

AFRICAN DEVELOPMENT FUND

THE GAMBIA

**LOWLAND AGRICULTURAL DEVELOPMENT PROGRAMME
(LADEP)**

PROGRAMME COMPLETION REPORT

**AGRICULTURE AND AGRO-INDUSTRY DEVELOPMENT
DEPARTMENT (OSAN)**

FEBRUARY 2007

TABLE OF CONTENTS

BASIC PROJECT DATA	VII
EXECUTIVE SUMMARY	XIII
1. INTRODUCTION.....	1
2. PROJECT OBJECTIVES AND FORMULATION	2
2.1 PROJECT OBJECTIVES	2
2.2 PROJECT DESCRIPTION	2
2.3 PROJECT FORMULATION	3
3. PROJECT EXECUTION	4
3.1 EFFECTIVENESS AND START-UP	4
3.2 MODIFICATIONS.....	4
3.3 IMPLEMENTATION SCHEDULE	4
3.4 REPORTING	5
3.5 PROCUREMENT	5
3.6 SOURCE OF FINANCE AND DISBURSEMENTS	6
4. PROJECT RESULTS AND PERFORMANCE.....	8
4.1 RESULTS BY COMPONENT	8
4.2 PERFORMANCE OF CONSULTANTS AND CONTRACTORS.....	11
4.3 FINANCIAL AND ECONOMIC PERFORMANCE	11
5. SOCIAL AND ENVIRONMENTAL IMPACT OF THE PROJECT.....	13
5.1 SOCIAL IMPACT	13
5.2 NATURAL RESOURCE AND ENVIRONMENTAL ISSUES	14
6. PROJECT SUSTAINABILITY	15
6.1 INSTITUTIONAL AND FINANCIAL SUSTAINABILITY	15
6.2 ENVIRONMENTAL AND NATURAL RESOURCES SUSTAINABILITY	15
6.3 ASPECTS OF INTEGRATED WATERSHED MANAGEMENT	16
6.4 GENDER PERSPECTIVES	16
7. PERFORMANCE OF THE BANK, THE BORROWER AND CO-FINANCIERS.....	17
7.1 PERFORMANCE OF THE BANK.....	17
7.2 PERFORMANCE OF CO-FINANCIER (IFAD)	18
7.3 PERFORMANCE OF THE BORROWER.....	18
8. OVERALL PERFORMANCE AND RATING	18
9. CONCLUSIONS, LESSONS AND RECOMMENDATIONS	19
9.1 CONCLUSIONS.....	19
9.2 LESSON LEARNED.....	19
9.3 RECOMMENDATIONS	21

LIST OF TABLES

	Page No.
Table 3.1: Implementation schedule for Lowland Agricultural Development Project (LADEP)	5
Table 3.2: LADEP: Summary of Items in Project Procurement List	6
Table 3.3: LADEP: Project Cost Estimates (At Appraisal) by Categories of Disbursement (UA million)	7
Table 3.4: LADEP: Project Source of Finance and Disbursement	7
Table 3.5: LADEP: Project Cost Estimates by Categories of Expenditure	8
Table 3.6: LADEP: ADF Cost Estimates and Disbursement by Categories of Disbursement	8
Table 4.1: Projected (at Appraisal) and Actual (on Completion) Area Reclaimed or Opened up (ha) by Component	12
Table 5.1: Total Population Benefiting, Participants in Work by Sex, and total Rice Growers	15

LIST OF ANNEXES

	No. of Pages
Annex 1: Map	1
Annex 2: Ledger of Disbursement per Category per Loan	4
Annex 3: Summary of Quantifiable Achievements of LADEP by IFAD	3
Annex 4: Calculation of Economic Internal Rate of Return	3
Annex 5: Performance Evaluation and Rating	1
Annex 6: Recommendations and Follow-up Actions	1
Annex 7: Borrower's Contribution (Operational Performance, Conclusion, and Recommendations as stated in Borrower PCR)	1
Annex 8: Co-Financier Contribution (Executive Summary as stated in the IFAD PCR)	3
Annex 9: Sources of Information	3
Annex 10: Aspects of Successful and Sustainability Lowland Development	3

CURRENCY EQUIVALENTS

Currency	At appraisal (April 1996)	At PCR stage (November 2006)
1 Unit of Account (UA)	1	1
1 Dalasi (GMD)	14.2836	41.5920
1 US Dollar (USD)	1.46121	1.48004

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LIST OF ABBREVIATIONS AND ACRONYMS

ASS	:	Acid Sulphate Soil
ADB	:	African Development Bank
ADF	:	African Development Fund (ADB)
AWPB	:	Annual Work Plan and Budget
CBO	:	Community Based Organization
CMC	:	Central Management Committee
CMU	:	Central Management Unit
DAS	:	Department of Agricultural Services (DOSA)
DCD	:	Department of Community Development
DOP	:	Department of Planning (DOSA)
DOSA	:	Department of State for Agriculture (formerly MANR)
DRC	:	Divisional Review Committee
EIRR	:	Economic Internal Rate of Return
FIRR	:	Financial Internal Rate of Return
FFHC	:	Freedom from Hunger Campaign (Government initiated NGO)
GMD	:	Gambian Dalasi
IFAD	:	International Fund for Agricultural Development
IMF	:	International Monetary Fund
MANR	:	Ministry for Agriculture and Natural Resources (now, DOSA)
M&E	:	Monitoring and Evaluation
MFEA	:	Ministry of Finance and Economic Affairs
MID	:	MacCarthy Island Division
MIS	:	Management Information System
MTR	:	Mid-term Review
NARI	:	National Agricultural Research Institute
NEA	:	National Environmental Agency
NGO	:	Non-Governmental Organization
PCC	:	Programme Coordination Committee
PIWAMP	:	Participatory Integrated Watershed Management Project
PMU	:	Programme Management Unit (LADEP)
PRA	:	Participatory Rural Appraisal
SA	:	Soils Associations
SMCs	:	Site Management Committees
SWMU	:	Soil and Water Management Unit (DOSA)
USD	:	United States Dollar

KEY DEFINITIONS

Bridges – *Main bridges* are constructed from concrete (cement) and metal railings, built on main tributaries of the River Gambia, which have to be crossed by farming communities to access rice fields. *Small bridges* are constructed across small canals which separate rice fields, or occur between a settlement and the rice fields. They are constructed with a combination of concrete and wood.

Causeway (Tidal Swamp Access) – A solid structure constructed from dry soil with high pressure to prevent it being eroded away by water, and solid enough to allow passage of people and livestock (not for vehicles). The causeways serve as access roads for people and their animals to access rice fields that would otherwise remain inaccessible. The project built the structures for accessing productive lands that have remained inaccessible and hence unfarmed for several years.

Dyke – A bond structure constructed from mud, gravel and other local materials with appropriate height to retain rain water in the rice fields while preventing the intrusion of sea water during floods from the Atlantic Ocean. The project provided tractors and other equipments, while the beneficiary community for the reclaimed land provided labour force to build the needed dykes. Anti-Salt Dykes, are dykes that are build solely for the purpose of preventing salt water intrusion from the sea or lower saline parts of the River Gambia into cropped fields.

Lowland Rice Ecologies – A broad classification of uplands, transitional and lowlands, generally divided into the following categories:

Backswamps: These are broad, nearly-flat, shallow depressions between the river levee and the plateau, concentrated in Upper River Division. Soils Associations (SA), are fine texture heavy clays and silty clays in the lowest areas, and medium textured loams and silt loams on the fringes or transitional are The name "Backswamp" is a misnomer: these are not permanent wetlands, but areas which experience shallow flooding from rainwater and surface water run-off during the rainy season and dry completely at the end of the rains. The levee impedes flooding from the river except under exceptional conditions when peak floods may break though the levees.

Bantafaro: These are rainfed rice fields on transitional soils found on gently sloping land on the edge of flood plains, tidal swamps, Wulumbangos and back swamps. Bantafaros are found throughout the country. Soils are mixed hydromorphic soils, usually ripe clays. Near the mouth of the river, Bantafaro soils tend to be lighter, with a sandy substratum 10-30 cm below the horizon (Prufu series), whereas in MacCarthy Island Division (MID) they tend to be heavier, with a higher clay content (Mandori series). The water regime is based on rainfall and upland water run-off. Along the Lower Central and Lower River high tides can partially flood Bantafaros creating saline intrusion problems. These were once major rice producing areas: in some parts of the country, due to drought, they have become too dry to sustain rice production later in the season and are used only for nurseries.

Pump irrigated land: It is located in flood plains and along the river levees in the Upper Central and Upper River. Soils are mostly clays and silty clays and include Associations 17, 18, 19, 20, 21, 22, and 23. There is no natural flooding, the water regime being controlled by pumping.

Tendaco: Upland rice fields cultivated under a bush fallow system along the Atlantic coast south of Banjul. Tendacos are upland depressions with light soils, sandy loams with a moderately coarse texture which correspond to several different soil Associations of the Land Resources Study. The water regime depends on rainfall and surface water run-off.

Tidal swamps: These are located in the margins of the river and can be divided into two types: (i) perennial fresh water tidal swamps, which are found exclusively in the Upper Central River in MID. Soils are fine texture heavy clays and the water regime is basically rainfall and fresh water tidal flooding; (ii) seasonally saline tidal swamps which are found in the Lower Central River. Soils are fine texture clays and silty clays. Soils representative of these areas include existing or potential acid sulphate soils. The water regime is rainfall and tidal flooding, fresh water in the wet season and saline in the dry season; vegetation may be mangrove or grassland.

Wulumbango: Literally means upland valley. These are long, wide, shallow, gently sloping upland depressions with a high water table, which drain into bolons or tributaries of the River Gambia, usually perpendicular to the river. Wulumbangos are found away from the river in the whole country. Soils are fine texture heavy silty clays in the deepest areas and medium and light textured loams and silt loams on the fringes or transitional areas. The water regime is dependent on rainfall and surface water run-off; however, at the point where the valley meets the river flood plain, water from the bolon can enter and flood the lowest parts of the Wulumbango.

River Gambia – The river that dissects The Gambia into the North and South Banks. It is tidal throughout its length in the country and can be divided into four (4) sections: i) Lower River: below Kerewan (from river mouth to Kerewan). River waters are perennially saline. ii) Lower Central River: between Kerewan and Carrol's Wharf, the river is saline in the dry season (October to June) and freshwater during the peak floods in the rainy season (July to September). iii) Upper Central River: above Carrol's Wharf (between Carrol's Wharf and Georgetown); the tides are freshwaters throughout the year. iv) Upper River: above Georgetown, the tidal effect is slight and levees along (fresh water, non-tidal).

Spillway – A structure constructed from bricks and cement to spill out water from one rice field to the next, or spill out excess water from the rice fields. The project provided all materials to build the required spillways while farming community provided the labour.

BASIC PROJECT DATA

1. Loan Number:	2100150000366
2. Borrower:	Republic of The Gambia
3. Beneficiary:	Rice Farmers and Lowland Communities in The Gambia
4. Executing Agency:	The Ministry of Agriculture and Natural Resources, the Quadrangle, Banjul, the Government of The Gambia

A. LOAN

	<u>APPRAISAL ESTIMATE</u>	<u>ACTUAL</u>
Amount	UA 4.00 million	UA 4.0 million
Repayment Rate	1% from the 11 th to 20 th year, and 3% thereafter	
Service Charge	0.75% per annum (on the amount disbursed and outstanding)	
Commitment Charges	0.5% per annum (on the un-disbursed portion commencing 60 days after the signing of the loan agreement)	
Repayment Period	Forty (40) years	
Grace Period	Ten (10) years	
Loan Negotiation Date	October 1996	October 1996
Loan Approval Date	Second Quarter, 1996	19.11.1996
Loan Signature Date	December 1996	20.12.1996
Date of Entry into Force	February 1997	25.04.1997

B. PROJECT DATA

	Project Cost and Financing	<u>APPRAISAL ESTIMATE</u>			<u>ACTUAL</u>		
		FC	LC	Total	FC	LC	Total
1.	Total Cost (UA million)	4.22	3.83	8.05	n/a	n/a	7.94
2.	Financing Plan (UA million)						
	ADF	2.60	1.36	3.96	n/a	n/a	3.96
	IFAD	1.62	1.77	3.39	n/a	n/a	3.16
	GoTG	-	0.70	0.70	-	0.82	0.82*

* Including in-kind contribution

3.	Effective Date of First Disbursement:	09.01.1998
4.	Effective Date of Last Disbursement:	31.12.2005
5.	Commencement of Project Implementation Activities:	01.04.1997
6.	Date of Completion of Project Implementation Activities:	31.12.2005

C. PERFORMANCE INDICATORS

1	Cost Under run	UA 0.00 (0%)
2	Time Overrun	
	- Slippage of Effectiveness	2 months
	- Slippage of Completion Date	19 months
	- Slippage of Last Disbursement	19 months
	Number of extensions of last disbursement Date	One
3	Project Implementation Status	Completed
4	List of verifiable indicators and levels of achievement (expressed as % on planned levels):	87% See Annex 12 and Project LOGFRAME

Source: Project Documents and Reports

5.	Institutional Performance:	Satisfactory
6.	Contractor Performance:	Satisfactory
7.	Consultant performance:	Satisfactory
		At Appraisal On Completion
8.	EIRR (%)	9.0 15.5
9.	FIRR (%)	n/a n/a

D. BANK MISSIONS:

Mission Type	Date	No of Pers.	Composition	Days
Identification	Nov-Dec 92		IFAD specific Identification Mission	
Environmental Screening	August 93		In-country Environmental Screening and Scoping Mission was carried out by IFAD	
Preparation	December 93		1 st phase: Socio-economic & production system study (SEPSS) 2 nd phase: Preparation Mission composed of IFAD and Local counterparts from SWMU	
Appraisal	1996			
Launching	30 Nov-11 Dec 97	1	Socio-Economist (+ 2 experts from IFAD)	11
Supervision	22 Feb-5 March 98	1	Socio-Economist	12
Supervision	14-29 April 99	1	Socio-Economist (+ 2 experts from IFAD)	15
Supervision	12-23 Dec 99	3	Socio-Economist, (+ 2 experts from FAO)	11
Supervision	24 Sep- 8 Oct 00	2	Socio-Economist Agricultural Economist	14 14
Supervision	20 Feb-4 Mar 01	1	Socio-Economist	12
Supervision	9-20 Feb 02	3	Socio-Economist, Agronomist (+ 1 expert from FAO)	11
Mid Term Review	8-19 July 02	3	2 Bank Consultants (+ 1 expert from IFAD)	11
Supervision	14-28 Nov 02	2	Forestry Specialist Gender Specialist	14
Supervision	29 Jul-12 Aug 03	1	Forestry Specialist	14
Supervision	1-15 Nov 03	1	Forestry Specialist	15
Supervision	8-21 Jun 04	1	Forestry Specialist	11
Super vision	30 Oct – 7 Nov 04	1	Financial Analyst	10
PCR	19 Nov-2 Dec 06	3	Agricultural Economist Environment Specialist Bank Consultant (Economist)	5 7 15

* In Calendar Days

E. ADF Disbursement

	Appraisal Estimate (UA million)	Revised Budget (UA million)	Actual Disbursed (UA million)	Percent Disbursed (%)	
				Of Annual Target	Cumulative
TOTAL DISBURSED	3.96	4.00	4.00		100%
AMOUNT CANCELLED			0.00*		
UNUSED BALANCE			0.00		
YEARLY DISBURSEMENT:					
1988	0.85	0.85	0.39	46%	10%
1999	0.51	0.53	0.63	119%	26%
2000	0.58	0.60	0.65	108%	42%
2001	0.47	0.47	0.15	32%	46%
2002	0.46	0.46	0.36	78%	55%
2003	0.46	0.46	0.60	130%	70%
2004	0.35	0.35	0.96	274%	94%
2005	0.28	0.28	0.26	93%	100%

* The amount cancelled is UA 354.65, i. e. less than UA 0.001 million (less than 0.01%). The disbursement is 99.99%, i.e. 100%

F. CONTRACTOR(S)/SUPPLIER(S)

Name	Responsibility	Date Signed	Contract Amount	Disbursed	Un-Disbursed	Achievement
Shyben A. Madi & Sons, Banjul Gambia	Motor Vehicles	5/10/1998	USD 500,609	USD 500,609	USD 0.00	Full delivery
Shyben A. Madi & Sons, Banjul Gambia	Motor Vehicles	21/5/2001	USD 180,333	USD 180,333	USD 0.00	Full delivery
Shyben A. Madi & Sons, Banjul Gambia	Motor Vehicles	7/11/2002	USD 304,072	USD 304,072	USD 0.00	Full delivery
Shyben A. Madi & Sons, Banjul Gambia	Spare parts for motor vehicles	21/12/2002	USD 97,500	USD 97,500	USD 0.00	Full delivery
Shyben A. Madi & Sons, Banjul Gambia	Spare parts for motor vehicles	15/12/2003	EURO 40,311	EURO 39,348	EURO 963.34	Full delivery

G. CONSULTANT(S):

Name	Responsibility	Date Signed	Contract Amount	Disbursed	Un-Disbursed	Achievement
FJP Management Consultants Banjul Gambia	Establishment of MIS at LADEP	18/11/1999	GMD 340,750	GMD 272,000	GMD 58,750	Incomplete work
United Nations Development Programme	UNV Engineering	1999	USD 125,484	USD 125,484	USD 0.00	Full delivery of service
Dev. Management Consultancy Intern'l Brikama Gambia	Studies	16/12/2002	GMD 562,250	GMD 562,250	GMD 0.00	Full delivery of service

THE GAMBIA: LOWLAND AGRICULTURAL DEVELOPMENT PROGRAMME (LADEP)**

NARRATIVE SUMMARY (NS)	OBJECTIVELY VERIFIABLE INDICATORS (OVI)		MEANS OF VERIFICATION (MOV)	ASSUMPTIONS																
	At Appraisal	On Completion		At Appraisal	On Completion															
<p>SECTOR GOAL:</p> <p>- Improvement of food security for the rural poor households.</p>	<p>- Incremental rice production per household commencing PY3 would be:</p> <table border="1"> <tr> <td></td> <td>-fert.</td> <td>+fert.</td> </tr> <tr> <td>Bantafaro</td> <td>2,242</td> <td>2,906</td> </tr> <tr> <td>Wulumbango</td> <td>1,273</td> <td>1,720</td> </tr> <tr> <td>Backswamp</td> <td>1,966</td> <td>2,551</td> </tr> <tr> <td>Tidal swamp</td> <td>2,700</td> <td>—</td> </tr> </table>		-fert.	+fert.	Bantafaro	2,242	2,906	Wulumbango	1,273	1,720	Backswamp	1,966	2,551	Tidal swamp	2,700	—	<p>- The proposed survey was not implemented as planned. However, the increase in levels of rice production at national level exceeds the proposed indicators. (not verified)</p>	<p>- SWMU reports; on-going crop production and yield' surveys-by SWMU Agronomy Unit & FFHC</p>	<p>- International price of 100% broken Thai rice does not decrease by more than 20%; incremental labour made available; no drastic climatic changes.</p>	<p>- Thai rice price decreased by less than 20%. Price of Thailand rice (Bangkok) was 312.5 USD/MT in 1997 & 252.0 USD/MT in 2004, i.e. it decreased by 19%</p>
	-fert.	+fert.																		
Bantafaro	2,242	2,906																		
Wulumbango	1,273	1,720																		
Backswamp	1,966	2,551																		
Tidal swamp	2,700	—																		
<p>PROGRAMME OBJECTIVES:</p> <p>- to increase total rice production in the traditional rice production systems of the lowland by about 12,500 tonnes per annum by PY8 on sustainable basis using community based demand driven developmental approach.</p>	<p>1. 3,735 ha of tidal swamp rice land developed by PY8; 1,640 of ha existing schemes upgraded by PY8; and, access to about 2,700 ha of tidal swamps improved by PY8.</p> <p>2. % of areas cultivated on improved sites increased by <100%; yield on improved sites increased to at least 2,200 kg/ha.</p> <p>3. Works maintained by beneficiaries; Environmental safeguards adopted.</p> <p>4. Completion of National Plan on Lowland Development.</p> <p>5. Functioning CBOs established in 80% of programme sites by end of PY8.</p>	<p>1. By the PY8 (2004) 4,926 ha tidal swamp rice production developed; access to another 3,125 ha for rice production opened.</p> <p>2. Project cultivated sites increased by 100%; rice yield increased from 1.5 tons/ha to 2.2 tons/ha; doubled in some sites. (100% achieved)</p> <p>3. Five out of the six visited sites (83%), beneficiaries properly maintained the dykes. (80% achieved). The project did not adopt adequate environmental safeguards (33% achieved)</p> <p>4. National Plan on Lowland Dev. was not completed (0% achieved)</p> <p>5. More than 80% of the established CBOs are functioning. (100% achieved)</p>	<p>1. SWMU/FFHC reports, SWMU crop production & yield surveys; supervision mission reports</p> <p>2. DCD/NGO reports; DOP evaluation studies in 5 sites /yr; farmer feedback during annual consultation; supervision missions report.</p> <p>3. DCD/NGO reports, SWMU reports and supervision missions report.</p> <p>4. Cabinet Paper on Lowland development</p> <p>5. DCD/NGO reports, SWMU reports and supervision missions report.</p>	<p>- 5-6 km of dyke/yr completed by a tractor team; 15 ha rice land reclaimed by constructing a km of dyke; 25 ha tidal swamp reclaimed by constructing a km of Causeway. Labour for construction provided by beneficiary community.</p> <p>- 80% of expected yields achieved.</p> <p>- Structures maintained by user groups; land rights of women & land borrowers protected by contract.</p> <p>- Policy recommendations by Lowland Development policy Workshop adopted by Government.</p>	<p>- 165 km of dykes completed (more than 3 times), 10.8 – 39.4 ha of rice per km of dyke reclaimed, 22.2 – 118.8 ha of tidal swamp per km of causeway reclaimed. Beneficiary community provided labour.</p> <p>- 80% of expected yields achieved</p>															
<p>OUTPUT</p> <p>1. PMU established.</p>	<p>1. No. of offices rehabilitated & equipped. No. of contracts awarded.</p>	<p>1. Four offices rehabilitated and equipped. Only 2 were planned. (200% achieved). Planned</p>	<p>1. Supervision mission reports, quarterly progress reports & monitoring &</p>	<p>1. Qualified personnel available for recruitment to PMU & FFHC</p>	<p>1. PMU hired qualified persons in most positions but FFHC was replaced</p>															

NARRATIVE SUMMARY (NS)	OBJECTIVELY VERIFIABLE INDICATORS (OVI)		MEANS OF VERIFICATION (MOV)	ASSUMPTIONS	
	At Appraisal	On Completion		At Appraisal	On Completion
<p>2. Master Plan for lowland development prepared; key for problematic soils identification and soil map of Gambia produced.</p> <p>3. Bantafaro, Wulumbango and Backswamp sites developed & a minimum of 14,000 farmers involved in cultivation of these sites. Development of 90 tidal swamp access schemes comprising 2,700 ha and benefiting around 7,560 farmers;</p> <p>4. Adaptive research conducted; farmers use improved husbandry increased; extension workers & farmers trained.</p> <p>5. Functioning Community-based Organisations formed.</p> <p>6. Rice production increased.</p>	<p>Functioning MIS & monitoring.</p> <p>2. Master Plan Document and Cabinet Paper produced.</p> <p>3 No. of schemes; No. of farmers involved in cultivation of the developed schemes & ha of rice area developed/ reclaimed per year.</p> <p>4. No. of agronomic trails completed; No. of farmers using animal traction, organic manure, compost, improved transplanting, better crop varieties, fertiliser & improved seeds.</p> <p>5. Number & % of programme sites with user groups & written contracts. No. of workshops conducted & of community level PRAs.</p> <p>6. Total rice production per annum increased by about 12,500 in PY8.</p>	<p>contracts were awarded- 8 of them under ADF Loan. (100% achieved.) MIS & M&E never function (10% achieved)</p> <p>2. Pre requisite study in preparation of the master plan was completed but no consultant was recruited to develop the Master Plan (0% ach) Soil identification. & map were produced (100 ach)</p> <p>3. 28,687 farmers involved in project sites (205% achieved) 240 Tidal swamp access schemes developed (267% achieved). Area of 2,700 ha comprised (100% achieved). 7560 Farmer benefited (100% achieved)</p> <p>4. Nine agronomic trails completed (100% achieved); 28 trials using traction, organic and compost (100 ach); 56 trials using improved transplanting (100% ach); better crop varieties; 48 trails on fertilizer (100% ach); 44 trails on improved seeds (100% achieved)</p> <p>5. 100% of project sites has written contracts (100% achieved); 100% implementation of workshops & community level PRAs</p> <p>6. Total rice production per annum increased to over 12,500 tons in last project year (>100% achieved)</p>	<p>Evaluation reports.</p> <p>2. Written Policy Document.</p> <p>3. Progress Report of the SWMU, FFHC, NARI, DLS, NOH, PMU; supervision mission report; DOP evaluation studies</p> <p>4. NARI's reports, progress reports, SWMU, FFHC, DLS reports.</p> <p>5. DCD & NGO progress report; DOP evaluation reports in 5 sites/yr.</p> <p>6. MOA reports, PMU progress reports, DOP reports & M & E reports.</p>	<p>management.</p> <p>2. Policy incorporates environmental concerns; findings of soil resources inventories reflected.</p> <p>3. SWMU & FFHC implementation capacity strengthened; operation control measures, logistics, machinery operation & maintenance programmes established; communication procedures and linkages between the various implementing agencies and the PMU instituted.</p> <p>4. Yield improvement technology made available quickly and adopted by farmers.</p> <p>5. Communities mobilized for carrying out construction, upgrading and maintenance work; district capacity strengthened; sufficient time allocated to LADEP by the DCD staff; DCD vehicles replaced in PY5.</p> <p>6. Farmers maintain the water control structures annually; market determined producer price of rice provided lucrative incentive for them to continue growing it.</p>	<p>by SWMU.</p> <p>2. There are soil maps & identification but not much on environmental issues.</p> <p>3. SWMU benefited from the project and strengthened its operations; but not much in the case of FFHC.</p> <p>4. Yield was improved and technology made available and adopted by farmers.</p> <p>5. Communities mobilized for carrying out construction, upgrading and maintenance work.</p> <p>6. More than 80% of the visited sites are maintaining the water control structures annually – this is after 2 years of the project completion.</p>

NARRATIVE SUMMARY (NS)	OBJECTIVELY VERIFIABLE INDICATORS (OVI)		MEANS OF VERIFICATION (MOV)	ASSUMPTIONS	
	At Appraisal	On Completion		At Appraisal	On Completion
<u>ACTIVITIES</u> 1.1 Policy analysis 1.2 Soil inventories 1.3 Environmental studies 2.1 Soil/water management works. 2.2 Tidal;access dykes 2.3 Trails, technology testing 2.4 Training sessions 2.5 Animal health monitoring 3.1 User group formation 3.2 Conflict resolution 4.1 Programme management 4.2 Monitoring 4.3 Evaluation	1. Number and quality usefulness of policy papers, environmental studies and soil maps produced. 2. Number of field offices established and operated by SWMU; Number & quality of equipment made available; number & quality usefulness of training materials produced and training programmes implemented; km of dykes & causeways constructed per. annum; number & quality usefulness of agronomic trails implemented. 3. Number of active and effective CBOs; Number, quality and usefulness of PRAs carried out; number & quality of staff of DCD & participating NGOs involved in the field. 4. Number and qualifications of the PMU staff, the SWMU's M&E Unit staff and the DOP staff involved in the programme & their effectiveness in monitoring and evaluation of programme activities.	1. No policy papers or environmental studies were produced (0% achieved); 100% of the soil maps were produced (100% achieved). 2. two field offices established with good quality of equipments (100% achieved); quality of training materials and programmes implemented were not up to the standards (60% achieved); 165 km of dykes constructed (100% achieved); 73 km of causeways constructed (57% achieved). 3. Active & effective CBOs (80% achieved); quality & usefulness of PRAs, DCD, participation of NGO (100% achieved in each one) 4. The project has high quality of PMU staff (100% achieved); but not the case in the M&E staff (10% achieved); Also, the quality of the DOP staff involved in the project and their effectiveness were not up to the desired level (25% achieved)	1. DOP records; supervision mission report; PMU progress reports. 2. SWMU, FFHC, NARI, DAS & DLS reports; PMU quarterly reports: supervision mission reports. 3. DCD & NGO- reports; PMU supervision mission reports 4. supervision mission & PMU reports	1 TAs recruited punctually; required logistics to carry surveys and collect field data made available. 2. Funds for supporting SWMU, FFHC, NARI, DAS & DLS provided timely; beneficiary demand & self-help labour proved to be sufficient to meet target. 3. Beneficiaries established CBOs and participated actively in PRAs; DCD and NGOs staff provided the required technical and logistical support to the CBOs.	1. No surveys were carried appropriately. 2. Fund were available to support the said units timely 3. Exists

** The Matrix was prepared (at appraisal) and approved by the Board in this format, which is not consistent with the project components, due to matrix format used y the Bank at the time of project appraisal; the same format had to be maintained at the PCR level so that targets and indicators can be traced.

EXECUTIVE SUMMARY

1. Introduction

1.1 The Gambia has the potential to produce rice competitively if it focuses on the appropriate ecology, adopts suitable technology and improves institutional framework and support services. The enclave project approach of earlier interventions had little success in promoting the development of the necessary policy and institutional framework for supporting agricultural development. While earlier projects temporarily increased rice output, the interventions were not sustainable. Thus, a programme-type approach, focusing on long-term sustainability, with phased development, based on a supportive national policy framework, is considered more prudent.

1.2 The Lowland Agriculture Development Project (LADEP) was conceived in the context of a long-term 20-year programme of which LADEP was to be the first phase. The aim of LADEP was to create nation-wide sustainable rice development schemes, based on low technology engineering already proven in the field and on a demand-driven basis, where the beneficiaries are prepared to contribute to the development in the form of self help labour. It was expected that by the end of the programme implementation, there will be around 20,000 rice farmers who will have plots within the perimeters of schemes developed under LADEP. These farmers would benefit from improved food security and drought mitigation capabilities.

1.3 The project was appraised in June 1996, approved by the Board in December 1996, and was signed during the same month (December 1996). The project had a total cost of UA 8.05 million, co-financed by the Bank from ADF resources (UA 4.0 million) and IFAD (UA 3.4 million), with Government counterpart funding of UA 0.7 million. Implementation of the eight-year programme was completed in December 2004, and is perceived both by the Borrower and co-financiers, i.e. the International Fund for Agricultural Development (IFAD) and the Bank as successful.

2. Project Objective

2.1 The overall objective of the LADEP was to increase total rice production in the traditional rice production systems of the lowlands by about 12,500 tons per annum by the 8th programme year, on a sustainable basis, using community-based demand driven developmental approach.

3. Project Performance

3.1 The programme had five main components: i) Soil and Water Management Schemes, ii) Tidal Swamp Access Schemes, iii) Support Services, iv) Lowland Development Master Plan, and v) Project Management. There was no major change in these components throughout project implementation.

3.2 On the whole, the Project is deemed Highly Satisfactory both by the Borrower and the co-financiers, i.e. the Bank and IFAD. All the loan conditions were fulfilled about on time

and the project had a significant impact on the development of the lowlands in The Gambia. The overall performance of the project is rated as Highly Satisfactory (3.8 out of 4.0 points).

3.3 Assessments and analysis in the PCRs of both the Borrower and co-financiers present the project interventions as sustainable, with full ownership by communities and beneficiaries, and extensive field evidence of replication and continuity of project activities. The programme therefore is expected to have a long-lasting effect in boosting lowland agricultural production in The Gambia, using simple techniques that are easy to maintain by the beneficiaries. Recent field visits by the PCR mission, two years after project completion, found project intervention technologies still actively used in rice production in the lowlands, while the built structures are fully functioning and are maintained by the community.

4. Lessons and Recommendations

4.1 Lessons Learned

4.1.1 *Government Commitment*: The Government supported, actively participated and owned the project at all stages of the project cycle, which contributed significantly to project success. The reformed salary scale for public employees allowed LADEP to keep qualified and experienced staff after their retirement. Counterpart funding was provided as anticipated both in terms of amounts and timing. Also, *good understanding* of the project concept and design between the co-financiers facilitated a good cooperation and smooth project implementation.

4.1.2 *Technical design* that included detailed studies to precede the project preparation led to the excellent project design. *Flexibility* in project design contributed positively to project implementation such that minor modifications were accommodated, and the simplicity of *technologies* and agronomic follow-ups increased success in terms of coverage and outreach.

4.1.3 *Environmental integrity* included environmental studies but fell short of a full environmental assessment. Therefore conservation of sensitive ecosystem while expanding the rice ecologies was not maintained.

4.1.4 The project intervention packages were not given out freely to the communities, '*No Free Meal*'. Rather they were perceived as facilitation: reclaimed land, provided access to back swamps and reduced agro-ecological hazards, while farmers farmed their land and paid for their inputs.

4.1.5 *Self-help labour* is a targeting mechanism. The beneficiary participation and in-kind contribution in the form of labour, created a sense of ownership of constructed structures, while the creation of farmer organizations emerged with a culture of maintenance, working in groups and teams.

4.1.6 The *good commitment* of the Programme Management Unit (PMU) to the project was a key pillar for the project achievements, in spite of challenges that emerged with the change of government at the initial phase of the project.

4.1.7 *Demand-led* and community-based self-help approach was adopted, with a strong emphasis on transferring the awareness and skills needed to assure local management of maintenance and repairs.

4.2 Recommendations

To the Bank

4.2.1 Continue dialogue with the Borrower and encourage the latter to complete the development of the Lowland Development Master Plan, which remains critical for the sustainable use of the lowlands and the eco-systems.

4.2.2 Emphasize local participation and ownership in the funding of subsequent phases of planned 20 years programme, of which LADEP was the first phase.

4.2.3 Strengthen the Monitoring and Evaluation (M&E) components of future projects to facilitate data collection that for accurate documentation of project impacts for development effectiveness

4.2.4 Put detailed environmental assessment among priority studies preceding lowland development interventions in The Gambia.

To the Borrower

4.2.5 Continue providing and strengthen support-service activities that enable farmers to market, make production profitable and make farming attractive.

4.2.6 Continue honouring financial commitments to project implementation, such as counterpart funds and improved salary scales as incentive and motivation.

4.2.7 Continue facilitating and provide necessary support to procurement, and reduce administrative setbacks that impede such processes, as experienced with the Lowland Master Plan that was hindered by DOSA.

4.2.8 Put detailed environmental assessment among priority studies preceding lowland development interventions in The Gambia.

1. INTRODUCTION

1.1 Agriculture is the dominant sector of The Gambian economy, contributing about 33% of the GDP and employing about 80% of the country's population (2002-2004). Despite this crucial role in the economy, growth in the agriculture sector has been constrained by inappropriate policy environment, lack of short and long-term financial capital, human and social capital, limited capacity and efficiency of extension services, and most crucial of all, adverse physical and agro-ecological conditions. The need for overcoming these constraints were clearly spelt out in the Government's Strategy for Poverty Alleviation of 1994 (SPA), which among others, emphasized the enhancement of the productive capacity of the rural poor, about 80% of whom depend directly on agriculture for food and incomes.

1.2 The country is dissected by the River Gambia, with flood plains, estuaries, mangrove swamps and back-swamps. The Central River Section of the country (*see Annex I*) contains extensive areas of actual and potential Acid Sulphate Soils (ASS), which can develop acidity and preclude crop production if allowed to dry out. The lowlands are characterized by tidal movements and seasonal flooding from the Atlantic Ocean, with subsequent seawater intrusion into the River Gambia which results into high salinity of the lowlands, destroying the richly fertile soils that would otherwise be very suitable for rice cultivation. With these adverse physical conditions, agriculture has been subjected to very marginal yields of major crops in the rainfed system (groundnuts, millet and other coarse grains) and seasonal changes in soil characteristics that adversely affect rice production in mangroves swamps and tidal plains, and in some cases leaves large tracts of agricultural land unproductive.

1.3 The Lowland Agricultural Development Project (LADEP) was designed to respond to these agro-ecological challenges with simple but appropriate technologies to increase rice production nationwide. The project was identified by the Specific Identification Mission of the International Fund for Agricultural Development (IFAD) in 1992. In 1993, the Bank was contacted both by the Government of The Gambia (GOTG) and IFAD to co-finance the project. At this time, the Bank had financed the Gambia Rice Development Project (RIDEP) and the Jahaly-Pachaar Smallholder Project (JPSP), both of which supported rice production. Both RIDEP and JPSP generally achieved their objectives and were considered technically successful on completion. Therefore the Bank saw the request as an opportunity to consolidate and complement completed activities of RIDEP and JPSP, so as to scale up lowland rice production in the country. IFAD prepared the project in early 1994, followed by a joint appraisal mission by IFAD and the Bank later the same year.

1.4 The appraisal team largely maintained the approach and design suggested in the Socio-Economic and Production Systems Study (SEPSS), albeit reducing the targets with regards to yields and outputs. The project was thus designed as a long-term lowland agricultural development programme, spanning over a period of 8 years between May 1996 and May 2004. Recognizing the need to enhance the capacity of institutions in the agricultural sector, the Government of The Gambia and co-financiers (IFAD and the Bank) agreed to entrust Government Institutions and local communities with the implementation of various project components.

1.5 This report presents a review of the performance of the implementation of various components of the LADEP, including its impacts on the Gambia's farming communities, various stakeholders, the environment and the economy as a whole. The report is prepared from information contained in the project appraisal report, mid-term review reports, PCR from IFAD and the Borrower, stakeholder meetings, audit reports and other Bank records in the project files (*See Annex 2 for information sources*).

2. PROJECT OBJECTIVES AND FORMULATION

2.1 Project Objectives

2.1.1 The overall goal of LADEP was the sustainable improvement of traditional rice production so as to ensure food security and improve the incomes of rural households. The objective was to increase total rice production in the traditional rice production systems of the lowlands by about 12,500 tons per annum on sustainable basis by the end of the eight year of programme intervention, using community-based demand driven developmental approach.

2.1.2 This project goal and objective are intricately linked to the Government's Strategy for Poverty Alleviation (SPA) of 1994, which for the agricultural sector emphasizes the improvement of the productive capacity of the rural poor by overcoming agro-ecological constraints, build local capacity and promote participatory approaches to development in the sector. Thus, the project objective of addressing the agro-ecological constraints that deter rice production in the lowlands contributes directly to the Government's SPA, by constructing dykes to prevent sea water intrusion, spillways to control flooding and impound saline water from affecting production and footbridges to facilitate access to lowland, back swamps and mangrove swamps that would otherwise be inaccessible to farmers. Target objectives for each of these activities are summarised in the Project Logframe.

2.2 Project Description

2.2.1 The activities of the programme as defined at appraisal entailed five components: i) Soil and Water Management Schemes, ii) Tidal Swamp Access Schemes, iii) Support Services, iv) Lowland Development Master Plan, and v) Programme Management.

2.2.2 Soil and Water Management Schemes: This component entailed the construction of lowland water retention structures (dykes and spillways) to prevent salt water intrusion, retain moisture on rice fields, and agronomic follow-up activities. The construction works targeted the new development or reclamation of about 3,735 ha of land on about 234 sites, and the upgrading works on a further 1,640 ha farm lands. Agronomic follow-up by the Soil and Water Management Unit (SWMU) was to capacitate farmers to take full advantage of developed structures and reclaimed land and put it under productive use. The activities of SWMU included the initial ploughing of the reclaimed land, and the provision of improved rice seed varieties adapted to the different agro-ecologies.

2.2.3 Tidal Swamp Access Schemes: This component entailed the construction of causeways and bridges to facilitate farmers' access to fertile tidal swamps, where rice production is inhibited by difficult access due to deeply muddy water marshes in the rainy season. Under this component, LADEP targeted the construction of causeways and bridges that would open up 2,700 ha of tidal swamp land for rice production at 90 sites, served with two field stations. At design, the component was to be implemented by Freedom From Hunger Campaign (FFHC), which has broad community-based agricultural focus centered on rice-growing women. FFHC is a Government initiated NGO, and thus functions as a parastatal.

2.2.4 Support Services: Activities under this component comprised community mobilization, adaptive research and agricultural extension. The Community Mobilisation principally adopted Participatory Rural Appraisal (PRA) techniques, and was implemented by the PIU in collaboration with the Department of Community Development (DCD) field staff and NGOs, targeting 400 communities. The Adaptive Research focused on the adaptation and further development of existing technologies and was carried out by the National Agricultural Research Institute (NARI) and SWMU. The research included animal traction, maintenance of natural soil fertility,

improvement of crop varieties and field conditions, such as liming to reduce soil acidity, and farmer training regular extension activities and entailed ad-hoc studies to determine farmer needs and focus areas.

2.2.5 Lowland Development Master Plan: The Master Plan was intended to present an analysis of the potential for investment in the lowlands, so as to give investment guidelines for future agricultural development in the lowlands. The study was to entail lowland resource inventories, environmental surveys and detailed studies.

2.2.6 Programme Management: A small Programme Management Unit (PMU) was to be created in the then Ministry of Agriculture and Natural Resources (MANR) to co-ordinate the activities of the implementing agencies of LADEP, and assume responsibility for overall management of the programme.

2.3 Project Formulation

2.3.1 Origin and Preparation: The programme originated from the analysis and recommendations of an IFAD Specific Identification Mission which visited The Gambia in November-December 1992. The approach was to be demand-driven, and the interventions were to respond only to the demand of farmers and beneficiaries communities. The original idea was to design a twenty-year Lowland Agricultural Development Programme (LADEP) covering traditional rice ecologies. In June 1993, IFAD endorsed the concept of the programme and engaged the FAO Investment Centre (FAO-IC) to carry out a Socio-Economic and Production Systems Study (SEPSS) late in 1993. IFAD and the GOTG approached the Bank for co-financing of the programme. The Bank perceived the request as an opportunity to complement two Bank-finance projects, Rice Development Project (RIDEP) and the Jahaly-Pachaar Smallholder Project (JPSP), both of which supported rice production.

2.3.2 The sector goal and objectives of LADEP were also reviewed by the Bank in line with The Gambia's reviewed agricultural sector strategy as spelt out in the Strategy for Poverty Alleviation (PSA) of 1994 and the Country Strategy Paper (CSP) for The Gambia. The Bank then came on board the LADEP, maintained the approach and design laid down in the SEPSS, albeit reducing the targets with regard to yields and outputs. The project was prepared by the FAO-IC in late 1994 as the first phase (8 years) of the larger 20 years development programme. In addition to the SEPPS study, the preparation entailed engineering reconnaissance site surveys.

2.3.3 Appraisal, Negotiation and Approval: A joint appraisal mission by IFAD and the Bank was sent to the field in later the same year 1994, comprising Bank staff, IFAD staff and consultants, including engineers, economists, agronomist, environmentalist and gender experts. The appraisal team conducted a detailed review and analysis of the general and specific features of The Gambia's agriculture sector, including agricultural institutions, constraints to the sector's development and the agricultural development strategy. Lessons from this review were incorporated into the final project design.

2.3.4 The Bank component of the programme was negotiated on in mid 1996, and was approved on 19 November 1996, the Board of Directors of the ADF approved UA 3.96 million loan to the GOTG for the LADEP programme, matched by IFAD with UA 3.36 million (Approved by the IFAD Board in April 1995), with a Government counterpart funding of UA 0.70 million.

3. PROJECT EXECUTION

3.1 Effectiveness and Start-up

3.1.1 The LADEP Loan Agreement between the GOTG and the Bank was signed on 20 December 1996 for both the ADF and IFAD Loans. Conditions for the entry into force of the agreement included: i) Provide evidence that the Programme Management Unit (PMU) within the Project Coordination Office (PCO) of the Ministry of Agriculture and Natural Resources (MANR) has been established to execute and coordinate the programme (Para. 5.2.1); ii) Cause the MANR to allocate, in Banjul, suitable office space for the PMU (Para. 5.2.1); iii) Provide evidence that, (a) a Programme Coordination Committee (PCC) is established, and (b) that the members of the committee have been appointed (Para. 5.1.1); and, iv) Provide evidence that the Principal Programme Officer (PPO) and the Financial Controller for the PMU, with qualifications and experience acceptable to Fund, have been appointed (4.2.20; 5.2.2). The borrower was also required to fulfil 'other conditions' for the implementation of the project, all of which were fulfilled.

3.1.2 The borrower fulfilled the entire loan conditions in December 1996 and the Legal Opinion was received by the Bank in 1997. The implementation of LADEP thus commenced in November 1997 for the IFAD Loan and in January 1998 for the ADF Loan. The Borrower fulfilled all the Loan Conditions very quickly, although there was a delay in receiving the Legal Opinion. This delay translated into a one year extension request that was deemed necessary as recommended in the Mid-Term Review (MTR). One minor start-up problem was the fact that the Freedom from Hunger Campaign (FFHC) lacked the required human capital to implement the Tidal Swamp Access Schemes component, which was reallocated to the Soil and Water management Unit (SWMU) and implemented with the support of the PMU.

3.2 Modifications

3.2.1 There was no major modification in the project design and scope, except the project completion date which was extended from 31 May 2004 to 31 December 2005, based on the recommendation of the Mid-Term Review Team, so as to complete the planned 8 year of project implementation. There was also a reallocation of funds, that is UA 0.24 million from the Goods category and UA 0.35 million from the Recurrent Costs, which was reallocated to Works (UA 0.28 million) and to Services (UA 0.31 million) (*See Table 3.5 for details*).

3.3 Implementation Schedule

3.3.1 Most of the project activities started on time or just a few months later. Details of the planned and actual project implementation dates of the entire project activities are presented in Table 3.1. The project was implemented between 1997 and 2004, implying a slippage of 19 months. Project approval was achieved on the planned date of November 1996. The Loan Effectiveness was planned for February 1997 and was realized in April 1997 with about two months delay.

3.3.2 First disbursement was made to the project in January 1998. Implementation of the programme was supposed to be completed on 31 December 2003 for the IFAD Loan and in May 2004 for ADF Loan. The project completion date was however extended to 31 December 2004 for IFAD Loan, and to 31 December 2005 for the ADF Loan, which correspond to the final disbursement dates for the IFAD and ADF Loans.

Table 3.1: Implementation schedule for Lowland Agricultural Development Project

	Description	Planned at Appraisal	Actual Date of Implementation
1.	Approval of Loan	November 1996	November 1996
2.	Loan Effectiveness	February 1997	April 1997
3.	Recruitment of PMU Staff	March 1997	March 1997
4.	Preparation of Work Plan	March 1997	March 1997
5.	Recruitment of FFHC Implementation Team	April 1997	February 1998 but under SWMU
6.	Recruitment of the CMC & SMSs	April 1997	CMC Aug 1997 SMC February 1998
7.	Concluding Contracts with FFHC, DCD & NARI	May 1997	May 1997
8.	Establishment of MIS System	June 1997	Started in October 1999 & was never completed
9.	Recruitment of consultants for the Master Plan	August 1997	Delayed and never completed*
10.	Commencement of Construction work	September 1997	January 1998
11.	Mid-Term Reviews	May 2000	July 2002
12.	Programme Completion	May 2004	December 2004

* The study for the Master plan was successfully carried out. However, the actual development of the Master Plan was never accomplished, as the consultant for this second phase of the work was never recruited.

3.4 Reporting

3.4.1 According to the project files and the Government PCR, the project submitted a total of 29 progress reports, 8 consultative meeting reports, and submitted 8 audit reports, one for each year from 1997 to 2004 inclusive. The Bank on its part carried out 13 supervision missions including the launching and mid-term review missions. Some of these missions were jointly conducted by the Bank and IFAD. There was no problem with the submission of audit reports, quarterly progress reports or annual reports.

3.4.2 The submitted progress reports we judged to represent the project implementation status, and articulated the project implementation issues at the time of submission. All audit reports made a detailed presentation of the project financial records, with no financial irregularities. No major issues were brought to note by the Auditors with regards to non-adherence to the Bank's rules and procedures on the procurement of Goods and Services. All audit reports adequately covered all the necessary areas and were considered to be of acceptable quality and standard.

3.4.3 The Mid-Term Review (MTR): The MTR, which was planned to have taken place in May 2000 at appraisal, was conducted in July 2002 (26 months later than planned in the appraisal).

3.4.4 The Borrower prepared and submitted a final PCR in October 2005, which was reviewed by the Bank. The Borrower PCR was comprehensive and informative, and among others, articulated the uncompleted development of the Master Plan, and explained the reasons for its non-accomplishment. The Borrower PCR recommended that extension follow-up be intensified for sustainability of these project achievements, and that the Bank should be encouraged to finance the next phase of the proposed 20 year LADEP programme.

3.5 Procurement

3.5.1 The Bank's rules of procedure for the procurement of goods and works were strictly followed throughout project implementation. Abiding by these rules did not create any problems for the borrower as all good and works were procured as planned without any need for amendment of procedures, and made a 100% disbursement of the ADF Loan.

3.5.2 During the project implementation, eight tenders were prepared, approved and launched under the ADF Loan. The mode of procurement for three of the eight was International Competitive Bid (ICB), two were launched under Direct Contract (DC) and the remaining three were procured through Short Listing (SL). Table 3.2 summarizes the mode of procurement applied in the project for the good and services.

Table 3.2: LADEP: Summary of Items in Project Procurement List

	Item Description	Mode of Procurement
1.	Motor Vehicles	International Competitive Bid (ICB)
2.	Motor Vehicles	International Competitive Bid (ICB)
3.	Motor Vehicles	International Competitive Bid (ICB)
4.	Spare parts for motor vehicles	Direct Contract (DC)
5.	Spare parts for motor vehicles	Direct Contract (DC)
6.	Establishment of MIS at LADEP	Short List (SL)
7.	UNV Engineering	Short List (SL)
8.	Studies	Short List (SL)

3.6 Source of Finance and disbursements

3.6.1 Sources of Finance: The total project cost, including contingencies at the time of appraisal, was UA 8.05 million, i.e. UA 3.96 million for the ADF Loan, UA 3.39 million for the IFAD Loan and government contribution of UA 0.70 million. During the implementation, however, the ADF Loan was revised upwards to UA 4.00 as exemplified in Table 3.3.

Table: 3.3: LADEP: Project Cost Estimates (At Appraisal) by Categories of Disbursement (UA million)

Category	ADF	IFAD	GOTG	Total Project
Civil Works	1.42			1.42
<i>Equipments</i>		1.13		1.13
<i>Vehicles</i>	1.07			1.07
Total Goods	1.07	1.13		2.20
<i>Technical Assistance</i>	0.42			0.42
<i>Training</i>		0.67		0.67
Total Services	0.42	0.67		1.09
Recurrent Cost	1.05	1.59	0.70	3.34
Grand Total (Project)	3.96	3.39	0.70	8.05

3.6.2 The breakdown of project cost by financier was done at project appraisal. At appraisal, the total project cost for the ADF Loan was estimated at UA 3.96 million and was allocated to **Civil Works** (UA 1.42 million), **Goods**: Vehicles (UA 1.07 million), **Services**: Technical Assistance (UA 0.42 million), and **Operating Costs** (UA 1.05 m). The Board however approved an ADF Loan of UA 4.00 million, which made it possible to revise the budget allocation at MTR as follows: civil work (UA 1.70 m), goods (UA 0.83 million), services (UA 0.77 million), and Operating Costs (UA 0.70 million) as highlighted in Table 3.6.

3.6.3 The cost of the project co-financed by the IFAD was UA 3.39 million, allocated to Goods: Equipments (UA 1.13 million), Services: Training (UA 0.67 m), and Operating Costs (UA 1.59 million). Total counterpart contribution by the Government of The Gambia was UA 0.70 million, allocated to Operating Costs only. Thus, the funding of LADEP was a joint-financing arrangement whereby the Bank and IFAD funded activities under the same programme components, rather than funding separate components. Therefore the report will not present a separate analysis of the performance IFAD and Bank-financed components since they do not separately exist.

3.6.4 **Project Disbursement:** The actual cost of the project as indicated by amount disbursed was UA 7.98 million, which was UA 0.07 million less than the appraisal estimate. The distribution of the actual cost of the project between the co-financiers was UA 4.00 for ADF, UA 3.16 million from IFAD, and UA 0.82 million from the Government of the Gambia, including in-kind contribution.

Table 3.4: LADEP: Project Source of Finance and Disbursement

Source	Appraisal (UA' million)	Actual (UA' million)	Percentage
ADF Loan	3.96	4.00	100%*
IFAD	3.39	3.16	93%
GOTG	0.70	0.82	117%
Grand Total	8.05	7.98	99%

* During the implementation of the project the ADF Loan was revised to UA 4.00 m.

Table 3.5: LADEP: Project Cost Estimates by Categories of Expenditure

Category	Appraisal Estimate	Revised Budget	Actual Expenditure
ADF (UA million)			
1. Goods (UA million)	1.07	0.83	0.85
2. works (UA million)	1.42	1.70	1.78
3. Services (UA million)	0.42	0.77	0.78
4. Operating costs (UA million)	1.05	0.70	0.62
Total ADF (UA million)	3.96	4.00	4.02
IFAD (SDR million)			
1. Tools, equipments & materials (SDR million)	1.02	1.02	0.90
2. Training (SDR million)	0.65	0.65	0.66
3. Agricultural Inputs (SDR million)	0.37	0.37	0.37
4. Allowances (SDR million)	0.55	0.69	0.60
5. Operating costs (SDR million)	0.47	0.67	0.64
Total IFAD (SDR million)	3.06	3.40	3.17
GOTG (UA million)			
Operating Costs (UA million)	0.70	0.70	0.82

Source: Project files, Government PCR and IFAD PCR; 1.0 UA = 1.0 SDR

3.6.5 **ADF Disbursement:** The disbursement of the programme funds was almost exactly as planned at appraisal, with a slight increase in the category of Goods as well as Operating Costs (104% each), and a decrease in the Services category disbursed only 90 % as indicated in Table 3.6.

Table 3.6: ADF Cost Estimates and Disbursement by Categories of Disbursement

Category	Appraisal	Revised Budget	Disbursement	%
01. Goods	1.07	0.83	0.86	104%
02. Works	1.42	1.70	1.72	101%
03. Services	0.42	0.77	0.69	90%
04. Operating Costs	1.05	0.70	0.73	104%
Total	3.96	4.00	4.00	100%

Source: ADB files

4. PROJECT RESULTS AND PERFORMANCE

4.1 Results by Component

Component I: Soil and Water Management Schemes

4.1.1 Appraisal Targets: At appraisal, the Soil and Water Management Schemes component had two sub-components, namely, a) Engineering Works, and b) Agronomic Follow-Ups. The Engineering subcomponent entailed the construction of lowland water retention structures (dykes and spillways) to prevent salt water intrusion from the sea, and to retain moisture on rice fields during the early dry season. The engineering works targeted the development of 234 Sites by constructing the following structures: i) 9,150 meters of spillways; ii) 5-6 km of dykes per year for the eight project years, giving 40-48 km by the end of the project; iii) open up access to 3,735 ha rice production land; and iv) upgrade 1,870 meters of dykes (serving an area of 1,640 ha). Prior environmental impact assessment studies were also expected to be undertaken for each scheme.

4.1.2 The agronomic follow-up sub-component was intended to allow farmers to take full advantage of the developed structures and reclaimed land and put it under productive use. Under this sub-component, the project intended to assist farmers by undertaking the first ploughing of the reclaimed land, and the provision of improved rice seed varieties adapted to the different agro-ecologies. Farmers were expected to give SWMU 1.25 kg of paddy for every kg of improved seed received.

4.1.3 Outcome and Performance: a) The Engineering sub-component: as planned, the programme produced environmental studies on some of the programme schemes, and many of the studies were not up to standard. However, all the programmed construction work was undertaken, and in some cases beyond targets. In this regard, the project developed 274 sites (117% of appraisal target, and constructed the following structures: i) 5,475 meters of spillways or 60% of appraisal target; ii) 165.09 km of dykes or 375% of appraisal target; iii) opened up access to 4,926 ha or 132% of appraisal target; and iv) upgraded 11,301 meters of dykes or 604% of appraisal target.

4.1.4 The project was designed using community-based demand-driven developmental approach, and was thus difficult to predict the actual length of spillways and dykes. Because the appraisal report was based on the best estimates at the appraisal time, it turned out that communities had higher demand on the project than it was expected.

4.1.5 b) Agronomic follow-up: under this sub-component, the project developed the reclaimed land as planned and enabled farmers to put it to productive use. The project provided farmers with the first ploughing of the reclaimed land, and the provision of improved rice seed varieties adapted to the different agro-ecologies. Farmers gave 278 tons of paddy to SWMU (278% achievement). This component rated Highly Satisfactory (HS).

Component II: Tidal Swamp Access Schemes

4.1.6 Appraisal Targets: At appraisal, the objectives were to construct of causeways and bridges to facilitate farmers' access to fertile tidal swamps, where rice production has been inhibited by difficult access due to deep, muddy water marshes in the rainy season. The programme intended to cover 90 sites under this component, and targeted the construction of: i) 1,860 meters of bridges; ii) 235 km of causeways, both of which were to open up access to 2,700 ha of land for rice production.

4.1.7 Outcome and Performance: Under this component, the programme achieved nearly all the targets and in most far above appraisal target. The sites covered 133 sites under this component or 148% of appraisal target, with the construction of the following structures: i) 2,597 meters of

bridges or 140% of appraisal targets; ii) 73.1 km of causeways or merely 31% of appraisal targets. These structures opened 3,125 ha or 116% of appraisal targets. Thus, this component is rated Highly Satisfactory (HS), in view of its overall achievements. The performance of this component was high because of the higher demand by the community on the project, which could in fact not all be met due to lack of time and resources.

Component III: Support Services

4.1.8 Appraisal Target: At appraisal, the programme objective under this component entailed, i) community mobilization, ii) adaptive research, and iii) agricultural extension. The Community mobilisation was to entail training and sensitisation activities to capacitate the communities to sustainably manage the interventions. Participatory Rural Appraisal (PRA) techniques were to be used by the PMU in collaboration with field staff of the Department of Community Development (DCD) and NGOs in targeting 400 communities. The Adaptive Research sub-component was to focus on the adaptation and further development of existing technology, to be carried out by the National Agricultural Research Institute (NARI) and SWMU. The research was to include animal traction, maintenance of natural soil fertility, improvement of crop varieties and field conditions, such as liming to reduce soil acidity. The Agricultural Extension sub-component was to conduct farmer training and regular extension activities, as well as ad-hoc studies to determine farmer needs and focus areas.

4.1.9 Outcome and Performance: At programme completion, the achievements under this component were significant. Achievement under component included: i) 470 communities were mobilized, amounting to 118% of appraisal target. The project received 1,036 requests for assistance, all of which could not be met. The project only met the requests of 399 communities (i.e. 39% of the requests), which was already 118% of appraisal target; ii) The adaptive research sub-component successfully completed 16 Participatory Rural Appraisals (PRA) serving 33 farmer associations, and conducted 185 trials of adaptive researches. There were no specific quantifiable targets for this subcomponent; iii) The agricultural extension sub-component trained 1,551 members of Site Management Committees (SMCs), 103 existing extension workers, and 204 new extension workers. Overall therefore, this component is rated Highly Satisfactory (HS).

Component IV: Lowland Development Master Plan

4.1.10 Appraisal Targets: The objective of this component was to develop a Lowland Development Master Plan, intended to present an analysis of the potential for investment in the lowlands, so as to give investment guidelines for future agricultural development. The study was to entail lowland soil maps and inventory, environmental surveys and detailed studies.

4.1.11 Outcome and Performance: Under this component the project prepared the expected soil map and inventory (100%), carried out 6 out of the expected 7 environmental surveys (86%) and completed the study, though the study was not of the expected standard. Further, the component failed to produce the targeted Lowland Development Master Plan, which remains critical for lowland agricultural development in the Gambia. Therefore this component rated as Highly Unsatisfactory (HUS).

4.1.12 The project produced all documents and studies needed to finalize the Master Plan. However, due to administrative delays on the part of DOSA, the finalization was never achieved. The PCR team was informed that the administrative delays from DOSA did not facilitate the recruitment of the consultants to finalize the Plan.

Component V: Programme Management

4.1.13 Appraisal Targets: A small Programme Management Unit (PMU) was to be created in the Ministry of Agriculture and Natural Resources (MANR), which is now the Department of State for Agriculture (DOSA) to co-ordinate the activities of the implementing agencies of LADEP, and assume overall responsibility for the management of the programme. Among others, the PMU was to take responsibility for the financial management of the project, including the preparation of annual work plans and budgets, procurement documents, managing the project asset and resources and producing the required quarterly, annual and audit reports.

4.1.14 Outcome and Performance: The Programme recruited a successful PMU, headed by a dedicated and experienced Project Coordinator. Due to remuneration incentives, the programme was able to attract and keep qualified and experienced staff. The Coordinator was assisted by an Accountant, two Administrative Officers, two Accounts Clerks as well as support staff. Quarterly and annual progress reports were submitted on time and adequately reflected the implementation status of the project, and articulated emerging issues related to project performance, which was also followed-up. The audit reports also adequately reflected the project's financial situation, and were accepted by the Bank as adequate and satisfactory. Therefore the performance of the PMU is rated as very Highly Satisfactory (HS)

4.1.15 Partnerships and collaborations were perceived as a major instrument of LADEP, allowing the programme to take advantage of the considerable experience of a large NGO community. NGO interest became high because LADEP could provide assistance for major infrastructural investments (hardware) and thereby allow the NGO to focus on capacity-building (software). In reality, LADEP staff members were assisted almost exclusively by the line departments. The performances of DCD and DAS were highly satisfactory. The partnership with NARI improved significantly during the latter phases of programme implementation.

Monitoring & Evaluation (M&E)/Monitoring Information Systems (MIS)

4.1.16 Internal monitoring was to be assured by each implementing partner and updated databases regularly to the M&E/MIS officer within PMU. Each implementing partner was requested to submit reports and the PMU was to compile these and write the progress and annual reports to be submitted to the Bank. The importance of M&E was addressed in a considerable depth at appraisal. The envisaged computerised MIS was designed but never fully implemented because of a problem of corroborating the available information with the computer software.

Audit and Mid Term Review (MTR)

4.1.17 The appraisal report envisages that the MTR would be conducted jointly by Government, IFAD and the Bank by the 4th project year, i.e. by 2001. The MTR was conducted in July 2002, a year later than anticipated. Audits were carried out every year by independent auditors as envisaged in the loan agreement. Eight audit reports were submitted to the Bank, one for each year of project implementation

Table 4.1: Projected (at Appraisal) and Actual (on Completion) Results by Component

Component/ Sub-component/ Activity [Rating]	Unit	Project Target	Achievement	% of Target
1. Soil and Water Management Schemes [HS]				
A. SWMU Engineering				
1.1 Spillways	Meter	9,150	5,475	60%
1.2 Dykes	Kilo Meter	40-48*	165.09	375%
1.3 Sites	Site	234	274	117%
1.4 Hectare Opened	Hectare	3,735	4,926	132%
1.5 Upgrading	Meter	1,870	11,301	604%
B. Agronomy				
1.6 Seed Purchases	Ton	97	278	287%
2. Tidal Swamp Access Schemes [HS]				
2.1 Sites	Site	90	133	148%
2.2 Bridges	Meter	1,860	2,597	140%
2.3 Causeways	Kilo Meter	235.0	73.1	31%
2.4 Hectare Opened	Hectare	2,700	3,125	116%
3. Support Services [HS]				
A. Community Mobilization				
3.1 Community Mobilization	Community	400	470	118%
3.2 Villages demanded service	Village	1,036**	399	39%
B. Adaptive Research				
3.3 Participatory Rural Appraisal (PRA)	PRA	n/a	16	100%
3.4 Associations	Association	n/a	33	100%
3.5 Adaptive research	Research	n/a	185	100%
C. Agricultural Extension				
3.6 Site Management Committee (SMC) training	Members	n/a	1,551	100%
3.7 Training of non-Ag Extension Workers	Person	n/a	103	100%
3.8 Training of new Ag Extension Workers	Person	n/a	204	100%
4. Lowland Development Master Plan*** [HUS]				
4.1 Full Soil Map and Inventory	Map	1	1	60%
4.2 Environmental Surveys	Survey	7	6	33%
4.3 Detailed Studies (investment, social, policy)	Study			10%
4.4 Studies lead to Master plan	Study			40%
4.5 Mater Plan	Plan	1	0	0%
INCREMENTAL PRODUCTION [HS]	Ton	12,500	21,113	169%

* In the Project Matrix under the Programme Objectives Assumptions; 5-6 km of dykes per year, i.e. 5.5 km/yr.

** The project received 1,036 requests demanding LADEP assistance; the project assisted 399 villages (39%)

*** The Master Plan and Strategy were not produced and many of the studies were not done to professional standard.

Source: Project files, progress reports, Borrower PCR, and Co-financer PCR.

4.2 Performance of Consultants and Contractors

4.2.1 The project concluded eight contracts in total, five of which were for the supply of goods and three for consultancies including studies and engineering designs. The performance of the contractors for the supply of goods is rated as Highly Satisfactory. All the goods were delivered on time and of the expected quality. Two of the consultancy services were fully implemented and the quality of service was very satisfactory. The third consultancy was the establishment a computerized Management Information System (MIS), which was not of the desired quality and remained uncompleted. This was due to a discrepancy between the system's data requirements and the data that was available in the project. Overall, therefore, about 90% of the project contracts (7 out of 8 contracts) were fully implemented to the satisfaction of the Borrower and the Co-financiers, which justifies a high performance rating for the contractors and consultants.

4.3 Financial and Economic Performance

4.3.1 The aim of the Programme was to reduce poverty by improving food security of rural poor households. The objective of the project was to increase rural income through increased rice production in the lowlands, using community-based demand-driven development approach. The project succeeded in implementing this approach, i.e. the interventions were driven by the

expressed demands of the communities, which far exceeded the capacity of the project. In total, the project received applications from 1,036 villages requesting for various field interventions of the project, while the capacity of the project as appraised, in terms of resources and time, could only serve 399 villages.

4.3.2 Financial Performance: During the implementation period (1997-2004), the project improved rice yields from an average of about 1,500 kg/ha to an average of about 2,200 kg/ha, whereby yields were actually doubled at some sites. This led to an increase in production volumes that covered the consumption needs of the beneficiary farmers, with surplus for marketing. In addition, the nominal price of local rice increased from 3.89 GMD/kg to 11.75 GMD/kg, i.e. more income for households to cover other basic needs. Even though the GMD was depreciating against the USD, prices for basic needs did not rise proportionately.

4.3.3 Based on the financial analysis applying the 'with' and 'without' scenarios, the financial revenue from rice production (alone) in the project area, for the 8 years without the project, is estimated at GMD 61.42 million, i.e. GMD 1,774.00 annually per household, equivalent to about USD 66. With the project the estimated total revenue from rice production, for the 8 years of project activity, was GMD 140.00 million, i.e. GMD 4,045.00 annually per household, equivalent to USD 150 annually only from rice production activities. The financial analysis based on nominal prices shows that the incremental rice production because of the project doubled the nominal gross returns from rice and increased the annual returns per household three times.

4.3.4 Applying the with and without scenarios using fixed price of 1997 (3.89 GMD) the real revenue from rice production in the project area for the 8 years without the project will be estimated at GMD 37,789 million, i.e. GMD 1,092.00 annually per household, equivalent to about USD 40. With the project the estimated total real revenue from rice production for the 8 years was GMD 82,493 million, i.e. GMD 2,383.00 annually per household, equivalent to USD 88 only from rice production activities. The financial analysis, based on fixed prices, shows that the incremental rice production as a result of the project doubles the real gross returns from rice and increased the annual returns per household two times.

4.3.5 Economic Performance: The economic rate of return (ERR) on project completion is estimated at 15.5%, which by far exceeds the appraisal estimate of 9.0%. This increase resulted largely from the expansion of production resulting from land reclamation and opening of access (both of which were above project targets), as well as from increased rice yields, in combination with increased rice prices. The calculation of the ERR was based on only rice (cropped once a year) as a conservative analysis. However, some of the project sites grow rice more than once a year. In addition there are indirect benefits of the project cannot be quantified at this stage, such as having the all the family work together in the field during the year; community mobilization toward productive lands.

4.3.6 The project targeted poor subsistence households to increase production to cover their home consumption needs. The project succeeded in increasing rice production to cover the household consumption. However, surplus production beyond consumption requirements was sold in local markets to earn cash for other basic needs. At this stage, the size of the marketed rice did not require a marketing component of the project but this may become relevant in future with more market orientation.

5. SOCIAL AND ENVIRONMENTAL IMPACT OF THE PROJECT

LADEP adopted a holistic watershed conservation approach that was participatory, and was based on a systematic identification of agronomic and environmental problems at intervention sites, and implementation of proposed interventions with the full participation of the communities. The overall social and environmental impact of the project is judged to be positive, not only by the co-financiers (the Bank and IFAD), but also by the Government and the beneficiary communities. The project is also assessed to be sustainable, as there increasing field evidences continuing production activities more than a year after the project completion.

5.1 Social Impact

5.1.1 Positive social impacts of the project are discernable in all the project sites. To begin with, the project targeted about 73,000 people, comprising 21,000 rice growing households. At completion, the project far exceeded its target, about 281,620 people (directly and indirectly) and 34,000 households, about 70% of whom are women. The social impact of the project emerged from three main sources: increased area of production through improved access to back swamps and other lowland fields, increased yields of rice and other cereals, and capacity building at community level, particularly in dealing with flood control and agronomic issues related to soil salinity, acidity. Increased rice yields (from 1,500 kg/ha to over 2,200 kg/ha on the average) translated directly into additional income for about 70% of rural women, and enabled them to diversify their consumption patterns and increase expenditure of schooling for children, health and other basic needs. The increased production also created rural employment opportunities for the landless, which an unintended positive social impact.

5.1.2 Improved access to and from the rice fields (through bridges and causeways) has significantly reduced the danger of accidents and sometimes drowning of women, and freed their labour (reduced travel time) which is allocated to farm expansion and other productive activities. Community capacity building enhanced awareness and capacity of the community to identify and solve local agronomic and environmental problems, thereby increasing the probability of getting good harvest. The HIV/AIDS awareness campaigns contributed significantly to the health of population, particularly women whose risk is usually higher and prenatal contraction by children. The project further improved women's access and control over traditional cultivable lowlands, while the voice and representation of women in decision making was enhanced through 50% representation on committees of village farmer associations (VFA).

Table 5.1: Total Population Benefiting, Participants in Work by Sex, and total Rice Growers

Year	Total Population Benefiting Directly & Indirectly (People)	Households Participating in Works			Households Rice Growers Benefiting Directly		
		Male	Female	Total	New Sites	Old Sites	Total
1997	31,140	1,155	2,221	3,376	2,595	2,595	5,190
1998	34,616	533	1,693	2,226	2,377	2,839	5,216
1999	78,548	1,234	2,551	3,785	3,340	6,363	9,703
2000	58,716	1,998	3,279	5,277	1,850	4,893	6,743
2001	37,212	566	1,496	2,062	862	3,101	3,963
2002	41,388	1,156	2,683	3,839	349	3,449	3,798
2003		1,309	2,962	4,271			
2004		1,017	2,834	3,851			
Total	281,620 (73,000)	8,968	19,719	28,687	11,373	23,240	34,613 (21,000)
	Percentage (%)	31	69	100	32.8	67.2	100

(...) = in parenthesis are project targets (targets were exceeded); Data Sources: SWMU; IFAD and Govt. PCR

5.2 Natural Resource and Environmental Issues

5.2.1 LADEP was classified as a Category 2 Project, which required an Environmental Management Plan (EMP). However, the visits to project implementation site revealed a need for site-specific screening and the use of check lists to identify the potential impacts in each intervention site, particularly on certain sensitive habitats and on wild fauna and natural habitats. Interventions such as Tidal Swamp Access, Land Reclamation and establishment of Gully Plugs, Dykes and Causeways have a potential to generate secondary negative impacts or alter the natural hydrological patterns in the absence of strict measures. The National Environmental Agency (NEA) did not have a detailed agreement with LADEP to carry out site-specific assessments and thus environmental monitoring did not accompany implementation. Therefore key monitoring indicators that would explain the baseline situation as it contrasts from what is in the field today were not recorded to serve as reference indicators of environmental quality and natural resources conservation.

5.2.2 The weakness in M&E and the lack of environmental liable indicators meant that very little data on environmental protection and natural resources conservation was recorded for the project. Also the National Environmental Agency (NEA) was not involved in monitoring of the project's environmental impact because of the lack of resources to do the monitoring itself. Discussions with the officials indicated very little ownership and participation of the NEA in the design of the project and therefore in the implementation. The full participation of the NEA could have doubled the positive impacts and reduced the negative impacts.

5.2.3 Positive Environmental Impacts: The reclamation of saline land through flushing proved to be very successful in LADEP. Before project intervention, these saline lands were not only unproductive for agricultural production, but could also not support freshwater living systems. Therefore the saline habitat before the intervention had limited biodiversity both in terms of flora and fauna than the freshwater habitats that exists in these fields today. Field observation indicated the slow return of traditional flora that had already disappeared on the saline fields before the project interventions. Secondly, the reclamation of acid soils through a combination of flushing and liming has made large tracts of land cultivable, and has reversed the negative trends floral disappearance and extinction. The resulting improvement in soil texture, structure and consistency has ameliorated soil erosion and improved soil conservation.

5.2.4 Thirdly, the construction of dykes and spillways has a secondary effect of reducing the velocity of water flow and thus acts as a barrier against soil degradation through reduced abrasion and erosion. Field visits further revealed that there is a general environmental improvement with freshwater water flowing to the sites and increased rice production because of improved water flow and increased water retention. It is not clear however what the long term impact of the change of the water flow patterns on the mangroves is, and what mitigation measures would be adopted to overcome potential negative impacts.

5.2.5 Negative Environmental Impacts: Intensive agricultural practices especially in the uplands, may bring about deforestation, land degradation and destruction of natural riverine wetlands, which is gradually leading to increased erosion and siltation of the River Gambia. Upland production activities are not the result of LADEP activities, but the erosion and deposition of sand and sediments in rice fields reduces rice productivity in LADEP intervention areas. A concern is further expressed that the adoption of a demand-driven approach might have prompted the development or rehabilitation of lowland fields located in fragile and sensitive environments, which may cause environmental damages, e.g. mangroves or biodiversity loss. These concerns are however not substantiated by any empirical data or field observation. Also, the long-term impact of causeways and dykes on the hydrology of the lowland ecosystem remains unclear, and can be verified only decades after the intervention. There are no records to site specific environmental assessments that

may have led to site specific solutions and actions. Finally, LADEP did not have a clear integrated pest management approach in order to deal with any environmental hazards for the users of fertilizers, herbicides and pesticides in the sites of the project. In the absence of site-specific baseline environmental assessment studies at the beginning of the project, the impact of possible environmental hazards resulting from lowland interventions cannot be assessed in exquisite details.

6. PROJECT SUSTAINABILITY

6.1 Institutional and Financial Sustainability

6.1.1 The project provided technical support to two key field stations of the Soil and Water management Unit (SWMU), located at Jenoi and Sapu. These support activities especially in the areas of preparing technical manuals and various engineering trainings have been streamlined in the SWMU work programme, and are continuing under the regular development activities of the Department of State of Agriculture (DOSA). The project activities largely utilized local resources, including labour and construction materials, which created an avenue for replication and continuity. The communities were organized and trained during project implementation, and are thus able to maintain the project structures with limited financial resources, using their own labour and local material. Therefore at both the governmental and beneficiary level, there is a strong evidence of financial and institutional sustainability, as project activities are replicated and existing structures maintained with no external financial support.

6.2 Environmental and Natural Resources Sustainability

6.2.1 All the traditional rice ecologies in the Gambia can be classified under the broad definitions of wetlands. All the lowlands studied during the preparation of LADEP, including Wulumbango, Bantafaro, Tidal Swamps and Backswamps for rice cultivation are fragile ecosystems, providing refuge for a rich variety of resident and migratory avifaunal, aquatic as well as terrestrial wildlife species. The dilemma here is whether the lowlands can be developed for ecotourism to attract foreign exchange, or to become the rice basket of the Gambia to feed people, or both. These are some of the questions that the Lowland Development Mater Plan was meant to address. That is, the critical balance between the need for lowland rice production for food security and the need for generating foreign exchange revenues from ecotourism security.

6.2.2 It is consoling to note that despite the lack of clear guidelines and support from National Environmental Agency (NEA), LADEP has not further increased the degradation of the environment; in fact in many cases it has rehabilitated destroyed and abandoned sites (see 5.2.3). Therefore the attribution to traditional rice cultivation as being one of the degrader of natural ecosystems and loss of biodiversity does not apply in the case of LADEP. However LADEP and NEA have missed the opportunity to identify and protect pockets of critical natural habitats and wildlife movement corridors as safe heaven for the perpetuation of endangered wildlife species, which would have further demonstrated the possibility of the co-existence of sensitive ecosystems with rice ecologies in tandem with maintenance of biodiversity as elements of sustainability.

6.2.3 Causeway construction could create an irreversible impact if the natural movement of tides in the swamps and water restriction and drainage expose sulphuric material to oxidation, generating high acidity that would damage not only rice but also fish, flora and fauna. Construction of causeways controlled by the NEA for soil conditions and environmental sensitivities in the tidal swamps with a careful monitoring of the construction and the effects of the causeways on the habitats over a period of time would have given a wealth of data on the quality of the interventions. Also, the design of LADEP failed to address upland erosion and therefore the sustainability of the works in the lowlands is threatened by erosion, siltation and sand deposits. In terms of water

management, dykes may be technologically affordable and easy to maintain but may not be a long-term solutions in the face of climate fluctuations.

6.3 Aspects of Integrated Watershed Management

6.3.1 There are a number of interventions which have been affected by run off and erosion from upland areas, and this has been a major challenge for sustainability. Since LADEP was only implemented in the lowlands, the project intervention areas were affected by run off from the uplands. The project did not carry out a true integrated watershed management and has concentrated on spot treatments to immediately protect the lowland works. Full integrated watershed management is a very much larger exercise than the type of spot interventions. The Gambia River system is a very large watershed that covers Senegal and Guinea. The part in Gambia of the river system is a micro catchment, with runs off partly controlled by the other countries. Surface water hydrology is a complex issue, amplified by the multitude of rice ecologies in a variety of zones of the River, constituting the lowland ecological characteristics of each zone or section of river.

6.3.2 The concept of integrated watershed management originated from observations that sheet erosion on upland areas was causing siltation and sand deposition in water retention dams and structures. Where runoff was not being adequately managed, floods in high rainfall years destroyed spillways, bunds and other structures. Pilot watershed management activities were included in the design of LADEP to enable the project to carry out pilot work to determine the nature of the problems and evaluate possible solutions. It appears that these funds were used only for the protection of villages from flooding rather than for addressing the problems on the agriculture fields themselves. Thus many of the problems of reducing run off from the uplands and maintaining soil fertility has not been addressed. This should form a priority area of lowland intervention in future.

6.3.3 On the other hand, anti salt dykes served the dual purpose of keeping out the salt water when the level of the river rises during the rains and retaining rainwater behind the dykes. The retained water in turn flushes salts out of the soil profile as well as creating the soil water regime needed for rice growth. Also dykes and bunds have increased infiltration into the soil and reduce run off. The dykes retain surface water and this creates areas of permanent flooding, with an overall effect of increasing the total swamp area for rice cultivation. The retention of water on the fields both directly increases yields, and reduces the risk of poor yields or crop failure. This in turn increases investment in both input use and the intensity of labour. Reduced salinity levels, especially early in the rains permits early planting, leading to better yields in the lowlands.

6.4 Gender Perspectives

6.4.1 The distinction of agricultural production into uplands and lowlands roughly corresponds to the concentration of male and female farming activities. In the uplands male farmers produce cash crops and cereals such as maize, millet and sorghum, using mechanized practices but on relatively poorer soils. Their cultivation practices are reported to aggravate upland soils degradation, generating sediments that are washed away and deposited in the lowlands that are largely cultivated by women. Lowlands are less mechanized, with relatively low inputs due to the fertile nature of the lowlands comprising floodplains and back swamps, mainly used for rainfed rice production. Because of the low level of mechanization, production in the lowlands (which is largely done by women), generates little or no negative environmental impacts.

6.4.2 Since the activities of LADEP were almost entirely in the lowlands where cultivation is mostly done by women, about 70% of total project beneficiaries were women or female headed

households (see Table 5.1). In all the project sites, there are evidences of gender equality in terms of property rights (access and use rights) to the reclaimed lands, and fields opened up to production through project intervention. There was evidence of distinct gender equality in management and administrative roles, which seemed to have been emphasized by the project at planning and implementation. This was easy because the land at most of the intervention sites seemed to have been abandoned and new allocations were based on participation and interest in project activities, which most of the women rice growers expressed. In particular, the women commended the project for having opened access (by constructing bridges and causeways) to very fertile rice fields, which, before the project, could only be accessed by men due to hazardous flood and muddy conditions, and the fear of falling over and drowning.

6.4.3 Filed evidence from the project beneficiaries therefore corroborates assertions in both the IFAD and Government PCR that the project was overwhelmingly of great benefit to women. Access to new productive fields increased their land area of cultivation. The increase rice yields from 1,500 kg/ha to over 2,200 kg/ha (on the average) for new fields translated directly into additional income for about 70% of rural women, who could diversify their consumption needs, send more kids to school and increase their access to health facilities. Initial concerns both by IFAD and the Bank that increased lowland production would increase women's workload in rice harvesting and processing was offset by emerging job opportunities, whereby landless family members and villagers got seasonal employment on rice fields. Thus, the project contributed positively to the rural labour market by creating more jobs for landless women and villages due to the expanded rice production.

6.4.4 On the downside, exposure of the rice farmers (mostly women) to water borne diseases such as schistosomiasis and malaria through lowland rice production in the lowlands cannot be ruled out. Project interventions in the central and western parts of the lowlands are likely to create the habitat (stagnant freshwater bodies) parasite carrying these diseases. It is not clear how proactive LADEP was in implementing mitigation and preventive measures to counteract the risk of exposure.

7. PERFORMANCE OF THE BANK, THE BORROWER AND CO-FINANCIERS

7.1 Performance of the Bank

7.1.1 The Bank Group's lending strategy for the Gambia in early 1990's endeavoured to assist the country to stabilize its economy by diversifying agricultural production and overcoming major production constraints. Therefore the Bank's Loan in support of the LADEP was in perfect conformity with its operational strategy and well justified. The programme was identified and prepared by IFAD, and jointly appraised by IFAD and the Bank. The identification was done in 1992, followed by environmental screening and a socio-economic and production systems study, which provided a solid database for project preparation in 1993 and appraisal in 1996. During the design phase, the Bank met all its commitments after agreeing to co-finance the project and efficiently coordinated its activities with IFAD.

7.1.2 The Bank took over the implementation of the entire LADEP through a special agreement with IFAD, and efficiently implemented the programme at all stages. The Bank conducted 14 field missions between 1997 and 2004, including the appraisal, launching and MTR missions, some of them jointly with IFAD. These missions enabled the Bank to coordinate and closely monitor implementation activities, resolve emerging problems and assist the Borrower with complex planning processes that minimized implementation problems. All the implementation activities were about accomplished on time, with overall delay of less than 25%. The variation of cost from appraisal estimate was less than 10%. The project produced 29 quarterly reports, 8 annual work

plans, 8 audit reports and a PCR. These crucial roles played by the Bank greatly enhanced the performance of the entire programme. To this end, the overall rating of the Bank performance is Highly Satisfactory.

7.2 Performance of Co-financier (IFAD)

7.2.1 IFAD identified, prepared and appraised the project jointly with the Bank. The preparation was preceded by environmental screening and socio-economic studies that facilitated an excellent project design that was prepared and appraised by a competent team. Flexibility in project design contributed positively to successful project implementation, such that minor modifications to increase beneficiaries and outreach were accommodated without implementation problems. The co-financing arrangements and cooperation agreement between IFAD and the Bank explicit enough to enhance operational efficiency, where by the Bank's rules of procedures for the procurement of goods and works prevailed for all project procurements. IFAD therefore was not directly involved in the day-to-day implementation of the programme, which the Bank did on its behalf. However, IFAD responded immediately to requests from the Bank and from the Borrower, and kept the Bank and PMU staff constantly informed of its activities and decisions regarding the programme. These excellent implementation arrangements and response from IFAD greatly reduced processing time and contributed to timely implementation of project activities. Therefore IFAD's performance as co-financier is rated as Highly Satisfactory.

7.3 Performance of the Borrower

7.3.1 Borrower fulfilled the entire Loan Conditions, including condition for first disbursement in about a year: the Loan was approved in November 1996, entered into force in April 1997 and made its first disbursement in January 1998. Project implementation was carried out within the stipulated eight year period, with about 19 months time overrun that corresponded to the initial implementation delays. The Borrower strictly observed all conditions and fulfilled all commitments throughout project implementation, including timely contribution of counterpart funds, which exceeded appraisal estimates. The Borrower's adherence to commitments was further observed in its ownership of the programme and publicity nationwide, which raised awareness about project opportunities and contributed greatly in the uptake, ownership, implementation and exceptional impacts of the project.

7.3.2 There was a good level of understanding, interaction and consultation among the Borrower and the co-financiers (the Bank and IFAD), which helped facilitate dialogues and coordination of activities on the ground. The Borrower further made a good use of the technical assistance, which was well utilized in engineering work, training and related studies. The only point of contention was the production of the Lowland Development Master Plan which could not be produced due to bureaucratic setbacks by the Department of State Agriculture (DOSA). Overall, the performance of the Borrower is rated as Satisfactory.

8. OVERALL PERFORMANCE AND RATING

8.1 The overall performance and rating for project is Highly Satisfactory (3.8 points out of 4). All the loan conditions were fulfilled on time. The programme implementation was smooth, outreach was wide and exceeded targets and expectation by far, and the project interventions have succeeded in revitalizing lowland agricultural production in the Gambia. The programme laid a solid foundation for increasing agricultural production in the country through adoption of lowland water and land management technologies and improved seeds that are being scaled up and utilized by the communities, even beyond LADEP intervention sites. The programme staffing remained

efficient and committed to the project throughout implementation. The Borrower submitted acceptable quarterly progress, annual and audit reports in a timely manner, and prepared a PCR at the end of the project, which formed a valuable input into the Bank's PCR. The continuing production and field activities nearly two years after the project completion are visible signs of sustainability, which has been achieved through continuing support by the GOTG. The project has EIRR of 15.5%, calculated using actual project data, which far exceeds the appraisal estimate of 9.0%, further justifying the highly satisfactory rating of the project. The same rating is given in the Borrower's PCR and the PCR prepared by IFAD.

9. CONCLUSIONS, LESSONS AND RECOMMENDATIONS

9.1 Conclusions

9.1.1 Since the mid 1970s, the Bank Group has supported the agricultural sector of The Gambia, ranging from cotton development to fisheries and lowland rice development, and has thus been a major contributor to the country's agricultural development. However, implementation success of earlier Bank interventions remained limited, largely due to institution constraints on the side of the Borrower, as two of the fisheries projects were cancelled while the completion of the two rice development projects were largely behind schedule. The LADEP, jointly financed by the Bank and IFAD, is the first operation in the agricultural sector with a design that attracted massive support, participation, commitment and ownership by Government, local communities and beneficiaries. This is particularly due to the simplicity of the intervention packages, implementation design that mobilized communities and utilized community labour and local material, and thus made it easy for the interventions to be owned and managed, and in some cases replicated by the beneficiaries.

9.1.2 In view of the foregoing, programme implementation was relatively smooth and did not experience any threatening bottleneck. The programme was able to show very tangible results, and achieved all its targets (except the Master Plan), most of which were exceeded by far in number, coverage and outreach. Rice production activities are still very visible on the ground at the programme sites and have been expanded and up-scaled for most sites. However, for a full realization of the potential of lowland agriculture in the country, the Government of the Gambia should be encouraged to complete the development of the Lowland Development Master Plan, which remains critical for guidance in the sustainable development of the production potential of the lowlands.

9.2 Lesson Learned

9.2.1 The *Government supported*, actively participated and owned the project at all stages of the project cycle, which contributed significantly to project success. *Good understanding* of the project concept and design between the co-financiers and the Government facilitated a good cooperation and smooth project implementation. The reformed salary scale for public employees made employment in the civil service more attractive for field and middle-level staff, which allowed LADEP to recruit and keep qualified and experienced staff. Salaries and allowances of project staff were paid regularly, which had rarely happened in the past, and counterpart funding was provided as anticipated, both in terms of amounts and timing. Programme Coordination Committee (PCC) meetings were well attended and the discussions resulted in useful modifications to the draft annual work plans and budgets.

9.2.2 *Technical design* that included detailed studies to precede the project preparation led to an excellent project design. *Flexibility* in project design contributed positively to project implementation such that minor modifications were accommodated to increase success in terms of coverage and outreach. The engineering *technologies* are *simple* and *appropriate* for women who have many other income generating activities to attend to. The potential for replication is enormous

due to the use of locally available material. *Agronomic follow-ups* involving the introduction of low-input crop husbandry practices were adapted to the role of rice in family production systems. Farmers know that fertilizer can boost yields and that yields remain heavily conditioned by rainfall, and thus adopt soil improvement practices to retain moisture.

9.2.3 *Environmental integrity* included environmental studies but fell short of a full environmental assessment. Therefore conservation of sensitive ecosystem while expanding the rice ecologies was not maintained.

9.2.4 The project intervention packages were not given out freely to the communities, '*No Free Meal*'. Rather they were perceived as facilitation, in terms of creating access to back swamps and availing reclaimed land, and reducing agro-ecological hazards (e.g. salinity and acidity), while farmers farmed their land, paid for their inputs and marketed their products in a private sector-oriented style.

9.2.5 *Self-help labour* is a targeting mechanism. The beneficiary participation and in-kind contribution in the form of labour, created a sense of *ownership* of constructed structures, while the creation of farmer organizations emerged a culture of maintenance and working groups and teams. Most of the sites reclaimed by LADEP had been abandoned for years due to salt intrusion or reduced run-off, and claims to the tidal swamps were not as strong. Access to land, both reclaimed and opened up, was firmly linked to personal participation in the works: use of hired labour was not acceptable, fines were paid by anybody who did not obey the rules, and the land was to be distributed equitably. Everyone knew exactly what their rights, duties and obligations were, and they did the rest.

9.2.6 The *good commitment* of the PMU to the project was a key pillar for the project achievements, in spite of challenges that emerged with the change of government at the initial stages of the project. This commitment was sustained by good PMU leadership throughout project implementation.

9.2.7 The long-term sustainability of LADEP depended on the ability of the mobilizers to verify and sustain *community commitment* and sustain community recognition of the need for adequate follow-up actions and acted accordingly.

9.2.8 *Demand-led* and *community-based self-help approach* was adopted, with a strong emphasis on transferring the awareness and skills needed to assure local management of maintenance and repairs. Site selection by the DRCs was to be based on similar criteria and SMCs were to be established and provided with training and backstopping.

9.2.9 The assumptions made in the Programme Matrix were realistic and in most cases turned out to be accurate assumptions, which led to the realization of almost all programme targets. Such assumptions include:

a) The matrix assumed that the international price of 100% broken Thai rice will not decrease by more than 20%. The price of Thai rice (Bangkok) was 312.5 USD/MT in 1997 and decreased to 252.0 \$/MT in 2004. That is, it decreased by 19% in 8 years, which reflects fairly realistic assumption (IMF Data).

b) The matrix assumed that 5-6 km of dyke/year will be completed by a tractor team; 15 ha of rice land will be reclaimed by constructing a km of dyke; 25 ha tidal swamp will be reclaimed by constructing a km of causeway. Labour for construction will be provided by beneficiary community. The project progress reports and the government and IFAD PCRs showed that 165 km of dykes completed (more than 3 times), 10.8 – 39.4 ha of rice per km

of dyke reclaimed (more than 15 ha of rice land per km of dykes, in average), 22.2 – 118.8 ha of tidal swamp per km of causeway reclaimed (more than 25 ha of tidal swamp per km of causeway, in average). The matrix assumed that beneficiary community will provide labour. The project reports and PCRs showed that the community provided labour.

9.3 Recommendations

9.3.1 To the Bank

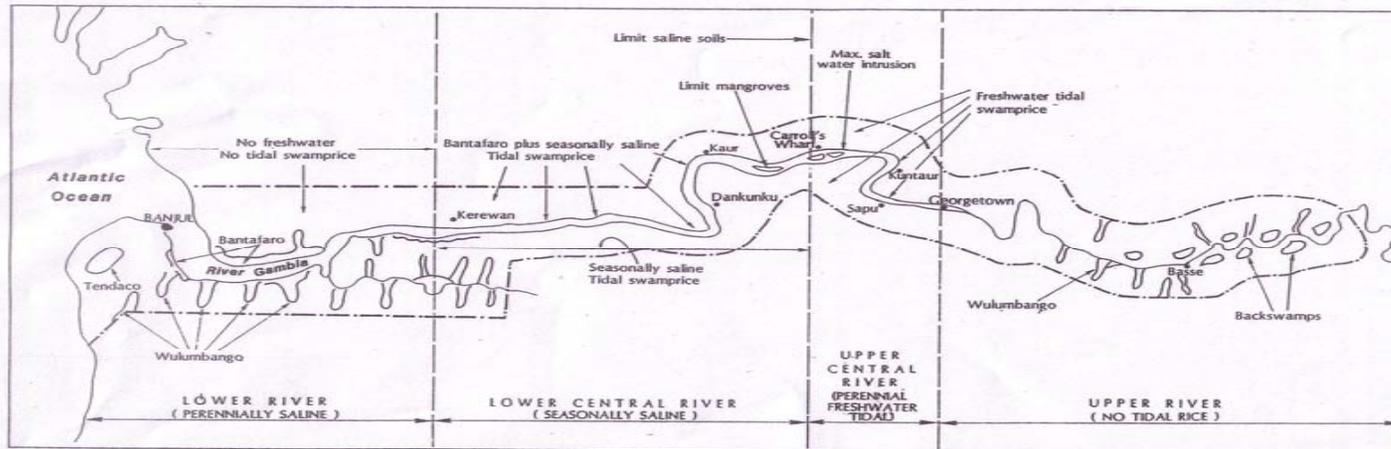
- i) The Bank should continue dialogue with the Borrower and encourage the latter to complete the development of the Lowland Development Master Plan. The required studies are already completed; the plan is critical for providing scientific and technical guidance on the sustainable use of the lowlands and ecosystems.
- iii) The Bank should emphasize local participation and ownership in the funding of subsequent phases of planned 20 years programme, of which LADEP was the first phase; the second phase called Participatory Integrated Watershed Management Project (PIWAMP) is already being implemented.
- iv) Strengthen the Monitoring and Evaluation (M&E) components of future projects to facilitate data collection that will enhance accurate documentation of positive and negative lessons, and project impacts that are critical improved development effectiveness.
- v) Put detailed environmental assessment among priority studies preceding lowland development interventions in The Gambia.

9.3.2 To the Borrower

- i) Continue providing and strengthen support-service activities (extension, road improvement and market facilities) that enable farmers to market, make production profitable and make farming attractive especially to the unemployed youth.
- ii) Continue honouring financial commitments to project implementation, such counterpart funds, improved salary scale and regular payment of salaries for project staff as incentive and motivation.
- iii) Continue facilitating and provide necessary support to procurement, and reduce administrative setbacks that impede such processes, as experienced with the Master Plan development that was hindered by DOSA.
- vi) Put detailed environmental assessment among priority studies preceding lowland development interventions in The Gambia.

THE GAMBIA
LOWLAND AGRICULTURAL DEVELOPMENT PROGRAMME
PROJECT COMPLETION REPORT

Project Map: Republic of The Gambia



**THE GAMBIA
LOWLAND AGRICULTURAL DEVELOPMENT PROGRAMME
PROJECT COMPLETION REPORT**

ANNEX 2
Page 1 of 4

Ledger of Disbursement Per Category Per Loan								
Source of Fund	: African Development Fund				Amount Signed	: UAC	4,000,000.00	
Country Name	: The Gambia				Net Amount	: UAC	0.00	
Loan Number	: 2100150000366				Date Signed		20.12.1996	
Project Title	: Lowland Agricultural Development Programme				Total Disbursed	: UAC	0.00	
Borrower Name	: 9900000267 Government of Gambia							
Category Code	: 001				Amount Allocated	: UAC	1,070,000.00	
Description	: Goods				Total Committed	: UAC	998,124.92	
					Amount Uncommitted	: UAC	71,875.08	
					Total Approved	: UAC	861,141.19	
					Approval Balance	: UAC	208,858.81	
Ldv ref. & Currency		Application No	Amount in currency	Equiv. Curr.	Amount Disbursed	Amount Approved	Amount Undisbursed	Approval Balance
F/GM/2003/09453	USD	RF NO 22	36,219.20	UAC	26,226.79	26,311.77	1,043,773.21	1,043,688.23
F/GMB/1998/2714	USD	DP NO 04	50,060.90	UAC	35,545.78	35,545.78	1,008,227.43	1,008,142.45
F/GMB/1999/1084	USD	DP NO 06	450,548.10	UAC	333,435.54	333,435.54	674,791.89	674,706.91
F/GMB/2001/1513	USD	DP NO 15	119,478.00	UAC	93,010.11	93,240.93	581,781.78	581,465.98
1/GM/2002/04784	USD	DP NO 17	60,855.00	UAC	48,657.14	48,445.26	533,124.64	533,020.72
1/GM/2003/09626	USD	DP NO 20	304,072.00	UAC	221,389.62	221,465.40	311,735.02	311,555.32
1/GM/2003/09454	EUR	DP NO 21	39,348.00	UAC	30,970.00	30,917.19	280,765.02	280,638.13
1/GM/2003/09905	USD	DP NO 23	97,500.00	UAC	71,728.10	71,779.32	209,036.92	208,858.81

Ledger of Disbursement Per Category Per Loan								
Source of Fund		: African Development Fund			Amount Signed		: UAC	4,000,000.00
Country Name		: The Gambia			Net Amount		: UAC	0.00
Loan Number		: 2100150000366			Date Signed			20.12.1996
Project Title		: Lowland Agricultural Development Programme			Total Disbursed		: UAC	0.00
Borrower Name		: 9900000267 Government of Gambia			Amount Allocated		: UAC	1,420,000.00
Category Code		: 002			Total Committed		: UAC	1,280,841.19
Description		: Works			Amount Uncommitted		: UAC	139,158.81
					Total Approved		: UAC	1,280,841.19
					Approval Balance		: UAC	139,158.81
Ldv ref. & Currency		Application No	Amount in currency	Equiv. Curr.	Amount Disbursed	Amount Approved	Amount Undisbursed	Approval Balance
1/GM/2004/16545	USD	RF NO 31	294,333.57	UAC	197,545.94	200,364.58	1,222,454.06	1,219,635.42
1/GM/2004/15573	USD	RF NO 30	145,604.94	UAC	98,583.55	98,139.68	1,123,870.51	1,121,495.74
1/GM/2004/13560	USD	RF NO 29	420,070.23	UAC	282,426.74	282,898.44	841,443.77	838,597.30
1/GM/2003/11941	USD	RF NO 25	41,082.18	UAC	28,700.30	29,542.77	812,743.47	809,054.53
1/GM/2003/09453	USD	RF NO 22	91,596.85	UAC	66,326.47	66,541.36	746,417.00	742,513.17
1/GM/2002/07063	USD	RF NO 19	71,721.01	UAC	54,346.45	54,281.46	692,070.55	688,231.71
1/GM/2002/04994	USD	RF NO 18	130,986.26	UAC	104,397.31	104,731.20	587,673.24	583,500.51
1/GM/2001/02638	USD	RF NO 16	49,232.62	UAC	38,479.22	38,496.67	549,194.02	545,003.84
F/GMB/1998/0873	USD	RF NO 02	316,759.74	UAC	237,115.14	237,115.14	312,078.88	307,888.70
F/GMB/2000/1481	USD	RP NO 12	85,381.00	UAC	65,542.57	65,010.09	246,536.31	242,878.61
F/GMB/1999/0670	USD	RF NO 05	144,146.67	UAC	103,719.80	103,719.80	142,816.51	139,158.81

Ledger of Disbursement Per Category Per Loan								
Source of Fund	: African Development Fund				Amount Signed	: UAC	4,000,000.00	
Country Name	: The Gambia				Net Amount	: UAC	0.00	
Loan Number	: 2100150000366				Date Signed		20.12.1996	
Project Title	: Lowland Agricultural Development Programme				Total Disbursed	: UAC	0.00	
Borrower Name	: 9900000267 Government of Gambia							
Category Code	: 003				Amount Allocated	: UAC	737,000.00	
Description	: Services				Total Committed	: UAC	696,165.00	
					Amount Uncommitted	: UAC	40,835.00	
					Total Approved	: UAC	684,842.76	
					Approval Balance	: UAC	52,157.24	
Ldv ref. & Currency		Application No	Amount in currency	Equiv. Curr.	Amount Disbursed	Amount Approved	Amount Undisbursed	Approval Balance
1/GM/2005/18045	GMD	DP NO 33	122,908.17	UAC	3,147.15	3,147.15	733,852.85	733,852.85
F/GMB/2000/2166	USD	RF NO 14	244,120.00	UAC	187,109.58	188,712.21	546,743.27	545,140.64
F/GMB/1998/3027	USD	RF NO 03	62,245.97	UAC	45,100.22	45,100.22	501,643.05	500,040.42
1/GM/2004/15573	USD	RF NO 30	322,514.48	UAC	218,362.24	217,379.09	283,280.81	282,661.33
F/GMB/2000/0507	GMD	DP NO 10	272,000.00	UAC	16,906.28	16,906.28	266,374.53	265,755.05
F/GMB/1999/1149	USD	DP NO 07	125,484.00	UAC	92,866.50	92,866.50	173,508.03	172,888.55
1/GM/2004/13560	USD	RF NO 29	41,732.71	UAC	28,058.24	28,105.11	145,449.79	144,783.44
1/GM/2004/07063	USD	RF NO 19	23,449.81	UAC	17,769.05	17,747.80	127,680.74	127,035.64
F/GMB/2000/1481	USD	RP NO 12	12,636.52	UAC	9,700.39	9,621.59	117,980.35	117,414.05
1/GM/2003/11941	USD	RF NO 25	75,858.82	UAC	52,995.50	54,551.14	64,984.85	62,862.91
1/GM/2003/12621	GMD	DP NO 27	140,562.50	UAC	3,599.20	3,599.20	61,385.65	59,263.71
1/GM/2003/10828	GMD	DP NO 26	56,225.00	UAC	2,368.82	2,368.82	59,016.83	56,894.89
1/GM/2003/10725	GMD	DP NO 24	112,450.00	UAC	4,737.65	4,737.65	54,279.18	52,157.24

Ledger of Disbursement Per Category Per Loan									
Source of Fund		: African Development Fund			Amount Signed		: UAC	4,000,000.00	
Country Name		: The Gambia			Net Amount		: UAC	0.00	
Loan Number		: 2100150000366			Date Signed		20.12.1996		
Project Title		: Lowland Agricultural Development Programme			Total Disbursed		: UAC	0.00	
Borrower Name		: 9900000267 Government of Gambia			Amount Allocated		: UAC	733,000.00	
Category Code		: 004			Total Committed		: UAC	732,613.43	
Description		Operational Costs			Amount Uncommitted		: UAC	386.57	
					Total Approved		: UAC	732,613.43	
					Approval Balance		: UAC	386.57	
Ldv ref. & Currency		Application No	Amount in currency	Equiv. Curr.	Amount Disbursed	Amount Approved	Amount Undisbursed	Approval Balance	
F/GMB/1999/2921	USD	RF NO 09	144,157.00	UAC	105,151.17	105,252.51	627,848.83	627,747.49	
F/GMB/2000/1481	USD	RP NO 12	28,906.00	UAC	22,189.64	22,009.37	605,659.19	605,738.12	
1/GM/2001/02638	USD	RF NO 16	25,603.38	UAC	20,011.08	20,020.16	585,648.11	585,717.96	
1/GM/2004/15573	USD	RF NO 30	4,823.58	UAC	3,265.86	3,251.16	582,382.25	582,466.80	
F/GMB/1997/3203	USD	RF NO 01	95,484.00	UAC	70,768.20	70,113.96	511,614.05	512,352.84	
1/GM/2004/13560	USD	RF NO 29	11,140.06	UAC	7,489.82	7,502.33	504,124.23	504,850.51	
F/GMB/1999/2191	USD	RF NO 08	144,155.00	UAC	105,233.38	105,233.38	398,890.85	399,617.13	
F/GMB/2000/1879	USD	RF NO 13	83,872.00	UAC	65,354.47	64,805.06	333,536.38	334,812.07	
1/GM/2003/09453	USD	RF NO 22	40,214.94	UAC	29,120.16	29,214.51	304,416.22	305,597.56	
1/GM/2002/07063	USD	RF NO 19	33,659.18	UAC	25,505.18	25,474.68	278,911.04	280,122.88	
F/GMB/2000/0699	USD	RF NO 11	228,166.00	UAC	169,276.42	169,404.62	109,634.62	110,718.26	
1/GM/2002/04994	USD	RF NO 18	137,990.74	UAC	109,979.95	110,331.69	(345.33)	386.57	

Note: numbers between prentices are negative amounts

THE GAMBIA
LOWLAND AGRICULTURAL DEVELOPMENT PROGRAMME
PROJECT COMPLETION REPORT

ANNEX 3
Page 1 of 3

Summary of Quantifiable Achievements of LADEP by IFAD

	1997	1998	1999	2000	2001	2002	2003	2004	97-04	Target ¹
Villages										
Villages requesting assistance	35	195	165	172	149	124	87	109	1036	--
Villages benefiting from new works	35	56	91	60	58	66	33	--	399	--
% applications met	100	29	55	35	39	53	72	87	470	400
+ water retention sites-new	28	32	51	30	24	29	33	57	284	234
+ water retention sites-upgraded	3	11	--	16	24	5	3	19	81	
+ tidal access sites	7	24	40	30	34	37	30	38	240	90
+ backswamp sites (experimental)	--	8	7	1	--	--	--	--	16	23
Beneficiaries										
Population of beneficiary villages (Census)	31140	28520	40076	22198	10344	4188	--	--	136466	
Participants in works (SWMU data base)	3376	2226	3785	5277	2062	3839	4271	3851	28687	
+ male	1155	533	1234	1998	566	1156	1309	1017	8968	31%
+ female	2221	1693	2551	3279	1496	2683	2962	2834	19719	69%
Beneficiary households new sites	2595	2377	3340	1850	862	349	--	--	11373	
Total households benefiting in year ²	2595	2839	6363	4893	3101	3449	--	--	23240	
Total rice growers benefiting										>21000
Total population benefiting										73000
Total population benefiting in year*	31140	34616	78548	58716	37212	41388	--	--	281620	
Sites by type of agro-ecology										
+ <i>bantafaro</i>	14	9	16	24	19	24	21	30	157	140
+ <i>wulumbango</i>	11	4	14	6	--	5	2	--	52	63
+ backswamp (experimental)	--	8	7	--	1	--	1	1	23	23
+ upgrading	3	11	--	--	1	5	3	19	42	78
* tidal swamp	--	24	40	30	34	37	30	38	133	90

¹ LADEP was to be demand-led. The targets indicate the orders of magnitude of achievements needed to make the IFAD loan to The Gambia cost-effective.

² Over the years, LADEP had to return to several sites where the works had been damaged (e.g. by floods). The SWMU database does not present these households separately from those benefiting from works on new sites.

	1997	1998	1999	2000	2001	2002	2003	2004	97-04	Target ¹
Civil works										
Length dykes built (m)	21368	13419	23799	8217	12045	20461	30142	35643	165094	none
Length spillways built (m)	1070	710	1185	355	500	800	1270	1060	6950	9150
Length bridges built (m)	--	414	99	374	343	259	340	694	2597	1860
Length causeways built (m)	--	6021	26285	11045	4941	10178	9335	5300	73105	235
+ of which: Jenoi	--	6313	11211	6470	1500	7670	3540	1030	37734	
CRD/NBD	--	--	15074	4575	3441	2508	5795	4259	35652	
Tidal as % of LADEP sites	20	43	44	50	59	56	48	41	45%	
Upgrading (m)									11301	1870
Area reclaimed/opened up (ha)	569	1188	1195	463	652	585	634	1490	6776	3735
+ water retention sites-new (ha)	569	473	612	89	474	585	634	1490	4926	3735
+ <i>bantafaro</i> (ha)	476	259	299	421	457	515	525	1363	4315	3000
+ <i>wulumbango</i> (ha)	93.5	37	35	118	--	70	104	102	559.5	315
+ backswamp (ha)	--	177	278	--	17	--	5	25	502	460
+ water retentions sites-upgraded (ha)	--	--	--	--	--	--	--	--	--	1640
+ tidal access Jenoi (ha)	--	715	583	374	178	270	--	--	2120	
+ tidal access CRD/NBD (ha)	--	--	679	135	96	95	--	--	1005	
Area reclaimed/ km dyke (ha)	26.6	35.2	25.7	10.8	39.4	28.6	--	--	average	
Area reclaimed/km causeway (ha)	--	118.8	22.2	33.9	36.0	26.6	--	--	average	
Support Services										
Community Mobilisation subcomponent										
+ SMCs fostered	--	--	74	--	--	--	--	--	74	
+ SMC members trained (M/F)	--	--	814	--	--	--	183/554	--	1551	
+ SMC leaders trained (M/F)										
+ Training workshops on DLFAs	--	--	--	7	7	--	--	--	14	0
+ Consultant to draft DLFA constitution	--	--	--	1	--	--	--	--	1	0
+ Workshop to finalise DLFA constitution	--	--	--	1	--	--	--	--	1	
+ SMC members at DLFA workshops (M/F)	--	--	---	542	94/281	--	--	--	917	
+ DLFAs fostered	--	--	--	12	11	10	2	--	35	0
+ DLVA leaders trained (M/F)	--	--	--	132	121	111	29/56	--	449	
+ PRA Training workshops	--	9	7	--	--	--	--	--	16	

	1997	1998	1999	2000	2001	2002	2003	2004	97-04	Target ¹
+ Extensionists trained	--	105	126	--	--	--	--	--	231	
+ Farmers trained in PRA (M/F)	--	3520	7400	--	--	--	--	--	10920	
Adaptive Research Subcomponent										
+ animal traction - ox cultivation trials									28	
+ natural fertility management (NFM)									48	
+ Rice varieties field trials									44	
+ Swamp rice transplanting field trials									56	
+ Responsive research field trials									9	
Institution Strengthening										
SWMU field stations (Jenoi/ Sapu)	X		X						2	2
Technical manuals									2x2	2x2
FFHC field stations (Farafenni/ Njau)	FFHC	replaced	by	SWMU					0	2
UNV engineers									2	2

Source: Data from IFAD and Government PCR

**THE GAMBIA
LOWLAND AGRICULTURAL DEVELOPMENT PROGRAMME
PROJECT COMPLETION REPORT**

ANNEX 4

Page 1 of 1

Calculation of Economic Internal Rate of Return (EIRR)

EIRR = 15.5%

#	Year	Present Value Cost GMD'000000	Present Value Revenue GMD'000000	Present Value Benefits GMD'000000
1	1997	8.6411	4.4223	(4.2187)
2	1998	11.7409	9.2603	(2.4806)
3	1999	12.9441	8.1452	(4.7989)
4	2000	13.3238	5.4089	(7.9149)
5	2001	15.8308	4.1527	(11.6781)
6	2201	15.4354	5.4409	(9.9946)
7	2003	14.4310	4.4432	(9.9878)
8	2004	12.8807	13.3048	0.4240
9	2005	3.2758	11.5245	8.2487
10	2006	2.8374	9.9825	7.1450
11	2007	2.4578	8.6467	6.1890
12	2008	2.1289	7.4898	5.3608
13	2009	1.8441	6.4876	4.6435
14	2010	1.5973	5.6195	4.0222
15	2011	1.3836	4.8676	3.4840
16	2012	1.1984	4.2163	3.0178
17	2013	1.0381	3.6521	2.6140
18	2014	0.8992	3.1634	2.2643
19	2015	0.7789	2.7402	1.9613
20	2016	0.6747	2.3735	1.6989
Total		125.3419	125.3419	0.0000

**THE GAMBIA
LOWLAND AGRICULTURAL DEVELOPMENT PROGRAMME
PROJECT COMPLETION REPORT**

ANNEX 5
Page 1 of 4

Performance Evaluation and Rating

FORM IP 1 - IMPLEMENTATION PERFORMANCE

Components of Indicators	Score (1 to 4)	Remarks
1. Adherence to Time Schedule	3.5	All of the implementation events were about the fulfilment time between 10%-25% delay
2. Adherence to Cost Schedule	4.0	The cost variation was less than 10%
3. Compliance with covenants	2.5	
4. Adequacy of Monitoring & Evaluation and Reporting	1.0	The M&E reporting was minimal
5. Satisfactory Operations (if applicable)	4.0	The project left 29 quarterly reports, 2 PCRs, 8 annual work plans, and # audit reports.
TOTAL	15.0	
Overall Assessment of Implementation Performance	3.0	Category S (Satisfactory)

THE GAMBIA
LOWLAND AGRICULTURAL DEVELOPMENT PROGRAMME
PROJECT COMPLETION REPORT

ANNEX 5
Page 2 of 4

BANK PERFORMANCE RATING

FORM BP 1 - BANK PERFORMANCE RATING

Component of Indicators	Score (1 to 4)	Remarks
1. At Identification	4.0	IFAD did the identification and preparation of the project, however, the Bank should be rewarded for the excellent decision of co-financing this well prepared project.
2. At Preparation of Project	4.0	
3. At Appraisal	3.5	The project matrix has been prepared in a good appraisal report.
4. At Supervision	3.5	14 supervision missions including lunching and mid-term review missions. Time duration for processing project documentation bidding contracts, disbursement is highly satisfactory.
Overall Assessment of Bank Performance	3.8	Category HS (Highly Satisfactory)

**THE GAMBIA
LOWLAND AGRICULTURAL DEVELOPMENT PROGRAMME
PROJECT COMPLETION REPORT**

ANNEX 5
Page 3 of 4

PROGRAMME OUTCOME RATINGS

FORM PO 1- PROJECT OUTCOME

No	Component Indicators	Score (1to4)	Remarks
1	Relevance and Achievement of Objectives		
i)	Macro-economic Policy	n/a	
ii)	Sector Policy	3.0	The programme was one of the main elements in implementing the Agricultural Sector Policy in The Gambia, especially in poverty reduction.
iii)	Fiscal Policy	n/a	
iv)	Financial	2.5	Adequate co-financing; no audit problems.
v)	Poverty Alleviation, Social and Gender	3.7	The programme had significant impact on poverty alleviation, social and gender.
vi)	Private Sector Development	4.0	The project beneficiaries in the communities are all private farmers, entirely belonging to the sector.
vii)	Environment	2.2	Environmental categorization may have been 1 and was adopted by ADB from IFAD, which categorized the project as 2.
2	Institutional Development		
i)	Institutional Framework including Restructuring	3.5	Through capacity building, the project significantly improved the performance of NARI and SWMU.
ii)	Financial and Management Information Systems, including Audit Systems	2.5	The project had a good financial and audit systems but could not establish management information system
iii)	Transfer of Technology	3.5	The programme helped in improving the seed varieties and the use of water resources.
iv)	Staffing by qualified persons including turnover, training and Counterpart staff	4.0	The programme was implemented by an excellent staff who continued work at the sites even after completion.
3	Sustainability		
i)	Continued Borrower Commitment	4.0	The borrower prepared a PCR at the end of the programme; the project activities are still supported by the GOTG.
ii)	Environmental Policy	2.5	The country has environment law but it is not well enforced.
iii)	Institutional Framework	4.0	Enabling institutional environment throughout programme implementation.
iv)	Technical Viability and Staffing	4.0	Excellent technical support and staffing.
v)	Financial Viability including Cost Recovery Systems	3.5	Continuity of activities after completion implies good cost recovery by farmers (no formal surveys)
vi)	Economic Viability	3.5	Very inherent; high yields; surpluses are marketed
vii)	Environmental Viability	2.6	See Annex 10

**THE GAMBIA
LOWLAND AGRICULTURAL DEVELOPMENT PROGRAMME
PROJECT COMPLETION REPORT**

ANNEX 5

Page 4 of 4

viii)	O&M Facilitation (availability of recurrent Funding, foreign exchange, spare parts, Workshop facilities etc.)	4.0	Farmers / communities operating and maintaining the structures built by the project in over 90% of sites; more demand for project activities.
4	Economic Internal Rate of Return	4.0	The project has EIRR more than 10%
	TOTAL	61.0	
	Overall Assessment of Outcome	3.4	Category HS (Highly Satisfactory)

**THE GAMBIA
LOWLAND AGRICULTURAL DEVELOPMENT PROGRAMME
PROJECT COMPLETION REPORT**

ANNEX 6
1 of 1

Recommendations and Follow-Up Matrix

Main Findings & Conclusions	Lessons Learned/ Recommendations	Follow-up Actions	Responsibility
<p><u>Formulation & Project Rational</u> The LADEP was a joint programme with IFAD. The programme was designed to increase total rice production in the traditional rice production systems of the lowland by about 12,500 tonnes per annum by PY8 on sustainable basis using community based demand driven developmental approach.</p>	<ul style="list-style-type: none"> - This programme is a model for an excellent collaboration between the Bank and IFAD. The success of the programme emanated from good identification, preparation, appraisal, implementation and completion. - Programme was entirely a response to farmers' expressed needs. - Government and farmers participated in the early stages of the project cycle. - The duration of the programme is 8 years; this gave lead time to achieve the project goals and objectives 	<ul style="list-style-type: none"> - The Bank should acknowledge the success of LADEP as a co-financed project (could be a letter to IFAD) - The Bank should continue this approach to insure the government participation. - The Bank should give enough time for programme implementation. 	<ul style="list-style-type: none"> - ADB management - ADB programme planning team - ADB management
<p><u>Project Implementation</u> - Adequate supervision missions (13 Bank supervision missions in 8 years) - The LADEP had framework for good communication and the existence of trust between Bank staff, IFAD and Government representatives - Lack of the M&E and MIS</p>	<ul style="list-style-type: none"> - Supervision mission is a management tool to get information to confirm/ modify implementation plans. - The relationship between Bank staff and Government representatives should be interactive and constructive relation. - Programmes should train the Government staff to perform the M&E job for all donors' projects to insure fairness and neutral job. If the project felt unfair M&E report, then the project can call for an international firm to do kind of arbitration report. 	<ul style="list-style-type: none"> - The bank should continue encouraging task mangers to have at least one supervision mission annually. - The bank should continue encouraging task mangers to improve their relationship with their counterparts. - Workshops and seminars are good tools to transfer the knowledge about M&E and MIS 	<ul style="list-style-type: none"> - ADB management - ADB management - ADB Task Manager
<p><u>Compliance with Loan Conditions & Covenants</u></p>			
<p><u>Performance Evaluation & Project Outcome</u> - A mid-term evaluation occurred in 2002 - 8 audit reports, - 29 quarterly progress reports were prepared during the life of the project.</p>	<ul style="list-style-type: none"> - Mid-term review is a good tool to confirm/ suggest modification(s) to the project structure. It should not be delayed for long time. - Adequate reporting is good tool to improve the day-to-day management 	<ul style="list-style-type: none"> - The Bank should encourage activity mangers to stick with the planned time for the mid-term review to improve the performance of their projects. - The Bank should montor the progress reporting 	<ul style="list-style-type: none"> - ADB Management - ADB Task Manager
<p><u>Sustainability</u> The programme is very sustainable:</p>	<p>Programme flexibility is critical for sustainability; focus on the sustainable activities by giving communities more resources to implement with limited supervision.</p>	<p>Provide resources to the M&E unit to track the programme activities</p>	<ul style="list-style-type: none"> - PIU, Task Manager, and Gov

Borrower's Contribution:
(Operational Performance, Conclusion and Recommendations as stated in
the Borrower's PCR)

OPERATIONAL PERFORMANCE

The overall sector goal of LADEP was the sustainable improvement of traditional rice production as a means of enhancing food security for impoverished rural households; while the specific objective was to increase total production in traditional rice production systems of the lowlands by about 12,500 tonnes per annum in PY8 on a sustainable basis using community based, demand driven developmental approach.

From 1997 to 2004, an incremental production of 28,313 tonnes of rice was achieved representing 226% of the targeted 12,500 tonnes. The high achievement was as a result of intensive farmer capacity building in rice production, opening up of 9,473 ha of land for production and shifting of emphasis from upland crop production to rice production. The detailed achievement summary is as Annex 2

The Lowland Agricultural Development programme activity implementation was concentrated only in the lowlands. The future plan of the project is to consider the conservation of the uplands through integrated watershed management. That was considered necessary because it was experienced that problems encountered in the lowlands e.g. siltation, emanate from the uplands as a result of hazards of soil erosion. It is hoped that the Bank will also consider funding of the envisaged Watershed Management Project.

During the implementation of LADEP, the only constraint or problem encountered was the inadequate field equipments, like tractors in relation to the high demand for LADEP assistants from the requesting communities. If the request for follow up project is accepted, tractors should be increased and at the implementation level, strict clustering, for effective and efficient utilisation of the tractors, should be adhere to. Give an account of the proposed utilization of the undisbursed balance where it exists.

CONCLUSIONS AND RECOMMENDATIONS

With reference to the achievement summary attached, it was a successful project. The targets were achieved and out of the implementation of the project activities signalled the improvement of the livelihood status of the project beneficiaries. Yields were increased, beneficiary knowledge increased, women's access to land was facilitated and institutionalisation of the project beneficiaries was successful.

It is therefore recommended that extension follow-up be intensified for sustainability of this project's achievement.

Co-Financier Contribution (IFAD):
(Executive Summary as stated in the IFAD PCR)

1. LADEP was IFAD's fourth loan to Government of The Gambia, aimed at developing lowlands rice production. The previous loans financed two phases of the Jahally-Pachaar Smallholder Project (JPSP) as well as the Small-Scale Water Control (SSWC) project. Although designers had tried from the start to gear the technologies to the capabilities of the growers, most of whom were women, their desire to assure full water control had resulted in ill-suited procedures (e.g. rigid water delivery schedules that required women to go to the fields at night). Strong concern for safeguarding women's land rights led to the mounting of a concerted campaign aimed at titling the plots in their name. African Development Bank had had similar experiences, with the added problem of particularly inept management due to political interference. The present report describing the rather more positive experience of LADEP from design to completion, is backed by the results of a 2.5-day participatory evaluation workshop attended by 28 women farmers, 10 local leaders and 10 economic operators.

2. The design of LADEP took full account of the previous experiences. It avoided regimenting production practices, leaving the women free to arrange their own schedules even though production would remain somewhat vulnerable to climatic variability. Heavy-handed top-down approaches to safeguarding women's rights were replaced by empowering the communities and encouraging them to base decisions on local values of harmony, sharing, equity and justice. This recognised the ability of communal land ownership to protect the rights of access to land by the poor, including women. To block elite capture, LADEP asked that any land improved with its assistance be allocated equitably among those who worked on the sites (i.e. not by hiring labour). Local sense of ownership was to be further strengthened by not providing food for work or other incentives. The somewhat illogical expectation that men who worked on the sites would not receive land may have been ignored, but there is no evidence of widespread dissatisfaction among women. Nobody was forced to turn up at the site if he or she felt that the terms of participation might not be as promised and women participated massively, both with labour and food. Finally, the implementation arrangements assured that programme management would be fully autonomous within the limits of its approved annual work plans and budgets (AWPBs).

3. Implementation of LADEP seems to have been significantly more cost-effective than might have been expected for a demand-led intervention. Unfortunately, the evidence is largely circumstantial. The envisaged monitoring and evaluation (M&E) procedures and management information system (MIS) were never properly put in place. Early reporting focused on the first-stage results or outputs (e.g. physical installations, people trained), with no attention to the second-stage results or outcomes (e.g. area reclaimed in ha, evolution of yields and production, adoption rates of improved packages, etc.) nor to the third-stage results or impact (e.g. food security at household and community levels, health and nutrition, schooling of children, especially girls, etc.). In December 2000, to ensure that at least a minimum of information on impact would be available for mid-term review (MTR), IFAD engaged the FAO/IC to carry out a Rapid Participatory Impact Assessment. This mission

THE GAMBIA
LOWLAND AGRICULTURAL DEVELOPMENT PROGRAMME
EXECUTIVE SUMMARY OF THE IFAD PCR

ANNEX 8

Page 2 of 3

worked closely with the M&E staff both of PMU and the main line department (SWMU, Soil and Water Management Unit) to design and install a system for collecting and analysing data on outcomes and impact. After computers were damaged by lightening, a simplified manual system was installed. The collection of historical series of data at household level was never carried out. The data bases are patchy and tend to give priority to technical aspects (i.e. the means) rather than the end.

4. The following evidence suggests that LADEP has impacted positively on the lives of rice growers, their families and communities: (i) the backlog of applications is growing rapidly as more and more communities hear about the benefits that LADEP (and PIWAMP) can bring to them; (ii) the prospect of having to make an enormous personal effort without hope of giveaways (e.g. food for work) is no deterrent; (iii) a hostile query before Parliament led to the appointment of an investigation team that toured the country entirely at its own discretion, without finding evidence of widespread discontent; (iv) women participating in the evaluation workshop repeatedly said that their rice had reduced the need for the family to buy rice; and (v) rising labour rates in the beneficiary communities provide indirect evidence of a significant increase in production.

5. The community-based approach to targeting did not compromise the land rights of women. Outputs of participatory evaluations suggest that only a foolish man would block access by his wife to land for rice growing, since "her" production alleviates "his" burden of having to buy rice for the family. The possibility that men may also have received plots that are being cultivated by their wives, should not be allowed to become an issue if the women, themselves, are not massively unhappy: indeed, a woman would be very foolish indeed to want to deprive of her family of a resource that can both improve family wellbeing and enhance women's prestige. A few women present at the workshop expressed their resentment at having to renounce to their land if they had to return to their own village (e.g. as a divorcee). Although two-thirds of the women present felt that they would lose their land under such circumstances, the problem may lie rather more with the quality of land that they would be entitled to as natives of their home village (if only because they had not taken part in the works there). Men from ethnic groups that did not have a rice-growing tradition have had less difficulty in taking up rice-growing themselves. Many of them are youths who failed to find satisfactory employment in the cities or abroad. Finally, virtually every women group (kafoo) has a few trusted men as members and hence equal beneficiaries. The difficulty of obtaining a firm answer on how many men are actually growing rice on the sites may be an indirect indicator of a desire to avoid being accused of not respecting the terms of the agreement with the donors. This would be unfortunate indeed as it would reveal a preoccupying lack of confidence among the partners.

6. Incremental rice production was to be the main instrument for enhancing household food security. Although hard data are patchy, a rough calculation based on the total area reclaimed/ opened up and the findings of fairly systematic yields sampling allows the assumption that a potential for growing over 18,000 tons of rice per year may have been created, against the target of 12,500 tons. The trend analyses carried out during the participatory workshop reveal the extreme variability of reality, because the technologies do not entirely eliminate the vulnerability of rice growing to climate, particularly the timing of rains. The matrices on the evolution of intra-family division of roles and responsibilities revealed an enormous change over the past 20 years. The burden of the elder generation, who

THE GAMBIA
LOWLAND AGRICULTURAL DEVELOPMENT PROGRAMME
EXECUTIVE SUMMARY OF THE IFAD PCR

ANNEX 8

Page 3 of 3

used to be the most important actors, has been significantly alleviated in terms of physical and financial contributions. For the men, this is due to the use of machines (animal draft or tractors); for the women it is due to remittances from sons and daughters working elsewhere.

7. The main instruments for enhancing the chances of sustainability were to be: improved organisation and capacity building at community level. Beneficiary villages were to set up a site management committee (SMC) both to mobilise the community's contributions and to take responsibility for subsequent management and repair of the works. The first stage was highly successful, also because Gambian communities are used to joining forces for collective projects. Although trained and found capable in the theory of repair and maintenance, few of the SMCs are actually taking this initiative and less than a hundred of them are formally registered. The decision, taken in 2002, to encourage them to create apex organisations will be premature if the building blocks are not strong and capable of independent action.

8. Performances by IFAD as co-financier, AfDB as co-financier and IFAD's cooperating institution and Government line departments as implementers, were satisfactory, albeit with important exceptions like the Master Plan for Lowlands Agricultural Development, which was never formulated, and impact assessment. The PMU and SWMU were able to reconcile a demand-led approach with a concern for cost-effectiveness; their main weakness was failing to understand that physical infrastructures were the means for pursuing the end of enhancing food security. LADEP was a successful project and the lessons learnt have been incorporated into the design of PIWAMP.

THE GAMBIA
LOWLAND AGRICULTURAL DEVELOPMENT PROGRAMME
PROJECT COMPLETION REPORT

ANNEX 9
Page 1 of 3

Source of Information

I. OFFICIALS MET DURING THE MISSION

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Department of Planning

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Soil and Water Management Unit (SWMU)

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**THE GAMBIA
LOWLAND AGRICULTURAL DEVELOPMENT PROGRAMME
PROJECT COMPLETION REPORT**

**ANNEX 9
Page 2 of 3**

Gambia Artisanal Fisheries Development Project

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Mr. Yaya S. Darboe, Project Accountant

Peri-Urban Smallholder Improvement Project (PSIP)

Mr. Lamin A. D. Sanyang, Project Coordinator

Farmer Managed Rice Irrigation Project (FMRIP)

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And Staff

Integrated Aquatic Weeds Management Project

Mr. Lamin Jobe, Project Coordinator

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And Staff

NGO: Action Aid International The Gambia

Mr. Alieu Darboe, Governance Manager

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National Environment Agency (NEA)

Mrs. Ndey Sireng Bakurin, Director, Inter-Sectoral Network

(Tel: +220-4223207)

International Fund for Agricultural Development (IFAD)

Mr. Leopold Sarr, Country Prog. Manager, Africa Division

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Farmer Groups at Visited Project Sites:

Jambur: Dykes and Spillways

Ndemban: Water Retention, Wulumbango

Jattaba: Water Retention, Anti-Salt Dykes, Land Reclamation

Bambako: Tidal Access: Bridge, causeways

Dankunku: Tidal Access: Main Bridge, causeways

Salikene: Anti-Salt Dykes and Water Retention Structures

II. DOCUMENTS AND REFERENCES

- Aide Memoir, LADEP/PCR Bank Mission from 19 November – 04 December 2006, dated 1 December 2006
- Annual Review Workshop Report/LADEP, Department of Planning, DOSA dated March 2001.
- Appraisal Report, The Gambia – Lowland Agricultural Development Programme, African Development Fund dated June 1996
- Borrower PCR, Project Completion Report of the Lowlands Agricultural Development Programme (LADEP), DOSA, Republic of The Gambia.
- Co-Financier PCR (IFAD), Project Completion Report of the Lowlands Agricultural Development Programme (LADEP), Loan No. 375-GM, International Fund for Agricultural Development.
- Corrigendum, The Gambia – Lowland Agricultural Development Programme – African Development Fund dated 06 November 1996

**THE GAMBIA
LOWLAND AGRICULTURAL DEVELOPMENT PROGRAMME
PROJECT COMPLETION REPORT**

ANNEX 9

Page 3 of 3

- Formulation Report, The Gambia: Participatory Intergraded Watershed management Project (PIWAMP), FAO/IFAD Cooperative Programme.
- International Financial Statistics (IFS), IMF, Annual Report 2004.
- Mid-Term Review of LADEP by SCANDIACONSULT, dated 29 August 2002
- Project Financial Reports (8 reports) – for the period 1997-2004, Project files, Department of State for Agriculture (DOSA), Republic of The Gambia
- Project Annual Work Plans (8 reports) – for the period 1997 – 2004, Project files, Department of State for Agriculture (DOSA), Republic of The Gambia
- Project Files – for the period 2003-2005, Project files, African Development Bank, Tunisia
- Project Financial Reports (7 reports) – for the period 1997-2005, Project files, African Development Bank, Tunisia
- Project Quarterly Progress Reports (available 15 reports) – for the period 1997 – 2004, Project files, Department of State for Agriculture (DOSA), Republic of The Gambia
- Sample of Yield Sampling Survey Form, SWMU/ LADEP, LRD, DOSA, Gambia
- Preparation Report, The Gambia – Lowland Agricultural Development Programme, Food and agricultural Organization (FAO) of the United Nations, Rome dated 22 April 1994

**THE GAMBIA
LOWLAND AGRICULTURAL DEVELOPMENT PROGRAMME
PROJECT COMPLETION REPORT**

ANNEX 10

Page 1 of 3

Aspects of Successful and Sustainability Lowland Development

In order to assess the success and sustainability of this project we have looked at a number of elements which may shed some light on the aspects of sustainability. The following table rates these aspects.

	Activities/Purpose	Comments & Ranking
1	Agricultural Development <ul style="list-style-type: none"> • Mechanized agriculture development • Providing agriculture inputs • Uniform cropping • Crop diversification • Cropping intensity to 2 x per year • Training extension for the farmers and local government staff 	3 rating Conservation agriculture applied; sensitive environment and soils; project has provided initial rice seeds and innovative and adaptable NERICA rice; crop intensity usual 1 year with attempts to plant another crop; training extension offered for farmers and government staff. Rating 2.5 as principles of sustainable agriculture have been applied.
2	Water Management <ul style="list-style-type: none"> • Installation/ rehabilitation of water control structures • Operation and maintenance of the structures • Training of O & M for the farmers – local government staff • Aqua-culture development • Estate crops/ tree crops 	2.5 rating A number of dykes and spillways have been installed to control and retain water; operation and maintenance of the structures is being carried out but not fully as the O & M is supposed to be managed by the farmers through their site management committees; aqua-culture development not developed; project was carried out in the lowlands only and therefore integrated water management in watershed not complete as uplands have an impact on the flow of water in the basin; dykes and spillways were not analyzed for environmental impacts; causeways built for access to some of the sites may create diversion in the water flow with incidence on the mangroves.
3	Post Harvest Handling <ul style="list-style-type: none"> • Sufficient and well distributed processing/drying of grains / post harvest handling • Storage • Transportation to the market • Marketing 	3 rating Rice consumption is the primary target of the intervention for food security; storage facilities were not built except in one or two cases but not extensively as rice cultivation is essentially done at the level of the farmers (a few ha) for feeding the populations. One drawback of rice cultivation and rice feeding is the effect of malnutrition on the population once this staple is widely used and only used.
4	Regional, Economic, Social Infrastructures	2.5 rating

**THE GAMBIA
LOWLAND AGRICULTURAL DEVELOPMENT PROGRAMME
PROJECT COMPLETION REPORT**

ANNEX 10

Page 2 of 3

	<ul style="list-style-type: none"> • Improvement of waterway facilities • Road development • Development of market • Facilities for drinking, sanitation, education, health, religious • Spatial planning 	A few improvements of the channels but not extensive; major road is in a very bad state (south bank road).
5	<p>Institutional Development</p> <ul style="list-style-type: none"> • Strengthening of Water Users Associations, Site Associations • R & D training ext by the local research institute • Initiative action and commitment of local government • Private sector involvement • Participatory approach • Banking credit mechanism 	<p>3 rating</p> <p>Yes with the set up of site management associations for each site/ intervention; NARI has been very involved in R&D, particularly rice research. Opportunity to evolve research on ‘‘rice mangrove’’ but not really taking off.</p>
5	<p>Management Information System (MIS)</p> <ul style="list-style-type: none"> • Asset management • M & E • GIS • Modeling of water management 	<p>1.5 rating</p> <p>Could have been better as GIS system not planned and data not entered in any alternative system. Data casually recorded and kept including valuable environmental data.</p>
6	<p>Gender Issues</p>	<p>3.5 Rating</p> <p>Project addressed very well gender issues as LADEP target beneficiaries were at 85 % women. Project was participatory, interventions were demand driven, and labour was provided by farmers including women who were organized in associations.</p>
7	<p>Environmental Impact Assessment</p> <ul style="list-style-type: none"> • Environmental Impact Assessment (EIA) document • Laws and regulations • Conservation of natural resources 	<p>2 rating</p> <p>Environmental categorization done at the level of IFAD and endorsed by ADB as 2 (could have been easily category 1 as the project may have irreversible environmental impacts on mangroves and sensitive habitats including wildlife). Conservation of natural resources is not a clear output of project and NR conservation indicators have not been set at the onset to monitor impacts and changes. NEA was not involved in the management and monitoring of environmental aspects.</p>
8	<p>Sustainable Development</p>	<p>2.5 rating</p>

**THE GAMBIA
LOWLAND AGRICULTURAL DEVELOPMENT PROGRAMME
PROJECT COMPLETION REPORT**

ANNEX 10

Page 3 of 3

	<p>LADEP has not fully addressed the issue of sustainable development (SD) by not taking into consideration some of the long term environmental risks, namely climatic changes with potential drought and salt water intrusions eastward in the Gambia river. At the local level the sustainability of dyke systems is under question. Furthermore, the issue of Mangrove development either for rice cultivation or for other uses like eco-tourism as rice intervention sites coincides with sensitive ecosystems and habitats could have been examined. The juxtaposition of rice ecologies (productive ecosystems) with service -based ecosystems (biodiversity and natural habitats) is of value in many parts of Africa to guarantee food security and eco tourism (revenues) security.</p> <p>Pilot watershed management activities were included in the design of LADEP but were not undertaken. These could have been learning experience for better designed projects in the future.</p> <p>Finally the Lowlands Master Development Plan was not completed as a record for sustainable development (SD) interventions.</p>
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