

ORIGINAL

REPORT ON
THE WEST AFRICA RICE DEVELOPMENT ASSOCIATION (WARDA)
BY
AN A.I.D IMPLEMENTATION REVIEW TEAM
JUNE, 1985

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PREFACE

This report was prepared by a project implementation review team which was formed to explore the viability of WARDA as an institution which should be sustained and make specific recommendations on future levels, length and nature of support to be provided by AID. The scope of work against which the report was prepared is Attachment 1 to the report. The team's field work, covering the period of March 17-29, consisted of a visit to one of WARDA's field stations at Rokupr, Sierra Leone, followed by an intensive nine-day period of investigation and report drafting in Monrovia, Liberia, site of WARDA's headquarters. The team's itinerary is included as Attachment 2 to the report. Team members included: Donald Mitchell, consultant to S&T/AGR; Kenneth Prussner, AFR/TR/ARD; Mark Smith, WARDA Project Officer, USAID/Liberia; and Jerry Wood, AFR/RA.

Part I of this report, an immediate reporting cable to AID/W, dated March 27, which deals with the critical financial situation of WARDA, is not reflected in the team's scope of work and was not anticipated at the time we arrived in Monrovia. We diverted our initial attention from the scope in order to develop an understanding and report on the financial crisis, because it is clear that decisions on AID's longer term relationship to WARDA are not needed if financial solvency of the organization is not achieved.

Part II of the report covers the original scope of work as well as additional issues which the team saw as essential in building a basis for sound decisions on the AID/WARDA relationship. In the interest of logical flow, the elements of the report do not follow the same sequence as given in the scope. However, the team believes that all items have been covered.

During the course of its work the team found further confirmation of the conclusion by the mid-point evaluation team that the WARDA II Project design gave far too little attention to institutional development of WARDA. Without a sound institutional setting the AID project components could be implemented effectively but have little impact because of WARDA's organizational problems. This did not prove to be the case, largely because of the intensive management attention given to the project by AID. To do an adequate job of this review the team felt that it was essential to deal with WARDA, the organization; this report places discussion of AID's possible future input in that context.

While all team members participated vigorously and fully at all stages in the preparation of this report, and the highest appreciation is due for the quality of their professional input, I take responsibility for the final editing and any mistakes of fact which may inadvertently be included.

Jerry J. Wood

PART I

CABLE ON WARDA'S FINANCIAL INSOLVENCY
March 27, 1985

AMEMBASSY MONROVIA
SECSTATE WASHDC

AIDAC

FOR: WILLIAM NAYLOR, AFR/RA

SUBJECT: INTERIM STATUS REPORT FROM WARDA IMPLEMENTATION REVIEW TEAM

1. SUMMARY: SCOPE OF TEAM'S MANDATE HAS BEEN SIGNIFICANTLY EXPANDED BY RAPIDLY DETERIORATING CAPACITY OF WARDA TO FUNCTION BECAUSE OF FINANCIAL INSOLVENCY. THE FINANCIAL CRISIS OF WARDA HAS ESCALATED IN RECENT WEEKS TO THE POINT WHERE WE CONCUR WITH THE ACTING EXECUTIVE SECRETARY'S VIEW THAT COLLAPSE IS HIGHLY LIKELY BY MAY 1, IF EMERGENCY OPERATIONAL FUNDING IS NOT FORTHCOMING. THE IMPLICATION OF THIS IS THAT ANY PLAN FOR FUTURE AID SUPPORT TO WARDA COULD NOT BE IMPLEMENTED IF BRIDGE FINANCING TO ASSURE WARDA'S SHORT-TERM VIABILITY IS NOT FORTHCOMING. WHILE TEAM FULLY EXPECTS TO COMPLETE REVIEW AGAINST SCOPE PREVIOUSLY AGREED UPON. PRIMARY FOCUS SINCE ARRIVAL IN MONROVIA HAS BEEN ON SHORT-TERM ISSUES THAT MUST BE UNDERSTOOD AND DEALT WITH AS BASIS FOR ANY RECOMMENDATIONS CONCERNING LONG-TERM RELATIONSHIP BETWEEN AID AND WARDA. END SUMMARY.

2. EVENTS WHICH ACCELERATED CRISIS:

- A. WARDA'S FINANCIAL RESERVE HAS BEEN, FOR ALL PRACTICAL PURPOSES, TOTALLY DEPLETED. THE WARDA SPECIAL FUND WHICH FINANCED OPERATIONAL DEFICITS IN PAST WAS DRAWN DOWN TO ZERO IN DECEMBER.
- B. WARDA NO LONGER HAS A LINE OF CREDIT WITH ITS MAJOR SUPPLIERS (AIRLINES, ELECTRICITY AUTHORITY, INSURER, STATIONERS ETC.) AND SOME CURRENT DEBTS ARE AS MUCH AS ONE YEAR OLD.
- C. WARDA PROFESSIONAL AND ADMINISTRATIVE STAFF, WHO HAVE NOT BEEN PAID FOR FIVE AND FOUR MONTHS, RESPECTIVELY, HAVE EXHAUSTED PERSONAL CREDIT SOURCES AND APPARENTLY REACHED THE END OF A TOLERANCE PERIOD. THE INDICATORS OF THIS ARE: SEVERAL EMPLOYEES HAVE BEEN EVICTED FROM THEIR HOMES; OTHERS HAVE SOLD FURNITURE TO BUY FOOD; CHILDREN HAVE BEEN WITHDRAWN FROM SCHOOLS BECAUSE OF INABILITY TO PAY FEES; RESIDENCE UTILITIES HAVE BEEN DISCONNECTED; AND CHILDREN ARE NOT RECEIVING THE LEVEL OF MEDICAL CARE THAT THEY WERE PREVIOUSLY. ONE MORE DRAWDOWN ON THE PROVIDENT FUND IS BEING PROCESSED FOR A SMALL NUMBER OF EMPLOYEES WHO ARE ELIGIBLE BUT THIS ACTION WILL REDUCE THE FUND TO THE MINIMUM LEVEL ALLOWED BY REGULATION, WITH NO FURTHER EMPLOYEE LOANS OR WITHDRAWALS POSSIBLE.

3. THE TEAM IS EXPLORING THE FOLLOWING OPTIONS REGARDING THE FUTURE OF WARDA:

- A. WARDA COULD BE PHASED OUT, PROVIDING THE FUNDS NEEDED TO PAY EMPLOYEES AND BILLS. THE COUNTRIES OF THE REGION WOULD BE LEFT WITH LIMITED NATIONAL RICE RESEARCH CAPABILITIES IN COUNTRIES WHERE THESE EXIST. RICE RESEARCH INFORMATION AND SEEDS COULD BE PROVIDED BY OTHER IARCS BUT THE NECESSARY TESTING AND DEVELOPING OF NEW TECHNOLOGY WOULD NOT BE ACCOMPLISHED IN MOST COUNTRIES.
- B. WARDA ACTIVITIES COULD BE SUBSUMED UNDER ONE OF THE IARCS, MOST LIKELY IITA, THIS WOULD MEAN BOTH A TRIMMING OF WARDA ACTIVITIES AND A SUBSTANTIAL INCREASE IN THE IITA BUDGET. DR. JIM JOHNSTON, CURRENTLY WARDA DIRECTOR OF RESEARCH AND DEVELOPMENT, WHO HAS LONG EXPERIENCE WITH THE CG SYSTEM, BELIEVES THAT IITA WOULD MOST LIKELY RESIST THIS EFFORT AS IT WOULD DISTORT ITS PRIMARY PROGRAM DIRECTION.
- C. RECONSTITUTE WARDA, MORE ALONG LINES OF OTHER IARCS.
- D. KEEP WARDA AS IT IS PRESENTLY CONSTITUTED.

IF AMONG THESE OPTIONS, IT WERE DECIDED TO MAINTAIN WARDA, THE CHALLENGE WOULD BE TO RENEW CONFIDENCE AND ACHIEVE FINANCIAL AND ORGANIZATIONAL VIABILITY BY BRINGING INVESTMENT DECISIONS IN LINE WITH REALITIES OF FUNDING. WARDA HAS ALREADY EMBARKED ON THIS PATH.

4. GIVEN THE PAST FINANCIAL DETERIORATION AND CRITICAL NATURE OF THE PRESENT SITUATION, THE TEAM HAS SERIOUSLY QUESTIONED WHETHER MEMBER STATES VALUE WARDA ENOUGH (DEMONSTRATED SUPPORT) TO MAKE IT REASONABLE FOR EXTERNAL DONORS TO MOBILIZE A TIME BUYING RESCUE OPERATION. THIS BASIC QUESTION CAN BE RESPONDED TO AS FOLLOWS:
- A. RECEIPTS FROM MEMBER STATES IN 1984 (OVER \$1 MILLION), IF EQUALED IN 1985, WOULD COVER 80% OF THIS YEAR'S ADMINISTRATIVE BUDGET FOR WHICH MEMBER STATES ARE RESPONSIBLE.
 - B. THERE IS A HIGH DEMAND FROM MEMBER STATES FOR TRAINING CONDUCTED BY WARDA, WITH COURSES FREQUENTLY OVER SUBSCRIBED.
 - C. THE LEVEL OF PARTICIPATION, MAGNITUDE OF DECISIONS AND COMMITMENT AT LOME BY THE GOVERNING COUNCIL WERE AT AN UN-PRECEDENTED LEVEL. NINE OF THE MEMBER STATES WERE REPRESENTED BY CABINET LEVEL MINISTERS.
 - D. GHANA, GUINEA AND SENEGAL ARE FULLY PAID THROUGH 1984 (OUT OF 15 MEMBER STATES).

- E. NIGERIA (FROM WHOM A LION'S SHARE OF MEMBER STATE SUPPORT IS EXPECTED) HAS VERBALLY AGREED TO RENEW SUPPORT AND PAY 20 PERCENT OF ARREARS, PLUS A 1985 CONTRIBUTION EQUAL TO 25 PERCENT OF THE TOTAL MEMBER STATE ASSESSMENTS FOR THIS YEAR.
- F. MESSAGES FROM SEVERAL MEMBER STATES REQUESTING PROCEDURES FOR MAKING 1985 PAYMENTS HAVE BEEN RECEIVED AND RESPONDED' TO.

5. Positive changes and achievements:

- A. Implementation of recommendations made by CGIAR, TAC and AID has proceeded smoothly.
- B. WARDA Contributions to increased potential for rice production are being documented in Senegal, Ghana and other countries.
- C. Responsible management
 - 1. Stringent administrative budget (down from dollars three million to 1.3 million)
 - 2. Staff reductions

	<u>Sept '83</u>	<u>March '85</u>	<u>% Reduction</u>
Totals	198	146	-26%
Admin.	116	81	-31%
R&D (total)	82	65	-21%
R&D at HQ	42	23	-45%

6. Actions taken by Acting Executive Secretary to deal with crisis

- A. Requests to Heads of State in Liberia and Togo in asking for high level communication of need for urgent action on member states contributions.
- B. Appeal to donors to expedite reimbursements on activities completed and early payment of '85 pledges.
- C. Telex appeal to CGIAR Secretariat.
- D. Continued follow-up on all expected contributions, including specific actions by station directors in the four countries to work with respective ministries of foreign affairs to accelerate contributions.
- E. Meetings with key ministers in Togo and Nigeria.

7. Team believes that only viable way to assure continuity of rice research, development and training in West Africa is for concerned parties to take action that will maintain WARDA operations while restructuring or other options are considered and decided upon. If this course is agreed to, the following steps are suggested:

- A. Based on WARDA appeal, telexed 3/26/85, CGIAR* should take lead in contacting donors and establishing targets to meet required funding level.
- B. Action to mobilize special fund should result in receipt of funds by WARDA Secretariat NLT late April.
- C. After CGIAR appeal, AID should quickly communicate expression of willingness to participate in emergency financing operation. One possible source of funds is the FY 1985 OYB for WARDA of dollars eight hundred thousand.
- D. WARDA secretariat should continue to press member states, using data which shows that if they do not come forward, now, they may well lose WARDA as a resource.

8. Against a current near zero cash situation, WARDA will have an estimated outstanding debt by March 31, of dollars three million, four hundred thousand. Of this amount, a conservative estimate of cash to be received by May 1 (not including member states, whose contributions are expected later) is dollars three hundred fifty-two thousand which consists of dollars one hundred thousand from the CGIAR and dollars two hundred fifty-two thousand from the EEC. The short-term cash requirement is, therefore, dollars three million, forty eight thousand. However, WARDA feels that approximately dollars one million nine hundred thousand will be adequate to pay staff at least 50 percent of salary arrears, reestablish credit and cover operational expenses for three months.

9. The team believes that the skills of a financial analyst will be required to determine whether the current financial crisis is amenable to solution. The team was struck by the fact that WARDA member state contributions to fund their portion of the administrative budget were, as of Dec. 31, 1984, only dollars one hundred forty-seven thousand less than what was expected of them. The non-recoverable portion of the debt (estimated at dollars one million four hundred thousand), results from poor financial management - expenditures in excess of commitments. WARDA contends that the remaining portion of the debt is purely a cash flow problem. Projections of income later in the year support this contention. However, it is clear that without emergency financing now it will probably not survive to recover from the cash flow problem. Drastic downward adjustments of the 1985 administrative budget by the Secretariat have brought it in line with realistic anticipated income, based on last year's receipts. The tight financial management instigated by the Acting Executive Secretary should be strengthened by the arrival next week of the internationally recruited controller.

10. As CGIAR must clearly take the lead on any actions, team recommends that AID/W consult with CGIAR secretariat on possibilities for emergency financing. Given limited time, this message is meant to provide information base. Further analysis and recommendations will follow.

PART II - WARDA's FUTURE:

A. Institutional Analysis: Constraints and Potential

1. Leadership: For the first time, WARDA has a talented, international class manager at the helm, albeit on an acting basis. With morale at its lowest ebb ever due to the financial liquidity crisis, the scientists and administrative staff who make up WARDA are being held together by the leadership of Alieu M. B. Jagne. He has taken firm measures to limit expenditures to anticipated income. He has reduced staff levels. He has focused on maintaining those operations that are at the core of WARDA's purpose while making reductions elsewhere.

While he may not be named as permanent executive secretary at the meeting of the Governing Council (GC) when it meets in late 1985, he will be at the head of the organization for the critical period during which organizational survival is the issue. Mr. Jagne's successor will be the first to be appointed as a result of screening by the Scientific and Technical Committee (STC). This process will to some extent de-politicize selection, or at least bring qualifications to the forefront as a consideration. Still, uncertainty about leadership of WARDA after January 1986 is a matter of concern when considering prospects for the future. This concern is balanced by a number of factors:

- a) After experiencing the tenure of two less than successful Executive Secretaries, it can be expected that the GC will try to ensure that a well qualified individual is appointed.
- b) One can assume that only qualified individuals will pass the STC screening process.
- c) The appointment of an experienced, internationally respected expert (Dr. James Johnston) to be Director of Research and Development brings the best available international talent to the top management team of WARDA (the incumbent expects to remain with WARDA for between two and three years).
- d) The appointment of an internationally recruited Controller will assure implementation of the sound financial management practices initiated by the Acting Executive Secretary.
- e) Station Directors and key staff in the stations have responded well to increased delegations of authority and represent today a strong second level echelon of management that is accountable.

In the past, there were minimal checks on WARDA leadership. The Executive Secretary controlled the organization with some degree of annual scrutiny by the GC, a politically based, administratively uninvolved group. Since mid 1984, management is no longer in the hands of one individual. The STC, with its broader membership, is an active oversight body. The appointments noted above constitute built-in checks and balances.

2. Staffing: WARDA is its staff. For a relatively new organization, the continuity of professional staff, particularly in research and development, is impressive. The 47 professional staff members currently on board have an average tenure with the organization of five years. Twenty-four (just over 50 percent) have served for periods of between five and eleven years. This does not include those professional staff members at the stations who are on indefinite secondment from national governments and who have a tenure record equivalent to that of the WARDA direct hire staff. As a whole, this staff cadre represents the strongest group of scientists working on rice in Africa today. No national rice research program even approaches the breadth and depth of expertise represented here. It has taken many years to assemble and develop this resource. If disbanded, it would take many years to rebuild.

When faced with mounting financial difficulties, WARDA undertook a staff reduction program aimed at maintaining its most valued core of scientific and support personnel. The total staff has been reduced by 26 percent since September 1983. While the total professional R&D staff has been reduced by 17 percent, the transfer of several headquarters-based scientists to the research stations resulted in a net increase of scientists on the stations of 43 percent by March 1985. The total headquarters staff of WARDA has been reduced from 114 in September 1983 to 71 in March 1985, a reduction of 38 percent.

A review of current staff strength and distribution by WARDA's Director of Research and Development indicates that, on the professional side, WARDA is at or near the minimum needed to maintain the structure and operations as it exists today. The team is in general agreement with this assessment.

Further reductions on the administrative side are possible and needed. These reductions are primarily at the lowest grade levels, however, and would not result in significant savings (an estimated maximum of \$30,000 per annum). Indeed, such savings would be more than offset by the urgent need to fill a few key positions in the Communications Division which is today below the minimum staff level necessary to maintain effective operations. A summary of recent changes in the WARDA staffing pattern is included as Attachment 3 to this report.

AID's contribution to the continuing staff development process has been two Ph.D's, four MS degrees and significant amounts of other long term and short term training. An example of this resource is the WARDA Station Director at Rokupr, Sierra Leone, who came to WARDA eight years ago as a noted scientist. Over the years he has applied his expertise to the particular problems of the mangrove rice ecology and has become a skilled manager as well. Under the adverse physical circumstances at the Rokupr Station, he has established the motivational climate, by personal example and perseverance, that pervades the group of productive scientists under his direction.

While the design of WARDA I and II provided for staff enhancement through the training of individuals, both projects have neglected the overall institutional development requirements of WARDA. Support by the projects in the areas of organization development and management systems could have helped WARDA resolve many of its problems before they reached the stage of sapping organizational vitality.

3. Decision Making Structure: Actions by WARDA in response to CGIAR, TAC and AID reviews have significantly altered the decision making structure, bringing it closer to that of other International Agricultural Research Centers (IARCS). Concurrent with the expansion of the STC in early 1984 to include seven CGIAR designated members, the mandate of this body was changed to increase its functions and responsibilities. The most important of these changes include approval of senior professional personnel, programs and budgets.

Personnel - The STC became a review and screening body for Member State nominations for the positions of Executive Secretary and Deputy Executive Secretary. The Governing Council will receive recommendations directly from the STC when there is a vacancy in one of these positions. Also, the STC became the approving authority for appointment of professional personnel at the levels of P-3 upward.

Programs and Budgets - In addition to their previous program review function, the STC was charged with review and approval of the program budget as basis for reporting to the Governing Council. The STC also became responsible for reviewing the administrative budget and recommending action to the governing council. The STC is, therefore, the only body with substantive responsibility for review of both the administrative and program operations of WARDA. The STC has become roughly analagous to a board of directors in the IARC system. This includes the annual TAC review process.

At the program level, an important change in the decision making structure deals with increased delegations of authority to Station Directors. For the first time they are responsible for development of a program, whereas previously their role was limited to implementation. Likewise, these directors have been given greater discretion over station administration, including increased financial accountability, control over staff and decisions on contracting.

4. Approach to Organizational Objectives: Changes discussed earlier in this section have been driven by a series of actions by the WARDA secretariat to sharpen program focus and increase organizational effectiveness. Three sets of actions are particularly noteworthy. These are enumerated in the Integrated Program Budget document that was approved by the STC in mid-1984. Briefly summarized, they are: 1) program priorities were established as the basis for future resource allocation; 2) decentralization was undertaken to

increase the authority vested in Station Directors and to move professional staff from headquarters to the field; and 3) activities were integrated into a common program in order to increase interaction and learning between the stations. As reported by the Director of the Rokupr Station, these measures have clearly increased staff effectiveness. Further improvement is still needed, particularly in communications. Installation of a radio net that would link stations is being discussed. This, or some reasonable option, should be pursued. Nowhere is the need for attention more apparent than in the area of printing and publications. The quality of presentation for WARDA publications must grow to match the quality of content. Publications today are characterized by near unreadable print that is produced by an ancient mimeograph machine.

Overall, WARDA has instituted almost all recommendations emanating from CGIAR's 1983 External Program Review and External Management Review and AID's Mid-point Project Evaluation as follows:

- a) Membership of the STC expanded to 14 (7 appointed by MS, 7 by CGIAR).
- b) GC has expanded the mandate of the STC consistent with CGIAR recommendations.
- c) An internationally recognized financial controller is being recruited.
- d) An internationally recognized Director of Research and Development has been recruited and has been employed since August 1984.
- e) The first integrated program and budget was developed and then approved by the STC in June of 1984.
- f) Headquarters staff has been reduced with many posted to research stations, with overall staff reduced by 26 percent since September.

B. Financial Viability

1. Member State Contributions: A major issue in assessing the financial viability of WARDA centers on the Member State contributions. Without looking at the entire contributions record, the member states can be easily maligned and misunderstood in this regard.

WARDA is unique among international agricultural research centers (IARCs) in that it is the only one that is an Association (as opposed to a Center) and depends on contributions from its members to provide the core administrative budget. Economically, the countries of West Africa are among the poorest in the world and they have been hard hit by the declining world economic situation, a strong dollar and a severe drought that is causing the much publicized famine in many of these member states. Despite this economic adversity, most have continued to make contributions, though not all at assessed levels.

Member State contributions are made in two parts: (1) An administrative fund that basically finances salary and operational costs of WARDA headquarters; (2) a special fund to provide working capital and finance non-recurring costs. The special fund has been used during this financial crisis as a fund of last resort to pay essential bills. Its balance is now zero. The administrative fund is one that has received the most attention by donors and is the source of great criticism by detractors of WARDA.

In 1984, Member States did make a total contribution to the administrative fund of \$1,037,085 out of a \$2.3 million assessment. Guinea, and Senegal are fully current in their payments both for the administrative and special fund, while Ghana would be except for a quirk of foreign exchange. At the other end of the scale Mauritania has never made a payment and Burkina Faso has arrears dating to 1978. Nigeria, potentially the largest contributor, has not made a payment since 1981 primarily due to political disagreements over selection of the Executive Secretary. It appears this tiff may be coming to an end and the Nigerian government at the GC meeting in Lome promised to pay a revised 1985 assessment equal to 25 percent of the member state assessment plus 20 percent of the arrears. While revising its own assessment may appear to be unilateral action on the part of Nigeria, it reflects a growing concern with the assessment schedule. Indeed, Nigeria has taken the initiative to prepare a new assessment formula which they plan to present to the next GC meeting. The team believes that a review of the assessment schedule is overdue and a matter for careful, professional attention.

Since its organization in 1971, WARDA has received \$14,473,621 in contributions from member states. Of this amount \$9,346,354 was contributed for the specific purpose of supporting the administrative budget, while the remaining \$5,127,267 was contributed to the special fund. While recognizing the distinction between these two funds, the team notes that in practice member states must be credited with a contribution to administrative support of WARDA that is a total of the two funds. Viewed in this way, member state contributions through 1984 fell short of required levels by only \$147,000.

Until 1981, assessments increased in small increments each year. In 1981, the assessment was increased dramatically from \$1,148,468 in the previous year to \$1,859,373, a sudden increase of 62 percent. The assessed level then moved up rapidly to a peak of \$2,819,566 in 1984, an increase of 146 percent in four years. The increase in level of contributions did not keep pace with this rise in assessments. Even so, the member state contribution of \$1,037,884 to the administrative budget in 1984 was the third highest annual contribution in the history of the Association. (See Table 1, p. 13)

Budgets set by the WARDA secretariat and approved by the Governing Council for the early eighties were out of line with member state capabilities and the cause of a large arrears that is on the books today. In this situation, funds were withdrawn from the member states' special fund to finance major deficits in administrative expenditures. This continued until December 1984 when the Special Fund was exhausted. Member states have contributed 61 percent of all administrative assessments since the founding of the Association.

This is particularly noteworthy when considering that a minority of members have not, and will not in the foreseeable future, be able to contribute to the support of the organization. It is also significant to note that previous levels were maintained in the early 1980's even though Nigeria, which carried a significant portion of the total assessment, did not participate during these years. Even though these years represented a period of grave financial and economic problems for member states, contributions continued to flow. WARDA has a record in this regard that is better than most if not all, of the thirty-six sub-regional organizations located in West Africa.

The cash flow problems of WARDA are often created more by the timing of the receipt of funds than by the intentions of member states to make payment. Most of the MS contributions as well as those of donors are received in the last half of the year. This in turn results from the release of funds during a given fiscal year and the movement of those funds through the banking systems to WARDA.

Within Liberia, WARDA is experiencing problems of getting funds processed through the National Bank. During our visit, for example, the EEC representative was amazed to find that a check for a quarter million dollars deposited with the National Bank over 2 months earlier had not been received by WARDA. This situation, which was not the first of its kind and which is beyond WARDA's control, exacerbates the organization's cash flow problems.

Table 1

WARDA Administrative Fund

Year	Balance	Assessment	Payment	Cumulative Arrears
1971	-			
1972	-	395,213	-	395,213
1973	395,213	426,191	604,883	216,521
1974	216,521	499,018	556,276	159,363
1975	159,263	497,738	449,869	207,132
1976	207,132	577,300	484,217	300,215
1977	300,215	710,829	432,026	579,017
1978	579,017	844,102	680,687	742,432
1979	742,432	965,928	798,315	910,045
1980	910,045	1,158,468	1,348,796	609,718
1981	709,718	1,859,373	784,658	1,784,433
1982	1,784,433	2,050,518	1,315,096	2,519,855
1983	2,519,855	2,537,043	853,647	4,203,251
1984	4,203,251	2,819,566	1,037,884	5,984,933
		<hr/>	<hr/>	
		15,331,287	9,346,354	

Table 2
WARDA Special Fund

Year	Opening Balance	Assessment	Payment	Cumulative Areas
1976	-	1,020,442	180,344	840,098
1977	840,098	1,180,508	157,785	1,862,821
1978	1,862,821	1,190,508	520,594	2,532,734
1979	2,532,734	1,207,388	555,761	3,184,361
1980	3,184,361	1,207,388	2,434,690	1,957,059
1981	1,957,059	1,207,388	1,023,319	2,141,128
1982	2,141,128	-	23,299	2,117,830
1983	2,117,830	441,611	149,354	2,410,087
1984	2,410,087	502,508	82,121	2,830,474
		<u>7,957,741</u>	<u>5,127,267</u>	

2. Donor Contributions: Table 3 provides a summary of contributions expected from donors and member states in 1985. Most of the donor funds are earmarked for specific project activities, which has the potential for distorting program objectives. However, it appears that a strong STC, reviewing the program annually, will be able to direct donors to fund project activities that are compatible with WARDA program objectives.

Table 3

1985 FUNDING EXPECTATIONS BY WARDA
(in US \$ 000'0)

Donor	1985 Budget Proposal	Current Anticipated 1985 Income
Member States	1300.0	1300.0
CGIAR	2893.0	2024.0
USAID	3018.0	2599.5
France	193.3	193.3
EEC	523.8	523.8
Japan	310.6	310.6
Belgium	301.9	301.9
UNDP/FAO	144.3	144.3
IITA	23.9	23.9
IBRD	65.5	65.5
Switzerland	212.6	212.5
TOTAL	8986.9	7700.0

3. Bringing Investment in Line with Income: Under current management, WARDA has trimmed its administrative budget and is attempting to bring operational costs in line with anticipated receipts. The 1985 assessment of \$2.5 million is designed to finance an austere operating budget of \$1.3 million, less than \$300,000 over 1984 actual contributions, with the balance going toward debt repayment.

WARDA, with CGIAR support, has taken the steps to assure responsible financial management in the future. It will, however, take time to correct the past mistakes of mismanagement. Until past debts are paid, WARDA will continue to have cash flow problems that will detract from its primary mission.

The potential for cash flow problems will continue if adequate provisions are not made by WARDA to assure operational funds throughout the year. Otherwise, they will continue to be buffeted by the budget cycles of member states and donors. The problem is further complicated by the fact that donor funded programs carry heavy administrative costs that are not provided for by donor funds. This causes fluctuations in annual administrative budget requirements that are not totally predictable. There is a need to reduce the portion of core administrative funds currently going to special project support. This could be done by donor agreement to earmark a portion (perhaps 15%) of contributions as a supplement to the core administrative fund, a common practice with other IARCs.

Another approach to the problem that is more comprehensive, but perhaps more problematic, would be to unify the total budget of WARDA. Contributions would flow into a common fund. In this scenario member states would be responsible for an established percentage of the overall budget rather than for the core administrative budget. This option, while attractive for the long term, could not likely be implemented in the near future.

C. Technology Generation and Transfer

1. Emerging Technologies: Programs by WARDA to generate technologies, especially breeding new rice varieties, only began in earnest about 1981. During the early years of the Association the strategy was to adopt imported technology after testing for qualities. Experience with this approach led to the realization that many constraints were peculiar to and needed to be researched in West Africa. Only limited technologies, primarily varieties for irrigated areas, were more directly transferable and have been applied.

Generating new technologies may take years when started from constraint identification and carried through to field trials and finally adoption by farmers. For example, depending on the number of traits in a variety, 5 to 12 years is likely to be needed. Varietal development is a necessary focus for upland, swamp and deep water rice cultures because of less water control than for irrigated systems and the need to allow for uncertainties in obtaining input supplies.

With this as background it is important to briefly describe some emerging technologies attributable to WARDA. These will be described for the four ecological categories by station name.

Rokupr is located in Sierra Leone and concentrates on the mangrove tidal swamp rice culture, the second research priority of WARDA. Swamp rice culture constraints being addressed by Rokupr are: cropping seasons ranging from 100-200 days, saline soil, high level of soluble iron, varying levels of flood water and attacks by crabs on young plants. In response to these conditions WARDA has:

- collected substantial amount of germplasm;
- conducted backcross breeding resulting in new varieties for various ecological conditions;
- identified two varieties which produced 25% more than current best, variety in farmers fields over two seasons;
- tested ratoon cropping which appears promising
- made progress in developing an injection fertilizer applicator that injects fertilizer into the soil to decrease the loss experienced with top dressed granular fertilizer due to the movement of water during tides;
- analyzed the returns of mechanical land preparation to compensate for the shortage of draught animals due to disease.

The first four examples of technology generation need less dependence on the input supply/service systems than the latter two examples. These were identified with knowledge gained from the Technology Assessment and Transfer (TAT) system constraint analysis studies. (See below for further information on TAT.)

(Although this is a section on technology, the team commends the dedicated scientists and their families for accomplishments achieved in an isolated area 3-4 hours over an improved yet rough road, poor water and limited electricity, the lack of telephone, telegraph and mail services and an absence of good sources for basic supplies.)

Richard Toll station in Senegal conducts work on irrigated rice and is the third priority of WARDA. Besides introducing appropriate rice varieties primarily from Asia, fertility research determined the essential need for phosphorus to be applied to fields beginning with the third cropping season and thereafter. Also, research is being conducted on water management of newly opened irrigated perimeters, as well as testing/promoting mechanization equipment of IRRI (International Rice Research Institute) design.

Bouake, Ivory Coast, does work on upland rice, the number one research priority of WARDA. Sixty-five percent of West Africa rice growing ecologies are upland systems. This work only began in 1982 with the Technology Assessment and Transfer (TAT) system conducting field studies to follow up rice varieties developed by breeders from the French Research Organization Institut de Recherches Agronomiques Tropicales et de Cultures Vivrieres (IRAT) and collecting data for constraint analysis (see Section C.2 below for a fuller description of TAT). This station has the fastest growth of staff. Preliminary views are that the more fertile hydro-morphic soils (saturated heavy soils usually at the base of slopes) will offer better conditions for development of technology which will provide faster results over a significant area devoted to upland rice.

Mopti station in Mali is the fourth priority of WARDA, emphasizing deep water and floating rice cultures. The erratic, reduced flood levels over the last four years have negatively affected most technology generation, except for breeding work on new varieties especially for deep water conditions. Breeding is possible because of a good germ plasm collection and important traits identified during the FA constraint analyses phase.

In 1985 there are 200 cooperators in seven countries. Further details on the relative progress for each ecology and participating countries is in Attachment 8.

2. Technology Assessment and Transfer*: The technology transfer activity of the Association was expanded to cover the assessment of improved technology and reorganized as a program in 1980. The objective of the program is to increase the rate of adoption of improved rice production technologies introduced to farmers in the member countries. The approach is to ensure that socio-economic, environmental and other constraints that are likely to affect the performance of the improved technologies when in the hands of farmers are identified and solutions identified.

The TAT program focuses on:

1. Systematic assembling of information on rice farmers that will allow identification of farmers' constraints and will guide development of technological packages.
2. Designing and testing improved technological packages under farmers' conditions for each rice production system.
3. Monitoring and evaluating the adoption of WARDA improved technology in production.
4. Identifying and examining major extension problems in the rice industry and working with national extension services to solve such problems.
5. Encouraging the establishment and efficient functioning of national seed multiplication projects.

*(Source: WARDA/84/STC-14/17, Programme Achievement, Contribution To an Impact on Rice Development in West Africa, Lome, 1984, p.35.)

3. Linkages with National Programs and Projects: One of WARDA's responsibilities is to assist Member States to develop their own technology development and transfer capacities for rice. WARDA has provided a wide variety of technical assistance services in the quest to fulfill this responsibility. At times, though, some have interpreted WARDA's responsibility as including responsibility for the adoption rate of varieties by farmers in member states.

This assumption was in the WARDA II PP which stated that one project purpose was, "the adoption of these high yielding rice varieties and related cultural practices by the farmers of West Africa." This attributes responsibility to WARDA for activities that are appropriately the responsibility of member state organizations. This inappropriate project purpose of the WARDA II PP should be reworded in the amendment to extend the project. A suggested rewording is as follows: "The second purpose is to make it possible for WARDA to provide assistance to member state national programs and projects that are responsible for increasing the adoption of these high yielding rice varieties and related cultural practices by the farmers of West Africa."

WARDA has the opportunity and technical resources to provide assistance through training, studies, etc., to accelerate the transfer of WARDA developed technology. If member states continue to experience extreme financial distress, then the need for WARDA to work with them through projects supported by external donors increases in importance. This reality has already surfaced in many countries. In addition, WARDA's regional network of resources focused on rice ecologies should receive support from all major donors having rice projects ranging over the areas of policies, research, production and post harvest technologies.

4. Relevance/Utilization of Training:

Both the 1983 CGIAR and AID evaluations gave the training Center high marks, pointing out that while improvements could be made, the Center was providing very useful courses designed to increase rice production in the subregion.

Two recent studies have produced rather comprehensive reports concerning WARDA training activities. A 1982 Swiss funded study examined course curricula and participant employment in member state countries following WARDA training. Also, WARDA has attempted through letters and visits to member states to determine if former participants are actively involved in rice research, extension and production activities. Comprehensive information has been difficult to obtain. However the Swiss study and contacts made by WARDA personnel indicate that a large percentage of students have returned to their home countries to work in rice research and extension activities. In the future, WARDA plans to send questionnaires in the WARDA newsletter requesting information concerning activities of former trainees.

Given these studies and the Training Center effort to follow up on former trainees' activities, there is a demonstrated interest to conduct long-term monitoring of training for adequacy and relevance to member state needs. The ad hoc actions to date need to be built on with design of a systematic, on-going process which feeds regularly into curricula development.

It is also clear that a review and diversification of training methodology would enhance the impact of at least some of the training programs.

5. Viability of WARDA research Stations:

The Mopti station research and TAT programs concentrate exclusively on deep water/floating rice a significant rice ecology along the Niger and Bani Rivers where successful rice production relies on annual floods.

The 1983 flood produced the 100 year low and the 1984 flood a 1000 year low. No one knows for sure if this phenomenon is a long term trend or if flood levels will return to normal in the near future. What we do know is that the trend in flood height and duration has been declining the past ten years and that, as a result, in recent years the research program has produced few meaningful results; and the TAT on farm trials have been a complete loss.

WARDA ranks Mopti as the lowest priority station and this judgement is confirmed by the STC. The station has made some technical progress in the selection and testing of new varieties. However, of all WARDA sub-stations, Mopti seems the least capable of mounting and sustaining a long range productive research and development effort. This is due to unreliable floods. Also, research in Asia has shown that it is extremely difficult to obtain significant yield increases in floating rice.

The Mopti station has problems that impair efficient cost effective operations. It is expensive to operate. The a 1984 research budget was \$791,00 as compared to Rokupr's research budget of \$447,000. It is isolated, being a 10 hour drive from Bamako and having no reliable air service. Station, field and laboratory research facilities are generally good. However, pumps purchased to provide water to research plots during low flood years have proven inadequate. A new permanent pumping station, estimated to cost in excess of \$50,000, is necessary to assure adequate pumping capacity. Also the entire station needs to be refenced to keep out cattle from adjacent farms. A screen house for plant breeding is needed and the seed storage facility needs major modifications. Residential housing is generally good, but improved fencing is needed to keep rodents and snakes out of housing. Schools are generally poor.

These factors combined make continued investment in Mopti highly questionable. Research and TAT programs at Mopti, however, can be transferred to other locations. In this regard the WARDA Director of Research and Development has suggested that the Mopti Station Director (soil science) and plant breeder could be relocated at Rokupr and the agricultural economist could be stationed at Bouake. This would allow: the Mali Government time to consider the future of the Mopti station operations; WARDA to reduce costs associated with reduction of station operations; and time to plan for staff expansion at Rokupr and Bouake. In fact, during the 1984 season the only successful aspects of the deep water/floating rice TAT on farm trials were carried out in Sierra Leone and Burkina Faso. Varieties were also successfully tested in Sierra Leone. WARDA could incorporate variety testing, technology generation and TAT on farm trials into the Rokupr station programs, albeit somewhat reduced compared to the current level of effort.

The Rokupr station research program deals with mangrove swamp rice, a very important rice ecology in the subregion with tremendous potential for expansion. In addition, the station offers three significant attributes for productive research and development. Its field research facilities are very good; all major rice ecologies, including deepwater/floating rice, are found, in Sierra Leone, and rice production in the mangrove swamp ecology can be significantly increased with improved varieties and technologies. WARDA ranks Rokupr as its second priority station, a judgement supported by the STC and CGIAR.

The Rokupr research program has already produced meaningful results (e.g. higher yielding varieties, improved production practices) and the TAT program is the most advanced of any substation. The Rokupr station's work on mangrove swamp rice offers excellent opportunities for short and long range research and development pay-offs.

Living conditions at Rokupr are mixed. Housing is generally good. The ancient water system has broken down and water must be obtained from wells or the nearby river. Power is available only 4-5 hours a day, schools are poor, basic food stuffs must be brought from Freetown and telephone communication is nonexistent. Staff tenure is generally high, but for Rokupr to maintain its effectiveness as a research station and continue to attract and retain a high quality staff, these problems must be rectified. Progress is being made in this direction, but a workable solution will require the assistance and cooperation of the Government of Sierra Leone, as well as additional WARDA resources.

The research program at Bouake station concentrates on upland rice, the most important rice ecology in the subregion, which occupies approximately 65% of the rice producing area. WARDA, along with the STC and CGIAR ranks Bouake as its first priority station. Although upland rice is the most important rice ecology in the subregion, it is also the most diverse and will take time in order to achieve significant results. AID and other donors must take the long-term view (15-20 years) when considering support for research at Bouake.

The 1983 CGIAR review recommended that WARDA substantially increase its research effort in upland rice. WARDA concurred and in response has moved ten senior research scientists from headquarters in Monrovia to Bouake, making a total of 12 scientists stationed at Bouake. The station currently provides WARDA only limited office space for professional and nonprofessional staff. WARDA must make a major capital investment to upgrade office and laboratory facilities. Field plots are sufficient for a much expanded research program. Due to the newness of the program, research results are limited, but the TAT program has made a good start in constraint analysis.

The Bouake area has many attributes which make it a desirable place to live and work. The station has excellent field research facilities and is located near major upland rice sub-ecologies. IRAT scientists located on the station have very good laboratory and office space and provide a synergistic mix of scientific disciplines. The city of Bouake is rare in West Africa in that good housing and schools (English and French) are readily available. Grocery stores are well stocked. The water, electrical, telephone and transportation systems are good.

The Saint Louis Station concentrates its efforts exclusively on irrigated rice. Although irrigated rice occupies only 2% of the rice production area in the subregion, the potential for increased production per hectare is greater than for the other ecologies. The CGIAR supports most of the station's research program. Although AID currently does not fund any of the Saint Louis operation, it may want to consider future support in that the probability of short and long term research pay-offs is high. The station has already released varieties that are yielding 7-8 tons per hectare in farmers' fields.

This discussion of the viability of WARDA research stations brings into question the absorptive capacity of the stations to expand their research effort as well as the appropriate mix of AID support. WARDA's mandate, is to conduct applied field base research (i.e. develop improved varieties and

technologies suitable for West African rice farmers). In this regard, both the Bouake and Rokupr stations can absorb substantially increased research activities. However, as has been pointed out, Bouake will need substantially more office and laboratory facilities for current or expanded staff levels. Rokupr's office space is barely adequate for current staff levels. Laboratory space is sufficient, but laboratories are not well equipped. If staff size were increased at Bouake, housing could be rented. At Rokupr, increasing staff size would require construction of staff housing.

D. AID/WARDA Future Relationship

1. Extension of the PACD beyond September 1985: The PACD will need to be extended beyond the current September 30, 1985 date, whether WARDA is phased out or continues in its present form, albeit better managed. Even if AID decided to withdraw support, an orderly, responsible phaseout will require more than a few months. It is suggested that the PACD be extended to December 31, 1986 to provide adequate time to phase out project activities or allow time to develop follow-on support. Rationale for selecting the date would include the following:

- the date coincides with the end of the WARDA fiscal year;
- consensus seems to be that Mopti should be terminated, but the 1985 research program is planned and actions underway for implementation. An orderly transfer of research activities to other stations and transition of the station from WARDA to Government of Mali operation, if this becomes necessary, could begin at the end of the 1985 cropping season;
- there may well be political ramifications of closing this station in Mali, and it will take WARDA time to gracefully close down the operation. This action probably could not be formalized until the next GC meeting in December 1985;
- if a follow-on project is planned the additional time will be needed to consider appropriate project emphasis and project management mode, design the activity and prepare the documentation;
- if AID, together with the CGIAR, determines that WARDA is not worth saving, the additional time would be required to shut down the operation.

Actions taken over the next few months will largely determine whether WARDA continues as a rice research institution or is dismantled. Obviously, if WARDA ceases to exist there would be no follow-on project. Assuming WARDA continues along some semblance of its present structure, the following options should be considered.

2. 1986 - a time of transition: During this final phase of WARDA II, a transition should be planned for the October 1, 1985 - December 31, 1986 period to allow for an orderly change of WARDA/AID working relationships. Project activities should continue along present lines except for an orderly phaseout of AID support to Mopti.

Assuming future AID support to WARDA would be channeled through the CGIAR system, this transition period could be a time to develop that working relationship. AID funds would continue to flow directly to WARDA during this transition, and AID's management responsibilities would be maintained.

3. Possible follow-on Arrangements: The transition period would provide time for planning and documenting any future AID support to WARDA. Possible programing arrangements may include the following options:

a) Provision of an annual grant to the CGIAR for WARDA support in the following areas:

- general support for program purposes as approved by the STC;
- support for specific program activities predetermined between WARDA and AID;
- whether the purpose is for general support or specified activities, AID should consider providing overhead as it does to other IARC's of 15 percent for administration and 85 percent for program.

A grant through CGIAR is perhaps the easiest route for AID. While there may be bureaucratic problems for AID as to whether the grant is handled in the same manner as for the IARCs or if the Africa Bureau can make a special grant for WARDA, it would require much less documentation and oversight. AID would be saying that it had confidence in the STC and CGIAR oversight mechanism and would give up direct involvement in project management. This appears justified and, given personnel limitations, this may be necessary.

b) A second option is to develop a follow-on project along the present lines that would include some of the following components:

- Continue Training Center support costs and the six month rice production training course;
- Continue Rokupr Station support for the mangrove swamp rice research with the program expanded to include deep water rice research and possibly upland rice for the more humid areas;
- Continue the TAT program at all stations as now underway;
- Provide administrative support, perhaps as an unrestricted overhead percentage and/or designated support for such improvements as a word processing capability to enable WARDA's professional staff to produce documents that reflect a credit to WARDA;
- Continue training of West African rice research and extention personnel to enhance the long term institutional capability of national and regional programs to solve rice production and distribution problems.

This approach would continue the AID project mode and would target those activities for support that AID considered important. However, a significant level of AID project management time would be required.

c) A third alternative could be a combination of the above approaches with funds provided in two categories: (1) administrative support and (2) funding for the specific project activities. Such an approach would provide for the institutional support as well as support to those specific research and extension activities AID feels are important to fund. Several factors have changed that would permit an adjustment in style of AID project management, once WARDA has gained adequate experience with the changes to assure that they will/can be sustained.

- the expanded STC with greater responsibility for program management;
- the presence of a CGIAR recruited Director of Research and Development and Controller; and
- improved managerial performance by WARDA.

- AID personnel reductions have eliminated the project manager position. While this report will recommend the reinstatement of the AID project manager position, current staff stringencies make the response to this recommendation somewhat problematic. If the position is not reinstated, an adjustment in the mode of AID project management will have to be accommodated earlier than would be desirable for all parties concerned.

4. Management Considerations: WARDA has dramatically improved its administrative, financial and technical management since the 1983 CGIAR and AID evaluations. The STC has begun to demonstrate an effective technical oversight capability comparable to the Boards, of Directors of other IACRCs.

If experience over the next two years shows that these improvements can be sustained, the need for a WARDA project manager for the long range will have been effectively eliminated. However, following the departure from post of the current project manager in June 1986, and until AID begins funding of WARDA through the CGIAR, substantial AID oversight of the WARDA II project must be provided. Indeed, the coming two years may be more demanding on AID

project management than any period to date. In addition to the substantial on-going responsibilities, the project will require regular and intensive effort to assure:

- 1) an orderly phase out of AID support for the research station at Mopti, including assistance to WARDA in capturing and transferring research results to date;
- 2) effective reprogramming of AID resources, originally intended for Mopti, into alternate, agreed upon activities on a phased basis that enhances the work and does not overstretch the absorptive capacity of the "receiving" units of WARDA;
- 3) liaison with national projects and programs as the TAT moves into stages where transfer of results becomes the critical activity;
- 4) adequate preparation for a more indirect role for AID under strengthened WARDA program and management systems; and
- 5) that future AID activities in support of WARDA are appropriate to field conditions, to the future of rice development in West Africa and to both the priorities and the constraints within which AID must operate.

For these reasons, reinstatement of the AID Project Manager position for WARDA is a matter of considerable urgency, given the departure of the incumbent in June, 1985. In reviewing options the team considered an arrangement whereby responsibility would be shared by the Mission ARD staff and TDY personnel from AFR/RA and AFR/TR/ARD. We are in agreement with the USAID/Mission Director that such an arrangement would require at least six TDY's by AID/W personnel per year, and that even with this level of effort, it is not an optimal solution.

The functions of this position, and the decision making requirements which it entails clearly make this job one which should be filled by a direct hire AID officer. If this becomes impossible, the option of a PASA arrangement, staffed by a regular employee of USDA, should be explored.

PART III-Conclusions and Recommendations

A. Major Conclusions:

1. WARDA is submerged in a major financial crisis, and unless steps are taken by May 1 to pay staff and meet urgent bills the organization will most likely be pushed beyond the point of no return.*
2. Staff have not been paid for months and morale is at an all time low; while good staff have remained loyal, they have made major personal sacrifices and can no longer pay bills to feed, clothe and house their families. They have become desperate; one WARDA employee summed it up by saying, "an empty bag cannot stand at all."*
3. The Acting Executive Director is actively soliciting funds from Member States (MS) and donors to pay staff and essential bills. It is ironic that WARDA has perhaps the best management it has ever had at a time when it is reaping the harvest of past mismanagement.
4. Contrary to an almost universal perception that member state (MS) support of WARDA has been dismal and declining, our review and analysis concluded that not only has MS support been sustained during an extraordinarily difficult time economically, but in absolute terms member state contributions through 1984 essentially covered the administrative budget.
5. The significant amount of arrears in MS contributions shown on WARDA books is primarily a result of a drastically escalated assessment schedule over the past four years. Only that portion of arrears that represents real unmet commitments should be considered as active debt by member states.
6. Program activities have continued at planned levels despite the financial woes, but within a few weeks this situation will change drastically without a major infusion of capital. While the WARDA secretariat's estimate of minimum requirements by May 1 is \$1.9 million, the team believes that amount may be inadequate to see WARDA through to its peak cash flow period which is historically during the latter part of the year.
7. WARDA has implemented the important recommendations of the CGIAR management review, the TAC external review and the USAID mid-point evaluation. As a result, staff reductions have taken place, fiscal procedures are being tightened and a much stronger and more dynamic STC is strengthening the research management capability of WARDA.

*The CGIAR is to be congratulated for its rapid action to alleviate the WARDA financial crisis temporarily. Conclusions Nos. 1 and 2 were confirmed by a CGIAR financial analysis team which was dispatched to Monrovia within one week of the AID team's return to Washington. Consequently, a CGIAR request led to mobilization of over one million dollars in expedited reimbursements and accelerated 1985 contributions by WARDA donors. These funds reached WARDA headquarters during late April and early May, giving WARDA a lease on life, including the payment of three months back salary to all employees.

8. The integrated program and budget process is meeting its objectives of unifying various WARDA activities supported from many sources.

9. Past fiscal mismanagement has caused an acute financial liquidity crisis at the time that WARDA is organizationally and programmatically the strongest it has been for many years.

10. The governing council, in giving more authority to the STC has tended to diminish its own role and decrease the political impact on WARDA.

11. A decision should be made now regarding continuation of support to the Mopti station, given the fact that no floods have occurred during the past 3 years and deep water/floating rice is the lowest program priority of WARDA.

12. AID assistance for the Rokupr station has generated promising emerging technologies in the short period of time since 1981 when the technology generation began to replace the testing of imported technology. Germplasm has been collected, breeding and farmers' field testing has produced two varieties yielding 25% increases, ratoon cropping is promising, and implements have resulted from mechanization using the fertilizer injector and pedestrian tractors where the supply/service system is supportive.

13. The AID-supported Technology Assessment and Transfer Program, which has been developed and applied since late 1981, is providing an accepted system to determine technology development constraints, devise appropriate transfer packages and help monitor farmer adoption with 200 cooperators in seven countries.

14. Training supported by AID has received positive feedback from evaluations and should be further strengthened.

15. Continued AID support for WARDA will be a good investment in line with the Agency priority to increase food production in Africa if WARDA maintains responsible management and solves its financial problems.

B. Recommendations:

The following recommendations are short-term in nature and should be implemented, regardless of WARDA's future.

1. CGIAR should take the lead to elicit donor response to WARDA's plea for funds needed (\$1.9 million) before May 1, and AID should respond positively to the request if other donors show evidence of support. Likewise, WARDA should intensify efforts to ascertain likely amounts of member states contributions even though remittances will likely be received after May 1.*
2. Given the immediate need of WARDA for financial analysis expertise, CGIAR should take action to provide assistance and AID should be willing to support this, if requested.*
3. The PACD of WARDA II should be extended from September 30, 1985 to December 31, 1986 in order to either 1) phase out the project or 2) allow time for institutionalization of changes recently adopted and preparation for an orderly transition from direct project support of WARDA to a mode that relies on the strengthened monitoring and decision-making process of the STC and the CGIAR.

After considering various options for the near term future of roughly five years, the team concluded that WARDA should be continued in essentially its present organizational form. The following recommendations are based on that conclusion.

4. AID should support continuation of WARDA in its present form for the near future. Such support should be contingent upon external donor and member state contributions and participation at a level not less than that demonstrated in recent years.
5. AID funds for WARDA from October 1, 1985 to December 31, 1986 should support a revised mix of specific activities that will be agreed upon between AID and WARDA. Any savings resulting from a phase out of support at Mopti should be directed to enhancing work at Rokupr and Bouake.
6. During the project extension phase from October 1, 1985 to December 31, 1986 AID will need to provide sufficient resources to analyze the possibility, appropriateness and funding mechanism for further assistance to WARDA upon the completion of WARDA II.

* These recommendations have been largely satisfied by rapid action initiated by the CGIAR secretariat. A request from CGIAR for a special AID contribution to a WARDA working capital fund was received on May 30 by AFR/RA and is under review.

7. Upon departure from post of the incumbent AID project officer for WARDA in June 1985, AFR/RA/TR and USAID/L should share the management and technical backstopping responsibility for WARDA II until the position of project officer can be reinstated and an appropriate professional officer posted to Monrovia. If AID support of WARDA is to continue beyond December 1986 (the recommended PACD of a project extension), it should be designed so as to require a decreasing level of direct AID management; ultimately, AID participation in STC meetings would be an appropriate and probably adequate means of project monitoring.

8. AID should support the unified budget approach of WARDA's management and its strategy to diversify support, (sources of funding) for any activity of the Association, be it programmatic or administrative in nature.

9. The Mopti Station should be phased out during the 1985-86 cropping season with the transfer of appropriate activities to the Mali Government, and relocation of international staff at Rokupr and Bouake Stations.

10. The Communications Division of WARDA should receive increased priority in allocation of financial resources to assure quality and timeliness in dissemination of results from the Association's programs. Organizationally the Division should become a part of or be closely linked to the Research and Development Department.

11. WARDA, with external consultant assistance, should further enhance its training program by: developing systems for monitoring the relevance and utilization of training; diversifying training methodology; and determining appropriate cost sharing arrangements with projects and programs of member states whose staff benefit from the training.

UNCLASSIFIED
Department of State

Attachment 1
OUTGOING
TELEGRAM

PAGE 01 STATE 077006
ORIGIN AID-00

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ORIGIN OFFICE AFRA-01

INFO AF00-02 AF01-04 AF02-03 AF03-06 AF04-06 AF05-01 AF06-02
AF07-02 AF08-02 AF09-01 AF10-01 AF11-01 AF12-01 AF13-01
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TAGS:

SUBJECT: IMPLEMENTATION REVIEW OF WARD

REF: MONROVIA 00158

AFR/RA AND AFR/RA/0000 SUGGESTED REPEL TO INCLUDE
SPECIFIC RECOMMENDATIONS IN DRAFT AUDIT REPORT AND
SUGGESTIONS FROM AFR/RA.

SCOPE OF WORK IS AS FOLLOWS:

1. OVERALL OBJECTIVE: TEAM WILL EXPLORE THE VIABILITY
OF WARD AS AN INSTITUTION WHICH SHOULD BE SUSTAINED AND
MAKE SPECIFIC RECOMMENDATIONS ON FUTURE LEVELS, LENGTH
AND NATURE OF SUPPORT TO BE PROVIDED BY AID.

UNDER THAT OBJECTIVE, THE FOLLOWING QUESTIONS WILL BE
ADDRESSED:

A) FINANCIAL VIABILITY

-- SHOULD AID CONTINUE SUPPORT IF NO CONTRIBUTIONS
REMAIN LEFT? WHAT IS THE POTENTIAL FOR WARD SOLVENCY?

-- SHOULD OTHER METHODS OF FUNDING BE EXPLORED THROUGH
CREDIT?

-- TO WHAT EXTENT HAVE RECENTLY RECEIVED BUDGETS
REALISTICALLY REFLECTED DECREASED AID SUPPORT?

-- ARE FURTHER BUDGET ADJUSTMENTS REQUIRED?

-- IS THE IMPLEMENTATION SCHEDULE REALISTIC?

B) FUTURE ASSISTANCE

-- SHOULD THE PACO BE EXTENDED UTILIZING AUTHORIZED
FUNDS, AND IF SO, FOR HOW LONG AND UNDER WHAT
CONDITIONS?

-- SHOULD A PHASE III PROJECT BE CONSIDERED AND, IF SO,
WHAT SHOULD BE THE CRITERIA FOR PROJECT SELECTION THAT
WOULD GUIDE THE FINAL EVALUATION OF WARD?

-- SHOULD AID FUNDS BE USED FOR ADMINISTRATIVE SUPPORT
COSTS IN THE FUTURE OR IN AN AMENDED PHASE III?

C) RESEARCH ACTIVITIES:

-- WHAT BENEFITS CAN BE EXPECTED FROM CONTINUED SUPPORT
OF HORTIC?

-- SHOULD WE INCREASE FUNDING AT BAUKWE AND ROKUPY?

-- WHAT ARE THE ABSORPTIVE CAPACITIES OF THE STATIONS?

D) TRAINING:

THE MID-POINT EVALUATION POINTED OUT THE NEED TO GETTER
DETERMINING THE RELEVANCE OF TRAINING RECEIVED AND HOW
TRAINING IS BEING UTILIZED. WHAT PLANS HAVE BEEN MADE
TO DOCUMENT THIS? IF NO PLANS HAVE BEEN MADE, WHAT
SHOULD BE DONE?

E) MANAGEMENT CONSIDERATIONS:

-- IF THE ADDITIONAL BILLING FOR A PROJECT MANAGER TO
REPLACE MARK SMITH IS APPROVED, WHAT IS THE BEST
LOCATION AND ADMINISTRATIVE ARRANGEMENTS FOR THE NEW
PROJECT MANAGER? IF IT IS NOT APPROVED, WHAT ARE
RECOMMENDATIONS FOR MANAGEMENT IF THE PROJECT IS
EXTENDED?

F) QUESTIONS RAISED BY THE AUDIT

1. CAN PAT SYSTEM BE EXPANDED TO PROVIDE AN ADEQUATE
MEASUREMENT OF FARMERS' ADOPTION OF NEW VARIETIES?

2. ARE PROJECT ACQUISITIONS STILL VALID? IF NOT, WHAT
CHANGES/ADDITIONS SHOULD BE INCLUDED IN A PROJECT
AMENDMENT?

3. CAN PROJECT BE FURTHER DISCONTINUED VIA
EXTENSION DEVICES OF OTHER PROJECTS AS IS BEING DONE IN
SENEGAL AND MALI?

4. IF THE ESTABLISHMENT OF A SEPARATE AID FUND IS NOT
POSSIBLE, CAN A TIGHTER FINANCIAL REPORTING SYSTEM BE
ESTABLISHED WITHIN WARD?

5. IF PACO IS TO BE EXTENDED, CAN A BETTER LOGISTIC
SUPPORT SYSTEM BE ESTABLISHED FOR RESEARCH STATIONS?
JAM

Itinerary
WARDA Implementation Review Team
March 16 - 29, 1985

March 16 - Wood and Prussner departed form AID/W, Smith and Johnston arrive, Freetown, Sierra Leone

Sierra Leone

March 17 - Sunday, Team (Prussner and Wood joined Smith) in Freetown

March 18 - Monday

0900 - 1200 Drive from Freetown to Rokupr Station. Met Johnston, and
1400 - late with station staff, Ayung Sampang Staff

Overnight at WARDA Guest House/Rokupr Station.

March 19 - Tuesday

0800 - 1200 Visited TAT program sites in Mangrove Sampang with Rokupr
1400 - 1500 meet Director of the Sierra Leone Rokupr Rice Research Station
1500 - 1700 Discussions with Station staff, toward research
1900 - Mixer hosted by Ayung Sampang for WARDA of Sierra Leone Min. of Agri.
Rokupr Station
Overnight at WARDA guest house Director and Deputy and team

March 20 - Wednesday

0900 - 1200 return from Rokupr to Freetown
1400 - 1700 Meet with USAID/staff

Liberia

March 21 - Thursday

0800 - 1200 Freetown to Monrovia
1300 - 1500 Met with Mission Director and Senior Staff
1900 - Dinner hosted by Mission Director

March 22 - Friday

0830 - 1200 Met with WARDA's Senior HQ Staff
1430 - 1630 Visited Fendali Training Center

March 23 - Saturday Michell joined Team

1900 - 2200 Transferred to USAID Guest House, briefed Michell
1300 -1800 Lunch, hosted by WARDA Acting Ex Sec. and discussion

March 24 - Sunday

Morning - Review materials
Afternoon - Discussion afternoon Team members

March 25 - Monday

1000 - 1100 Director and Senior Staff

1300 - met WARDA Act Ex. Sec. and Dir. R&D
Evening Cable preparation for AID/W

March 26

0800 - 1200 Met WARDA Act. Ex. Sec. & Dir. R&D
1300 - Finalize cable to AID/W

March 27

0830 - 1100 Met WARDA act. Ex. Sec. & Dir. R&D
1100 - 1200 Met WARDA staff association exc. committee
1300 - cable sent to AID/W and final report preparation

March 28 - Thursday

0800 - prepare and finalize report

March 29 - Friday

0800 - 1430 Finalize report and prepare for exit meeting

1430 1600 Exit meeting with Mission Director and Senior Staff
Evening Wood/Michell, Prussner depart.

STAFF STATISTICS

	Sept. 1983			Sept. 1984			March 1985		
	Prof.	GSS	Total	Prof.	GSS	Total	Prof.	GSS	Total
Executive									
Secretary	5	10	15	4	12	16	1	10	11
Administration									
and Finance	6	31	37	5	27	32	3	26	29
Communications	10	10	20	8	10	18	5	3	8
Training	9	35	44	8	34	42	8	25	33
Research									
and Development:									
Headquarters	20	22	42	7	22	29	6	17	23
Pendall	5	8	13	4	8	12	4	8	12
Suakoko	-	3	3	-	3	3	-	3	3
Bouake	4(+0)		11(+1)			11(+1)			
Rokupr	2(+6)		3(+6)			3(+6)			
St. Louis	5(+4)		7(+4)			8(+4)			
Mopti	3(+6)		4(+6)			4(+6)			
Sub-Reg.									

Coordination	9			6		-			
On Special									
Assignment	1			1			1		
Total R&D	49(+16)	33	82	43(+17)	33	76	37(+17)	28	65
Grand TOTAL	79	119	198	68	116	184	54	92	146

() numbers in brackets refer to professional staff seconded by national programmes.

Reductions in staff since September 1983: 25 professionals and 27 general service staff; a total reduction of 52. Note that only Liberian-based general service staff are shown in the above summary. The reduction in general service staff would have been larger if the support staff in the five-Sub-regional Coordination Offices had been included. The professional staff numbers include 4 French, 2 Belgian, 1 Japanese, 1 FAO (Italian) and 1 American technical assistance personnel paid directly by their parent organizations. The IITA Liaison Scientist is not included in the enumeration even though he contributes significantly to the program of the Research and Development Department.

WARDA STAFF DISTRIBUTION
PROFESSIONALS

Monrovia Departments and Divisions

Executive Secretariat	1 (Acting Executive Secretary)
Administration	2 Chief of Administration Personnel Officer
Finance	2 Controller (30-4-85) Finance Officer
Communications	6 Division Chief; Documentalist; Scientific Editor; 3 Translators
Research and Development:	
Central Data Processing	1 Statistician
Germ Plasm Unit	3 IITA Liaison (Breeder); Breeder; Seed Technologist (study leave)
Post Harvest Technology Lab.	2 Chief, Japanese Technical Assistance; one outposted (Gambia)
Res. & Dev. Coordination	5 Director(FF); Engineer (EEC); two Economists (USAID, France); Agrono- mist (IIC).
Training:	
Director, Monrovia	1
Training Centre (Fendall)	7 Chief (study leave); 3 Trainers; two Interpreters; Mech. Specialist (FAO)

Bonako, Ivory Coast 12 (1 local hire)

Director (Plant Geneticist) - CGIAR
Breeder (CGIAR); Asst. Breeder (French TA)
Senior Agronomist (CGIAR)
Senior Plant Pathologist (CGIAR)
Entomologist (CGIAR)
2 Extension Agronomist (EEC); (Assoc. I. Coast)
Seed Scientist (USAID)
2 Agr. Economist (USAID; EEC)
Mechanization Specialist (French TA)

Rokupor, Sierra Leone - - - - 8 (5 seconded by Government of Sierra Leone)

Director (Entomologist) (all USAID funded)
Extension Specialist
Agric. Economist
Breeder (seconded) Ph.D.
Ext. Agronomist (seconded) MSc.
Plant Pathologist " "
Entomologist " "
Weed Scientist " BSc.

St. Louis, Senegal - - - - 12 (only 1 Ph.D level)

Director (Physiologist) (CGIAR)
Rural Engineer (EEC)
Pathologist (CGIAR)
Agric. Economist (FAO-UNDP)
Research Asst. Agronomy - Azolla (Belgium)
Senior Agronomist (Belgium)
Asst. Breeder (Belgium)
Water Management Specialist (Dutch)
2 Extension Agronomists (seconded by Senegal)
1 Agronomist " "
1 Research Assistant " "

Kontikro, Mali - - - - 9

Director (Pedology) (USAID)
Plant Breeder "
Agric. Economist "
Senior Agronomist (French TA)
Assoc. Weed Scientist (PhD; seconded by Mali)
Assoc. Breeder (study leave) " "
Assoc. Agronomist " "
Assoc. Ext. Agronomist " "
Assoc. Ext. Agronomist " "

Bobo Dioulasso, Burkina Faso - - 1

Economist (World Bank Project - Team Leader)
Economic Survey

TELEX # 64145

CGIAR

Attachment 5
WARDA Telex to CGIAR
Dated March 26, 1985

ATTENTION: FARRAR/OZGEDIZ

THE SERIOUS FINANCIAL CRISIS WHICH WARDA HAS BEEN GOING THROUGH HAS ESCALATED IN RECENT WEEKS TO THE POINT WHERE THE COLLAPSE OF THE ASSOCIATION IS LIKELY, IF EMERGENCY OPERATIONAL FUNDING IS NOT PROVIDED.

AT THE END OF DECEMBER LAST YEAR, THE ASSOCIATION WAS INDEBTED TO THE TUNE OF \$2,743,782. OF THIS AMOUNT, \$1,904,284 WAS OWED TO STAFF AS SALARIES AND OTHER BENEFITS AND AS CONTRIBUTIONS TO THE STAFF PROVIDENT FUND. THE DELAY ON THE PART OF THE MEMBER STATES TO PAY THEIR ARREARS AND CONTRIBUTIONS FOR 1985 AND ON THE PART OF SOME DONORS TO REIMBURSE CLAIMS FOR 1984 AND TO PAY FOR 1985 ACTIVITIES HAS WORSENERED THE DEBT PROBLEM AND STARVED THE ASSOCIATION OF FUNDS AND COULD MAKE IT IMPOSSIBLE TO CONTINUE OPERATIONS.

THE ASSOCIATION HAS SURVIVED THUS FAR LARGELY BECAUSE OF THE PATIENCE, LOYALTY AND DEDICATION OF THE STAFF WHO HAVE NOT BEEN PAID SALARY FOR SEVERAL MONTHS NOW. AT THE END OF MARCH, THE ASSOCIATION WOULD OWE THE PROFESSIONAL STAFF FIVE MONTHS AND THE GENERAL SERVICE STAFF FOUR MONTHS SALARY. UNLESS THERE IS IMMEDIATE RELIEF, MASS RESIGNATIONS AND DESERTIONS OF STAFF ARE VERY LIKELY. IF WARDA DOES RECOVER FROM SUCH LOSS OF ITS MOST VALUABLE ASSET, IT WILL BE A VERY LONG TIME BEFORE IT CAN CARRY OUT ANY EFFECTIVE AND BENEFICIAL RESEARCH, DEVELOPMENT AND TRAINING PROGRAMME. THE 1985 CROPPING SEASON RESEARCH, NOT TO MENTION TRAINING COURSES, WILL BE IN SERIOUS JEOPARDY. THE STAFF HAVE, DURING THIS CRITICAL PERIOD BEEN SUSTAINED BY WITHDRAWALS

FROM THEIR PROVIDENT FUND ENTITLEMENTS AND BY BORROWING FROM THE FUNDS AND OTHER SOURCES. THE BULK OF THE FUNDS RECEIVED FROM MEMBER STATES AND DONORS HAVE BEEN ALLOCATED TO KEEP THE FIELD ACTIVITIES AND OPERATIONS GOING. THEY WILL SOON BE USED UP AT A TIME WHEN WARDA'S CREDIT RATING IS VERY LOW AND ITS SUPPLIERS OF GOODS AND SERVICES ARE DEMANDING ADVANCE PAYMENT. BY MY RECKONING, OPERATIONS WILL COME TO A COMPLETE HALT BY MAY 1, 1985 (EVEN IF THE STAFF IS WILLING TO CONTINUE WORKING WITHOUT SALARY) UNLESS WARDA IS GIVEN A MASSIVE INJECTION OF FUNDS. AGAINST THIS AMOUNTS OWED BY WARDA AT THE END OF DECEMBER MUST BE SET THE AMOUNTS (TOTALLING \$1,306,353) DUE TO IT FOR ACTIVITIES IT HAS ALREADY FINANCED BUT FOR WHICH IT HAS NOT BEEN REIMBURSED BY EXTERNAL DONORS. IF THESE AMOUNTS ARE REIMBURSED WARDA WILL NEED TO BE PROVIDED WITH \$1,437,443 TO LIQUIDATE ITS DEBTS AS AT DECEMBER 1984. THE DELAYS IN THE PAYMENT OF 1985 COMMITMENTS BY MEMBER STATES AND SOME DONORS WILL RESULT IN INCREASES IN WARDA'S DEBT TO \$3,397,613 AS AT THE END OF MARCH 1985.

THE IMMEDIATE ASSISTANCE OF DONORS IS NECESSARY TO SOLVE THE DEBT AND THE LIQUIDITY PROBLEM. THE WARDA SECRETARIAT HAS OVER THE PAST THREE MONTHS BEEN DRAWING THE ATTENTION OF THE MEMBER STATES TO THE DETERIORATING SITUATION AND HAS BEEN APPEALING TO THEM TO MAKE IMMEDIATE PAYMENT. IN RESPONSE TO THE REQUEST OF THE SECRETARIAT, THE CHAIRMAN OF THE GOVERNING COUNCIL HAS ALSO APPEALED TO MEMBER STATES. WE HAVE BEEN INFORMED BY FOUR INCLUDING NIGERIA THAT ACTION HAS BEEN INITIATED TO PAY. JUDGING FROM PAST EXPERIENCE WITH TRANSFER THROUGH THE BANKING SYSTEM, IT WILL BE SOME TIME BEFORE THESE FUNDS ARE RECEIVED; THEY MAY COME TOO

LATE. WE HAVE JUST RECEIVED A PAYMENT ANNOUNCED LAST YEAR BY ONE OF THE MEMBER STATES. THE HEADS OF STATE OF LIBERIA AND TOGO, THE HOST COUNTRY OF WARDA AND THE COUNTRY CURRENTLY HOLDING THE CHAIRMANSHIP OF THE GOVERNING COUNCIL RESPECTIVELY, ARE BEING INFORMED OF THE SITUATION AND REQUESTED TO APPEAL TO HEADS OF STATE OF OTHER MEMBER STATES.

APPEALS ARE BEING MADE BY US DIRECTLY TO OUR DONORS TO EXPEDITE REIMBURSEMENTS AND PAYMENTS FOR 1985 PROGRAMME ACTIVITIES AND TO PROVIDE EMERGENCY RELIEF FUNDS TO LIQUIDATE OUR DETS. THE SECRETARIAT WOULD APPRECIATE IT IF YOU WILL USE YOUR GOOD OFFICES TO APPEAL TO DONORS IN THE CG, PARTICULARLY WARDA DONORS, FOR URGENT HELP: 1) TO LIQUIDATE WARDA'S DEBTS BY MEETING OUR CLAIMS FOR REIMBURSEMENT AND CONTRIBUTING TO AN EMERGENCY RELIEF FUND AND 2) TO PROVIDE ADEQUATE WORKING CAPITAL BY ADVANCING FUNDS FOR 1985 ACTIVITIES.

THE FOLLOWING DONORS WHO ARE IN THE CGIAR SYSTEMS SHOULD BE REQUESTED TO ACCELERATE PAYMENTS FOR 1984 ACTIVITIES ALREADY PREFINANCED AND UNDERTAKEN BY WARDA:

AAA	BELGIUM	-	\$224,171
BBB	EEC	-	\$277,220
CCC	NETHERLANDS	-	\$ 75,873
DDD	UNDP/TCDC	-	\$ 24,002
EEE	UNDP/FAO/RAF/75/022	-	\$57,261

IMMEDIATE PAYMENT OF THESE AMOUNTS WHICH REPRESENT JUSTIFIED CLAIMS AND WHICH ADD UP TO \$659,127 WILL RELIEVE THE PRESSURE ON THE WARDA MANAGEMENT AND ENABLE IT TO PAY PART OF THE AMOUNTS OWED TO STAFF AND SUPPLIERS. AT PRESENT WE ANTICIPATE RECEIVING

\$352,424 ONLY BEFORE THE END OF APRIL (THIS INCLUDES \$100,000 FROM THE CGIAR SECRETARIAT FOR 1985 ACTIVITIES. THE IMMEDIATE FUNDING REQUIREMENT TO SAVE THE ASSOCIATION FROM COLLAPSING AND ALLOW TIME TO WORK OUT LONG TERM SOLUTIONS IS \$1,912,000 MADE UP OF

AAA \$990,000 FOR THREE MONTHS STAFF SALARIES

BBB \$550,000 TO COVER THREE MONTHS OPERATIONAL EXPENSES

CCC \$400,000 FOR SETTLEMENT OF ESSENTIAL DEBTS

DDD \$ 72,000 FOR JUNE 1985 MEETING OF THE STC

AT PRESENT SUBSTANTIAL PAYMENTS OF ARREARS OF MEMBER STATES CONTRIBUTIONS IN ADDITION TO 1985 CONTRIBUTIONS ARE UNLIKELY. THE SERIOUS ECONOMIC CRISIS AND SEVERE FOREIGN EXCHANGE SHORTAGES WHICH VIRTUALLY ALL WARDA MEMBER STATES ARE FACING AT THIS TIME HAVE ERODED THEIR ABILITY TO PAY. SOME OF OUR MEMBER STATES ARE IN FACT CANDIDATES FOR THE MASSIVE RELIEF EFFORT WHICH THE WORLD BANK AND THE UNITED NATIONS AND OTHER AGENCIES ARE TRYING TO MOUNT. AN APPEAL TO WARDA DONORS IN THE CGIAR SYSTEM FOR A RESCUE OPERATION WOULD BE MOST HELPFUL. THIS WOULD ENTAIL THE PROVISION OF EMERGENCY FUNDS TO THE TUNE OF \$1,437,443 AS GRANTS OR INTEREST FREE LOANS TO LIQUIDATE THE DEBT. THE COMPLETE EXHAUSTION OF THE WARDA SPECIAL FUND WHICH PROVIDED A CUSHION TO COVER SHORTFALLS IN MEMBER STATES CONTRIBUTION TO THE ADMINISTRATIVE BUDGET AND A WORKING CAPITAL BASE ENABLING THE ASSOCIATION TO PREFINANCE DONOR SUPPORTED ACTIVITIES HAS EXPOSED THE ASSOCIATION TO A SEVERE CASH FLOW PROBLEM. THE LACK OF WORKING CAPITAL WILL MAKE IT IMPOSSIBLE TO CARRY OUT THE

THE ACTIVITIES PLANNED FOR 1985. WE DO NOT HAVE THE FUNDS TO PREFINANCE DONOR SPONSORED AND SUPPORTED ACTIVITIES AND MAY NOT BE ABLE TO UNDERTAKE SOME ACTIVITIES UNLESS ADVANCES ARE PROVIDED BY THE DONORS. FOR THIS REASON, AN APPEAL FROM THE CGIAR SECRETARIAT TO DONORS TO PROVIDE FUNDS IN ADVANCE WOULD BE MOST HELPFUL INDEED.

THE APPEALS FOR 1) IMMEDIATE REIMBURSEMENTS OF PAYMENTS FOR 1984 ACTIVITIES; 2) GRANTS TO LIQUIDATE WARDA'S DEBTS AND 3) ADVANCES TO FINANCE 1985 ACTIVITIES DEAL WITH THE DEBT AND CASH FLOW PROBLEMS OF THE ASSOCIATION PROVIDED IMMEDIATE HELP IS GIVEN AND WARDA SURVIVES THIS CRISIS. THERE ARE ISSUES THAT WARDA MANAGEMENT WOULD LIKE TO DISCUSS LATER WITH DONORS. THESE RELATE TO THE NEED 1) FOR THE FINANCING OF THE TECHNICAL SERVICES WHICH PROVIDE NECESSARY SUPPORT FOR RESEARCH AND TRAINING, PARTICULARLY THE COMMUNICATIONS DIVISION WHICH HAS RESPONSIBILITY FOR PRODUCING AND TRANSLATING WARDA PUBLICATIONS AND REPORTS BOTH FOR THE DONORS AND THE MEMBER STATES; 2) FOR DONORS CONTRIBUTIONS TO THE ADMINISTRATIVE COSTS OF SPECIAL PROJECTS. WE WOULD LIKE TO HAVE THE OPPORTUNITY TO DISCUSS THESE ISSUES AND OTHER WARDA PROBLEMS WITH OUR DONORS DURING CENTRES WEEK IN JUNE 1985. WE WOULD APPRECIATE THE CGIAR SECRETARIAT HELP TO CONVENE A MEETING OF WARDA DONORS.

WARDA NEEDS AND, I BELIEVE, DESERVES ASSISTANCE. IN RESPONSE TO EXTERNAL REVIEW RECOMMENDATIONS, IT HAS FORMULATED AND HAS ALREADY BEGUN TO IMPLEMENT AN INTEGRATED PROGRAMME FOR RICE RESEARCH DEVELOPMENT AND TRAINING. THE EXPANDED SCIENTIFIC AND TECHNICAL COMMITTEE IS OPERATING EFFECTIVELY AND THE GOVERNING

COUNCIL HAS SHOWN ITSELF WILLING AND DETERMINED TO DEAL WITH THE MANAGEMENT PROBLEMS THAT HAVE PLAGUED THE ASSOCIATION. THE EXECUTIVE SECRETARIAT HAS RESPONDED TO THE CRISIS SITUATION BY TAKING FIRM MEASURES TO LIMIT EXPENDITURE TO ANTICIPATED INCOME.

THIS IS BEING DONE BY REDUCING STAFF LEVELS AND OPERATING EXPENSES AND BY STRINGENT EXPENDITURE CONTROLS. SINCE DECEMBER 1984 THIRTEEN PROFESSIONAL AND 19 GENERAL SERVICE STAFF POSITIONS HAVE BEEN ELIMINATED. THUS MORE THAN EVER BEFORE WARDA NOW HAS ITS ESSENTIAL ELEMENTS - A WELL DESIGNED INTEGRATED RESEARCH AND DEVELOPMENT AND TRAINING PROGRAMME, LOYAL COMPETENT AND DEDICATED STAFF, SOUND RESEARCH AND FINANCIAL MANAGEMENT, ADEQUATE SUPERVISORY CONTROL BY THE STC AND THE GOVERNING COUNCIL - TO CARRY OUT AN EFFECTIVE AND EFFICIENT RESEARCH, DEVELOPMENT AND TRAINING PROGRAMME. IT WOULD BE TRAGIC AND A SAD PARADOX IF THE ASSOCIATION WHICH NOW HAS THE POTENTIAL AND THE OPPORTUNITY TO MAKE A SIGNIFICANT CONTRIBUTION TO THE SOLUTION OF THE FOOD PROBLEMS OF THE SUBREGION (WHICH IS CAUSING THE INTERNATIONAL COMMUNITY SO MUCH CONCERN AND ANXIETY) IS ALLOWED TO COLLAPSE.

REGARDS

ALIEU M.B. JAGNE

ACTING EXECUTIVE SECRETARY WARDA

5. Against the amounts owed by WARDA at the end of December must be set the amounts (totalling \$1,306,339) due to it for activities it has already financed but for which it has not been reimbursed by external donors. If these amounts are reimbursed, WARDA will need to be provided with \$1,437,443 to liquidate its debts as of December 1984. The delays in the payment of 1985 commitments by Member States and some donors will result in increases in WARDA's debt to \$3,397,613 as of the end of March 1985.

6. The WARDA Secretariat has over the past three months been drawing the attention of the Member States to the deteriorating situation and has been appealing to them to make immediate payment. In response to the request of the Secretariat, the Chairman of the Governing Council has also appealed to Member States. We have been informed by four, including Nigeria, that action has been initiated to pay. Judging from past experience with transfers through the banking system, it will be some time before these funds are received; they may come too late. (We have just received a payment announced last year by one of the Member States). The Heads of State of Liberia and Togo, the host country of WARDA and the country currently holding the Chairmanship of the Governing Council respectively, are being informed of the situation and requested to appeal to Heads of State of other Member States.

7. Appeals are being made by us to our donors to expedite reimbursements for 1984 and advance payments for 1985 programme activities and to provide emergency relief funds to the tune of \$1,437,443 as grants or interest free loan to liquidate our debts. The assistance and support of the CGIAR Secretariat in this endeavour have been requested by WARDA. We would appreciate it if USAID will provide urgent help to liquidate WARDA's debts by contributing to an emergency relief fund. The CGIAR donors will be contacted by the CGIAR Secretariat to determine how much they will contribute.

8. The following donors who are in the CGIAR systems are being requested to accelerate payments for 1984 activities already pre-financed and undertaken by WARDA:

Belgium	-	\$224,171
EEC	-	\$277,220
Netherlands	-	\$ 75,873
UNDP/TCDC	-	\$ 24,002
UNDP/FAC/RAF/75/022	-	\$ 57,261

Immediate payment of these amounts which represent justified claims and which add up to \$659,127 will relieve the pressure on the WARDA Management and enable it to pay part of the amounts owed to staff and suppliers. At present we anticipate receiving \$352,424 only before the end of April (this includes \$100,000 from the CGIAR Secretariat for 1985 activities).

9. The immediate funding requirement to save the Association from collapsing and allow time to work out long term solutions is \$1,912,000 made up of:

\$990,000 for three months staff salaries
\$550,000 to cover three months operational expenses
\$400,000 for settlement of essential debts
\$ 72,000 for June 1985 meeting of the STC

10. Substantial payments of Member States' contributions for 1985 are likely to be made only during the latter half of the year, as has been the case over the last few years. Realistically, we cannot expect full payment of this year's contributions from those Member States that are hardest hit by economic crisis and drought. Some of our Member States are in fact candidates for the massive relief effort which the World Bank and the United Nations and other agencies are trying to mount.

11. The complete exhaustion of the WARDA Special Fund which provided a cushion to cover shortfalls in Member States' contribution to the Administrative Budget and a working capital base enabling the Association to prefinance donor supported activities has exposed the Association to a severe cash flow problem. The lack of working capital will make it impossible to carry out the activities planned for 1985. We do not have the funds to prefinance donor sponsored and supported activities and may not be able to undertake some activities unless advances are provided by the donors.

12. The appeals for 1) immediate reimbursements of payments for 1984 activities; 2) grants to liquidate WARDA's debts, and 3) advances to finance 1985 activities which are being launched and of which this request forms a part, deal with the debt and cash flow problems of the Association. Provided immediate help is given and WARDA survives this crisis, there are issues that WARDA management would like to discuss later with donors. These relate to the need 1) for the financing of the Technical Services which provide necessary support for research and training, particularly the Communications Division which has responsibility for producing and translating WARDA publications and reports both for the donors and the Member States; 2) for donors' contributions to the Administrative costs of Special Projects. We would like to have the opportunity to discuss these issues and other WARDA problems with our donors during Centres Week in June 1985. We have requested CGIAR Secretariat help to convene a meeting of WARDA donors.

13. WARDA needs and, I believe, deserves assistance. In response to External Review recommendations, it has formulated and has already begun to implement an integrated programme for rice research development and training. The expanded Scientific and Technical Committee is operating effectively and the Governing Council has shown itself willing and determined to deal with the management problems that have plagued the Association. The Executive Secretariat has responded to the crisis situation by taking firm measures to limit expenditure to anticipated income. This is being done by reducing staff levels and operating expenses and by stringent expenditure controls. Since December 1984 thirteen professional and 19 General Service Staff positions have been eliminated. Thus more than ever before WARDA now has the essential elements - a well designed integrated Research and Development and Training programme, loyal competent and dedicated staff, sound research and financial management, adequate supervisory control by the STC and the Governing Council - to carry out an effective and efficient research, development and training programme. It would be tragic and a sad paradox if the Association which now has the potential and the opportunity to make a significant contribution to the solution of the food problems of the sub-region (which is causing the international community so much concern and anxiety) is allowed to collapse.

14. Your kind assistance and support will enable the Association overcome its financial crisis and will be a great help to the rice farming community of West Africa.

Yours sincerely,



Alieu M. B. Jagne

ACTING EXECUTIVE SECRETARY

Ms. Lois Richards
Director
USAID/Liberia
Monrovia, Liberia



OFFICE MEMORANDUM

Attachment 7

To: USAID Evaluation Team
Dr. James E. Johnston, Director, KDA
From: WARRA Staff Committee
Subject: Staff Situation at WARRA

Date: 28/3/85

Further to the information received on 2/3/85 which reported on behalf of the WARRA Team, a staff document giving examples of problems in the process to submit the document for your reference for the attention of the USAID Evaluation Team.

WARRA STAFF COMM - 50

S. BINNI

KD/Management

11/04/85 NOLAVILLE

Dr. V. K. Niyandeng

In view of time constraint, we have briefly cited below one each of varying examples of hardships, frustrations and sufferings to which have been subjected. With sufficient time, the WAFDA Staff Crisis Committee would have otherwise convened a general staff meeting from which written documentation and/or affidavits would have been obtained from each staff. However, if such is mandatory to substantiate this presentation, these will be supplied at a later date with utmost urgency.

1. MEDICAL SERVICES

A baby boy born to staff member Simonette Asu on 27-10-84, requiring urgent blood transfusion which only the TLMA Hospital in the Monrovia area can offer, was denied admission and treatment because of their closure of credit lines to WAFDA. On a humanitarian basis in view of the infant's critical condition, admission was later granted. The attending physician, after approximately 10 days refused to sign a discharge sheet and Mrs. Asu was denied taking delivery of her child until hospitalization fees were paid up in full.

Announcements by many hospitals/clinics of withdrawal of credit facilities to WAFDA are conspicuously displayed by huge plaques in lobbies while very few are a little more discretionary. Only cash payments are acceptable for medical services and these we are unable to meet.

2. SCHOOL FACILITIES

There is written notice from the French School to staff member Maxwell Adjer-rah (Internationally recruited) that his two elementary school age children will be expelled from the school if by tomorrow, March 29, 1985 he unable to pay fees of \$2,100.00.

At least one third of the staff have received such warnings, written or verbal.

3. PANNING

Many staff have resorted to this as means of meeting pressing financial obligations. Sam Diah has had to pawn his television, while Isaac Urey had to put up his stereo component, refrigerator, etc.

The order of the day now as means through which WAFDA staff can ensure that their families are sustained daily is pawnbroking and this is in full boom everywhere.

4. EVICTION

Prince Markie and his family of 5 with all of their possessions now compulsorily occupy one 12' x 13' bedroom in a rented house, having had to pawn or sell most of their furniture to pay up on arrears with the former landlord and make an advance on the new quarters they now occupy.

Dr. V. K. Nyanteng has received communication from his landlord to vacate his home or face eviction through court orders. He has been threatened and is most likely to face charges of breach of contract by virtue of the fact that out of an annual lease agreement amount of 36,600.00 (payable in advance), he has been able to come up with only 34,000.00 to date.

5. CREDIT FACILITIES

Unlike the past, supermarkets and business establishments no longer honour WARDA staff personal cheques or legal power of attorney (LPA) for monthly salary deductions in payment of goods obtained. Business establishments have had stoves, refrigerators, beds, stereo sets, etc., repossessed through court orders. In December 22, 1981, Edward Olay had to either pay a marginal amount of 245.00 owed to a business house or go to jail over the Christmas holiday. (He was bailed out by Mrs. Newville.)

6. BANKING FACILITIES

1 out of every 5 staff with savings account at the Chase Manhattan Bank, Monrovia, Branch, have involuntarily had their accounts closed for failure to maintain a minimum balance of 32,500.00.

A 21,000.00 WARDA cheque drawn on the CITIBANK Monrovia Branch and issued to separating staff, Lucine Kamara, was last week "returned to maker" because of insufficient funds.

7. Staff members working away from Headquarters at the Training Centre, Fendall, have had to spend out-of-pocket money on transportation to and from work when the WARDA cars could not make regular pick ups either because of breakdowns or summary withdrawal by filling stations of credit facilities to WARDA.

8. UTILITIES

After repeated warnings from both the electricity and water corporations concerning arrears, water and electricity lines have not only been disconnected but lengths of pipes and wires physically removed from premises of staff, leaving them intotal darkness from day to day and their subsequent reliance on the use of wells for drinking water and outdoor fire hearths for cooking. Prince Markie and Sam Kenokai are an example out of many .

OTHERS

For a meagre repair amount of approximately 373.00, the secretary to EDV Director, Dr. James I. Johnston, has had her typewriter confiscated since December 1984 by the servicing company until arrears of roughly 3335.00 is paid up in full.

Basic stationery supplies run short adding more frustrations on the job. To complete a document, for instance, one may succeed in collecting one stencil each for the various floors or a few bond sheets here and there to operate the photocopier.

As means of immediate relief to staff, though unimposing as it may appear, the WADA Staff Crisis Committee is considering a proposal to purchase from the almost depleted WADA Staff Welfare Fund, a consignment of PL-480 rice for distribution of one bag each to staff.

STATE

AFFLICTION

William Nassah

W Nassah

- utilities disconnected
- 3 children out of school for fees
- problem with transportation (Lives 12 miles from H.)

James Suah

[Signature]

- 3 children out of school for 1985
- evicted from house
- temporary accomodation offered by brother
- unable to pay transportation
- walks 5 miles to work daily each way.

Joseph Sloan J. Sloan

- Water facility disconnected
- electricity disconnected
- transportation is a problem
- 9 children to support

Barnue Garmekollie

[Signature]

- Eviction notice to take effect end March 1985
- 5 children out of school
- detective training course discontinued due to inability to pay fees of \$25.00/month
- food shortage

William Brown

[Signature]

- delinquent in house rent; warning served
- arrears on children school fees, 1984/85. deadline
- impossible to meet living expenses

Warsay Nyeh

[Signature]

- arrears on school fees, utility bills
- impossible to meet living expenses
- transportation to work poses a problem

Samuel O. Roadu

- 4 months in arrears on rent
- warning issued by utilities corporations

Mark Etsibah

[Signature]

- warning on 4 months of arrears on rent
- utility bills long overdue; disconnection expected almost immediately

Jutay Nyemah

J. Nyemah

- children out of school for fees
- impossible to meet living expenses
- transportation to work poses problems
- impossible sustain family
- food shortage

Jonathan Abu

[Signature]

- arrears of 4 months on rent
- eviction in pipeline
- survives on credit of cash and food from friends

STAFF

APPLICATION

- M. S. Carpenter - written statement attached
- Sylvester B. Eaker - written statement attached
- William Whenda - written statement attached
- Richard Quellie - children expelled from school
- utility bills are in arrears
- impossible cope with living expenses
- transportation to work is a problem
- Ben Breyah *Ben Breyah* - delinquent in paying school fees
- rent in arrears for 4 months
- Joseph Tokpah *Joseph Tokpah* - served notice of eviction
- children to be expelled from school ending March 1985 for fees
- must rely credits from friends and relatives to maintain family
- unable to afford bus fare to work
- Amos Gbarne *Amos Gbarne* - delinquent in paying school fees
- cannot afford transportation fare to work
- living expenses cannot be met
- Francis Nyamekye *Francis Nyamekye* - written statement attached
- Mamadou A. Naign - written affidavit attached
- Prince Nansie - written affidavit attached
- John K. Mills *John K. Mills* - rent for 4 months overdue
- children attending school in Ghana and fees cannot be met
- Nandy Suah *Nandy Suah* - education for staff and wife disrupted for non payment of fees (\$230.00 each/ year)
- arrears of 4 months on house rent
- refrigerator has been pawned to landlord to cover rental payments
- Edward Clay *Edward Clay* - 4 months rent due on house
- food shortage
- 4 children out of school for fees
- impossible meet medical bills for family
- Eugene Garterh *Eugene Garterh* - over 4 months in arrears on rent
- notice on balance of school fees served



WEST AFRICA RICE DEVELOPMENT ASSOCIATION
ASSOCIATION POUR LE DEVELOPPEMENT DE
LA RIZICULTURE EN AFRIQUE DE L'OUEST

E.J. Roye Memorial Building
Ashmun Street
P. O. Box 1019
Telephone 221466/221963
Cables WARDA
Telex 4333
Monrovia, Liberia

March 22, 1985

The Honourable Joseph N. Boakai
Minister of Agriculture
Ministry of Agriculture
Monrovia, Liberia

Dear Minister Boakai:

Because of the implicit confidence which we the WARDA Staff have in your ability and respect for humanism, we have the honour to apprise you of the current state of affairs of WARDA staff and their plight which require urgent attention so as to circumvent a total collapse of the Association and the dignity for which it stands.

The staff condition at WARDA since our last meeting with you on January 4, 1985 has deteriorated and now claims an unprecedented level of demoralization. Salary payments to staff have been highly irregular over a period of one year, reaching an apex of five (5) months in arrears as of today's date. Concomitantly, arrears of bona fide claims dating far back as 1983 have yet to be settled. This has exposed us to the wrath and anger of landlords, school authorities and other basic services through which our daily livelihood and equilibrium have been ensured. Many staff members have been evicted from homes, their children have been denied entry into schools, individual credit confidence has eroded, and medical and other facilities have been withdrawn because of our inability to pay and honour our commitments. Most importantly, the respect which our position as heads of families once commanded is now being challenged upon our daily return from work by haunting landlords and the stares of our sick and starving children; surely an epitome of grief, hardship, suffering and sorrow, Mr. Minister.

Notwithstanding, Mr. Minister, our ultimate commitment to the success of WARDA, this our regional pride, remains steadfast while our maintained level of output and efficiency are an exemplification. As much as we are favourably disposed to the continued support of WARDA, our morale, social consciousness and spiritual principles are all fettered by the above conditions which we now humbly address to you for urgent reparation. There are no other immediate recourses opened to us, hence we implore you, Mr. Minister, to consider our plight as we respectfully request that our frail condition be urgently brought to the kind attention of His Excellency, CIO, Dr. Samuel K. Doe, Head of State of this beloved nation and President of the Interim National Assembly, RL, so that this Association may be saved from collapse and the families of its dedicated staff rescued from ruin and total destruction, both humanly and professionally.

We look to Dr. Samuel K. Doe, our host Government and founding member of WARDA, for urgent intervention and a possible remedy to our plight through any means within his realm that would ameliorate the situation and bring relief to the financial, social and economic strains which we, the staff members of WARDA, have endured over a one year period.

Mr. Minister, we find ourselves in a calamity over which we the staff have no control or solution. The path of days before us lies desolate and our future seems fraught with uncertainty and desperation. Consequently, our morale has been reduced to bare nothingness. We humbly turn to Dr. Samuel K. Doe, relying on his salvational magnanimity to assist in liberating us from this quagmire, and we also look to him for strength to pursue and fulfill the objectives of WARDA, our regional pride.

In profound appreciation of your continuous assistance and with assurances of our highest esteem and support, we remain,

Respectfully yours,

WARDA STAFF MEMBERS

The TAT program has five phases:

- Phase I Constraints identification through socio-economic, environmental and technological surveys of target farmers.
- Phase II Assessment of appropriate technological packages through adaptive farmers field trials.
- Phase III Designing and testing strategies for extending improved technologies to farmers.
- Phase IV Liaison with national extension agents to transfer improved technologies.
- Phase V Conducting studies to assess the adoption and impact of improved technologies.

1. The socio-economic studies have been completed in four countries covering mangrove and deep flooded/floating areas in Sierra Leone, Mali, Guinea and The Gambia. In Senegal and Ivory Coast, the studies are in progress while they are to start in Guinea Bissau.

Phase II was implemented in mangrove swamp rice ecologies in Sierra Leone, Guinea and The Gambia in the 1983/84 season. The improved technology packages tested were:

- 1) improved variety only;
- 2) improved variety + fertilizer;
- 3) improved variety + mechanical ploughing, and
- 4) improved variety + fertilizer + mechanical ploughing

(a) The improved varieties were:

- ROK 5 for short duration salt-free areas

- ROK 10 for long duration salt-free areas

(b) The fertilizer application was by injecting 30% aqueous solution of urea at the rate of 40 kg N/ha at early tillering at 20 cm below the soil surface.

Under the deep water and floating rice condition in Mali, the package tested included improved varieties, land preparation, sowing method and timing of seeding and fertilizer application.

Economic analysis of the adaptive trials of the improved packages in the mangrove swamps indicated the following:

- 1) ROK 5 could be grown with or without fertilizer in the short duration areas. However, the use of fertilizer could increase the net revenue by over 40%. This is quite significant.

- 2) CP 4 performed much better with fertilizer and poorly without it. With fertilizer application, the net revenue could increase by over 50%.
- 3) Mechanical cultivation using simple axle power tillers was not economical although it reduced the total labour requirement for land preparation and puddling by about 15%. The main benefit is in reducing the drudgery of manually doing the work.

2. Phases III and IV are going implemented in Sierra Leone this year. The recommended improved package for mangrove swamp rice cultivation includes improved variety, method, type, quantity and timing of fertilizer application and mechanical ploughing and puddling using a single axle power tiller.

With the assistance of WARDA Extension Specialist, the following has been done in preparation:

1. training of national extension staff;
2. preparation of a manual to guide conducting extension demonstration;
3. selection of sites for the demonstration.

WARDA has also supplied seeds and fertilizers to Sierra Leone Government to enable it to conduct demonstrations of the improved technological package.

4. Phase V is not yet implemented in any country.

The progress of the TAT program is indicated in Table 9.

Table 9

Progress of TAT Activities

Country	Ecology	Activity	Started	Comp.	Remarks
Sierra Leone	Mangrove Swamp	1) Socio-Economic Studies	1980/81	1982	
		2) Adaptive Farmer-Field Trials	1982	1983	
		3) Extension demonstration	1984	-	In progress
Mali	Deep Flooded/ Floating	1) Socio-Economic Studies	1980/81	1982	Mopti area
		2) Pre-extension Trials	1982	1982	Mopti area
		3) Adaptive Farmer-Field Trials	1983	-	In progress
		4) Socio-Economic Studies	1984	-	Gao area
Gambia	Mangrove Swamp	1) Socio-Economic Studies	1981	1982	
		2) Adaptive Farmer-Field Trials	1983	-	In progress
Guinea	Mangrove Swamp	1) Socio-Economic Studies	1982	1983	
		2) Adaptive Farmer-Field Trials	1983	-	In progress
Guinea Bissau	Mangrove Swamp	1) Socio-Economic Studies	1984	-	
		2) Adaptive Farmer-Field Trials	-	-	
Ivory Coast	Upland Coast	1) Socio-Economic Studies	1983	-	In progress
		2) Adaptive Farmer-Field Trials	1984		
Senegal	Irrigated	1) Socio-Economic Studies	1983	-	In progress
		2) Adaptive Farmer-Field Trials	1984		

(Source: WARDA/84/STC-14117, Programme Achievement, Contribution To and Impact on Rice Development in West Africa, Lome, 1984, pp 35-38)