZ	Deutsche Gesellschaft fur Technische Zusammenarbeit (West German bilateral aid program)
A	Hectare (1 hectare = 2.47105 acres)
BRD	International Bank for Reconstruction and Development
DA	International Development Association
MF	International Monetary Fund
RRI	International Rice Research Institute
KG	Kilogram (1 kilogram = 2.20462 pounds)
PARA	Ministere de la Production Agricole et de la Reforme Agraire (Ministry of Agriculture)

[illegible]	Metric Ton (US short ton)
[illegible]NPA	Societe d'Interet National pour les Produits Agricoles (parastatal company)
[illegible]	Service de la Methodologie et de Traitement des Informations Statistiques (statistics Bureau of MPARA)
[illegible]MACODIS	Societe Malgache de Commerce et de Distribution (parastatal marketing company)
[illegible]ALAC	Regional Development Authority for the Lac Alaotra Region
[illegible]	United States Agency for International Development
[illegible]	World Food Program

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