

Distribution: Restricted
Original: English

EB 2003/79/R.27
Agenda Item 13(a)

30 July 2003
English



IFAD
INTERNATIONAL FUND FOR AGRICULTURAL DEVELOPMENT
Executive Board – Seventy-Ninth Session
Rome, 10-11 September 2003

REPORT AND RECOMMENDATION OF THE PRESIDENT

TO THE EXECUTIVE BOARD ON PROPOSED

TECHNICAL ASSISTANCE GRANTS

FOR

AGRICULTURAL RESEARCH AND TRAINING

BY

CGIAR-SUPPORTED INTERNATIONAL CENTRES

Document #: 339612
Library:DMS

Due to resource constraints and environmental concerns, IFAD documents are produced in limited quantities. Delegates are kindly requested to bring their documents to meetings and to limit requests for additional copies.



TABLE OF CONTENTS

ABBREVIATIONS AND ACRONYMS	iii
PART I - INTRODUCTION	1
PART II - RECOMMENDATION	2
ANNEXES	
I. International Institute of Tropical Agriculture (IITA): Participatory Technology Development, Diffusion and Adoption of Cowpea for Poverty Reduction in West Africa – Phase II	3
II. West Africa Rice Development Association (WARDA): Participatory Adaptive Research and Dissemination of Rice Technologies in West Africa – Phase II	8



ABBREVIATIONS AND ACRONYMS

ARI	African Rice Initiative
CBSS	Community-Based Seed System
FFF	Farmers' Field Fora
ICM	Integrated Crop Management
IITA	International Institute of Tropical Agriculture
IPM	Integrated Pest Management
NARES	National Agricultural Research and Extension Systems
NARS	National Agricultural Research Systems
NGO	Non-Governmental Organization
NERICA	New Rice for Africa
PADS	Participatory Adaptive Research and Dissemination of Rice Technologies in West Africa
PLAR	Participatory Learning and Action Research
PRA	Participatory Rural Appraisal
PVS	Participatory Varietal Selection
WARDA	West Africa Rice Development Association



**REPORT AND RECOMMENDATION OF THE PRESIDENT OF IFAD
TO THE EXECUTIVE BOARD ON PROPOSED
TECHNICAL ASSISTANCE GRANTS
FOR AGRICULTURAL RESEARCH AND TRAINING BY
CGIAR-SUPPORTED INTERNATIONAL CENTRES**

I submit the following Report and Recommendation on two proposed technical assistance grants (TAGs) for agricultural research and training to international centres supported by the Consultative Group on International Agricultural Research (CGIAR) in the amount of USD 2 000 000.

PART I - INTRODUCTION

1. This report recommends the provision of IFAD support to the research and training programmes of the following international centres supported by the Consultative Group on International Agricultural Research (CGIAR), namely: the International Institute of Tropical Agriculture (IITA) and the West Africa Rice Development Association (WARDA).
2. The documents of the technical assistance grants for approval by the Executive Board are contained in the annexes to this report:
 - I. International Institute of Tropical Agriculture (IITA): Participatory Technology Development, Diffusion and Adoption of Cowpea for Poverty Reduction in West Africa – Phase II
 - II. West Africa Rice Development Association (WARDA): Participatory Adaptive Research and Dissemination of Rice Technologies in West Africa – Phase II
3. The objectives and content of these applied research programmes are in line with IFAD's evolving strategic objectives, and the policy and criteria of its TAG programme for agricultural research and training.
4. The strategic objectives of IFAD's support for technology development relate to:
 - (a) IFAD's target groups and their household food-security strategies, specifically in remote and marginalized agro-ecological areas;
 - (b) technologies that build on traditional knowledge systems, are gender-responsive, and enhance and diversify the productive potential of resource-poor farming systems by improving productivity and addressing production bottlenecks;
 - (c) access to productive assets (land and water, financial services, labour and technology, including indigenous technology) and the sustainable and productive management of such resources;
 - (d) a policy framework that provides the rural poor with an incentive to reach higher levels of productivity, thereby reducing their dependence on transfers; and
 - (e) an institutional framework within which formal and informal, public and private-sector, local and national institutions provide services to the economically vulnerable, according to their comparative advantage. Within this framework, IFAD also intends to develop commodity-based approaches to rural development. Finally, the establishment of a consolidated network for knowledge-gathering and dissemination will enhance the Fund's capacity to establish long-



term strategic linkages with its development partners and to multiply the effect of its agricultural research and training programme.

5. The TAGs proposed in this document correspond to the first two objectives of IFAD's Strategic Framework. With regard to the first strategic objective of strengthening the capacity of the rural poor and their organizations, both TAGs will work to enhance the capacity of grass-roots organizations to participate in agricultural technology development and dissemination. With respect to the second IFAD strategic objective of promoting equitable access to productive natural resources and technology, both TAGs will target technology development at the needs of resource-poor small farmers.

PART II - RECOMMENDATION

6. I recommend that the Executive Board approve the proposed technical assistance grants in terms of the following resolution:

RESOLVED: that the Fund, in order to finance, in part, the Participatory Technology Development, Diffusion and Adoption of Cowpea for Poverty Reduction in West Africa – Phase II, shall make a grant not exceeding one million United States dollars (USD 1 000 000) to the International Institute of Tropical Agriculture (IITA), upon such terms and conditions as shall be substantially in accordance with the terms and conditions presented to the Executive Board in this Report and Recommendation of the President.

FURTHER RESOLVED: that the Fund, in order to finance, in part, the Participatory Adaptive Research and Dissemination of Rice Technologies in West Africa – Phase II, shall make a grant not exceeding one million United States dollars (USD 1 000 000) to the West Africa Rice Development Association (WARDA) upon such terms and conditions as shall be substantially in accordance with the terms and conditions presented to the Executive Board in this Report and Recommendation of the President.

Lennart Båge
President



**INTERNATIONAL INSTITUTE OF TROPICAL AGRICULTURE (IITA):
PARTICIPATORY TECHNOLOGY DEVELOPMENT, DIFFUSION AND ADOPTION OF
COWPEA FOR POVERTY REDUCTION IN WEST AFRICA – PHASE II**

I. BACKGROUND

1. Cowpea is a crop with high potential for both rural poverty reduction and food security. It can contribute significantly to increased food consumption and incomes for smallholders and poor women in sub-Saharan Africa. However, the contribution by cowpea to food security throughout sub-Saharan Africa has so far been limited by low grain yield and large crop losses during storage. Cowpea has a potential grain yield of up to 2.0 t/ha compared to the actual average yield of 600 kg/ha achieved by farmers. The low yield and crop losses can be attributed to a number of insect pests, diseases and parasitic plants. Few farmers have access to environmentally sound and effective pest control methods. In addition, because of the high cost of environmentally sound chemicals, unscrupulous traders sell cheap but adulterated and ineffective pesticides to unsuspecting poor farmers. Health and environmental hazards linked to the misuse of synthetic pesticides have been reported in several places. Run-offs into streams and dams (resulting from pesticide application to crops in cultivated fields) have also caused water pollution and the death of fish.

II. RATIONALE AND RELEVANCE FOR IFAD

2. Cowpea is an ‘orphan crop’ and support for the development and dissemination of technologies that increase its productivity is in line with IFAD’s regional strategy for agricultural research. The strategy accords high priority to applied and adaptive research on neglected or orphan crops that are important to the farming systems of the rural poor, but have received insufficient research support in the past. Cowpea clearly falls into this category. Additionally, IFAD’s research strategy places a premium on building direct linkages between IFAD technical assistance grants and IFAD investment projects. Ongoing and future projects in the region provide excellent scope in this regard as the cowpea farmers collaborating with researchers from the Applied and Adaptive Research on Cowpea in Semi-Arid Zones of West Africa – Phase I are based in the rural areas where IFAD activities are mainly carried out.

3. Although the impact of the improved cowpea technologies on food security, poverty reduction and environmental protection has been significant, there is still much work to be done to increase their adoption and diffusion among resource-poor farmers. The scope of Phase I has been broadened and the title of the new phase, Participatory Technology Development, Diffusion and Adoption of Cowpea for Poverty Reduction in West Africa – Phase II, reflects this. Key areas to be addressed during Phase II include: the integration of cowpea-livestock systems; environmental protection; and strengthening of the monitoring and impact assessment capacity of National Agricultural Research and Extension Systems (NARES) and IFAD loan projects to evaluate the effects of improved cowpea and soybean technologies. Improving linkages with IFAD loan projects provides opportunities for the programme to test, refine and disseminate on a large scale, new and effective methods of knowledge-sharing and technology diffusion among farmers.

III. ACHIEVEMENTS OF PHASE I

4. The first phase of the programme, Applied and Adaptive Research on Cowpea in Semi-Arid Zones of West Africa, was carried out by multidisciplinary teams in four countries – Burkina Faso, Mali, Niger and Nigeria. The programme has contributed to the development of



ANNEX I

sustainable technologies that improve cowpea and soybean-based systems, capacity-building of NARES and poor farmers, and the protection of the environment in sub-Saharan Africa. The programme has been testing and using farmers' field fora (FFF) as a key method for both farmers' empowerment and technology diffusion.

5. Specific achievements of Phase I include the development and dissemination of sustainable integrated cowpea and soybean production technologies in sub-Saharan Africa. Technologies that have been widely diffused in some communities and used by poor farmers and rural women include high yielding varieties resistant to some pests and diseases, targeted insecticide application, botanical extracts from neem and papaya used as pesticides, solar drying and plastic bagging for prolonged seed storage, and improved traditional practices.

6. The programme has started to build strong linkages with IFAD-funded rural development projects in all the countries involved through participatory technology development and diffusion, and capacity-building. IFAD-funded projects in Burkina Faso, Mali and Niger are already benefiting from these linkages. Linkages will be extended during Phase II to other interventions such as the Community-Based Agricultural and Rural Development Programme in Nigeria and the Microfinance and Marketing Project in Benin. The programme has also begun to explore ways of involving the private sector, especially small-scale entrepreneurs, in cowpea and soybean processing and in the semi-industrial production of botanical agents for plant protection. Phase I of the programme has established strong linkages with some non-governmental organizations (NGOs), such as TechnoServe Inc. in Ghana and the Cooperative for Assistance and Relief Everywhere (CARE International) in Benin, with experience in fostering private entrepreneurship. This is being achieved through the local manufacture of equipment for extracting botanical pesticides, which can be purchased, operated and serviced by small farmers and their associations.

7. In addition to technology development and dissemination, the programme has built technical and managerial capacity among poor farmers, women and farmers' groups on ecological systems analyses, enabling them to evaluate better when to intervene to reduce pest damage to their crops. Capacity-building activities continue for NGO extension agents, public extension services personnel, researchers and research technicians from national research programmes, and IFAD project staff. Some staff from research institutes have benefited from scholarships administered under this programme, enabling them to pursue higher degree programmes. Some of these have now joined the research teams of the various countries. In addition, ten scientists from the programme countries were sponsored to participate in the World Cowpea Research Conference III, which took place in 2000.

IV. THE PROPOSED PROGRAMME

8. The programme goal is for the cowpea subsector to contribute to food security and poverty reduction in West Africa through the development and adoption of diverse products, better technology and improved knowledge on the part of farmers. Beneficiaries will be involved as much as possible with technology development. Participatory approaches will allow beneficiaries to validate acceptable technology and suggest modifications or other solutions and ideas. Special efforts will be made to address the needs of risk-averse resource-limited farmers, and in particular poor rural women. Each country will choose two to three themes, taking into consideration their comparative advantage and following priority-setting exercises among a broad spectrum of in-country stakeholders. The activities described below will be carried out under Participatory Technology Development, Diffusion and Adoption of Cowpea for Poverty Reduction in West Africa – Phase II.



9. **Improved seed development and dissemination:** varietal selection and multiplication of seeds of improved cowpea varieties that are resistant to pests, diseases, Striga, and Alectra, and characterized by high grain and fodder yield. This will be accomplished through community-based seed multiplication.

10. **Integrated pest management (IPM):** Phase II will continue efforts to develop and disseminate technologies capable of reducing the negative effects of pests without adversely affecting the environment. These technologies include: plant-based pesticides as alternatives to toxic synthetic pesticides; minimum insecticide sprays (i.e. improved timing and dosage of applications); botanical extracts from neem and papaya for use as pesticides; solar drying and plastic bagging for longer seed storage; and improved traditional practices. The programme will continue to use FFF as a vehicle for farmer empowerment and technology diffusion, with a special focus on farmer-to-farmer learning. With regard to *soil fertility*, emphasis will be placed on better understanding crop/livestock interactions with a view to improving land management with cowpea as a key crop for nitrogen fixation and a fodder source for animals. This should result in a major improvement in sustainable farming systems and work will be done in close collaboration with the integrated crop/livestock programme led by the International Livestock Research Institute (ILRI), which operates out of IITA.

11. Socio-economic and environmental analyses and capacity-building will be important cross-cutting concerns. Work initiated in the first phase relating to the dynamics of information-sharing and learning in the context of FFF will continue. Greater emphasis will also be placed on achieving a better understanding of the appropriateness of various technologies in terms of the varying levels of asset availability of different classes of farmers. Training of researchers and programme staff in socio-economic analysis – a highly successful element of Phase I – will continue and be broadened to include environmental impact assessment techniques and information sharing with other TAGs.

V. EXPECTED OUTPUTS AND BENEFITS

12. In the area of improved seed development and dissemination, a total of 30 tonnes of improved cowpea seed will be made available to farmers each year in the programme countries, at least 25% through the private sector (farmer-to-farmer or through entrepreneurs). With regard to integrated pest management, at least two acceptable, environmentally friendly (and economically viable) alternatives for insect pest control will be available in each country by 2006. Farmers who are exposed to these technologies will benefit from safe plant protection. Also, consumers of products protected without dangerous insecticides will have better health status. With regard to the benefits of sustainable production systems, information on the contribution of cowpea to livestock feed, soil improvement and Striga reduction will be documented, and this will help guide agronomists and breeders to orient future technology development.

13. With regard to stakeholder empowerment, it is foreseen that 3 000 farmers will be enabled to make safer and more cost-effective decisions about insecticide application based on their observations (including when and what to apply).

14. With regard to facilitation of linkages among stakeholders, benefits will include: the exposure of 2 500 additional farmers to information on cowpea IPM or grain legume processing knowledge through IFAD rural development projects and work with entrepreneurs via private enterprise support projects. A further 1 000 farmers, processors or entrepreneurs will be exposed to opportunities in the cowpea subsector.



VI. IMPLEMENTATION ARRANGEMENTS

15. Activities will be carried out in five west African countries (Benin, Burkina Faso, Mali, Niger and Nigeria) where cowpea and soybean have the potential to make significant contributions to food security, poverty reduction and prevention of environmental degradation.

16. **IITA** will manage the funds, backstop the technical activities and ensure effective monitoring and evaluation of the programme in collaboration with the steering committee. IITA will take care of reporting financial and management information to the steering committee and IFAD. IITA will assign a scientist as regional coordinator who will provide the overall supervision, leadership and day-to-day management of programme activities. The regional coordinator will work closely with a small team of part-time assistants who will assist in specific areas such as training in farmer field fora, capacity-building in socio-economic and related data collection by National Agricultural Research Systems (NARS), training in food processing, IPM and sustainable management of improved cropping systems.

17. **The Steering Committee (SC)** includes one representative from each of the five member countries, one IFAD representative, one from IITA, and the regional coordinator of the programme. The SC will hold annual meetings to exchange ideas, discuss the results of activities, lessons learned and future perspectives. It will plan and review programme activities and decide on annual resource allocation.

18. **A national monitoring and executive committee** will be established in each country. This committee will monitor Phase II activities in the country and ensure that all key partners are included in specific activities suited to their competence and expertise. This committee will ensure that linkages between the programme and relevant IFAD investment projects are developed and followed up. It will coordinate activities among partners and participate in all national workshops organized by the programme in the country.

VII. INDICATIVE PROGRAMME COSTS AND FINANCING

19. The total programme cost is estimated at USD 2 570 000 (Table 1). NARES will make in-kind contributions of professional and administrative staff time, laboratory and office space equivalent to approximately USD 555 000. IITA will contribute staff time, laboratory and office space and operating costs amounting to approximately USD 550 000. IFAD loan projects will also contribute an approximate amount of USD 465 000 in-kind staff time, and also financial resources for workshop participation, training and covering some research costs in their programme zones. Where possible, participating loan projects will be requested to budget a share of research operating costs during the annual workplan and budget process.

20. IFAD funding of USD 1 000 000 is requested to support IITA technical and administrative oversight of the programme, research costs, workshop organization, and monitoring and training of development partners. The annual breakdown of this contribution is presented in Table 2.

**Table 1: Financing Plan
(USD '000)**

Item	Source of Funds				Total
	IFAD	IITA	NARES Collaborators	IFAD Projects	
Personnel	303	150	300	200	953
Equipment (operational costs)	32	125	60	125	342
Training, workshops, seminars	147	30	-	50	227
NARES costs	330	200	175		705
Travel	70	20	-	70	160
Publications	11	25	20	20	76
Indirect costs (15%)	107	-			107
Total	1 000	550	555	465	2 570

**Table 2: Proposed Budget for IFAD Funds
(USD '000)**

Item	Year 1	Year 2	Year 3	Total
Personnel	101	101	101	303
Equipment (operational costs)	12	10	10	32
Training, workshops, seminars	47	50	50	147
NARES costs	114	109	107	330
Travel	20	25	25	70
Publications	3	3	5	11
Indirect costs (15%)	35	36	36	107
Total	332	334	334	1 000



**WEST AFRICA RICE DEVELOPMENT ASSOCIATION (WARDA): PARTICIPATORY
ADAPTIVE RESEARCH AND DISSEMINATION OF RICE TECHNOLOGIES
IN WEST AFRICA – PHASE II**

I. BACKGROUND

1. Demand for rice is rapidly increasing in sub-Saharan Africa, outpacing regional supply. Imports of about four million tonnes per year represent half of the region's consumption needs, valued at USD 1 billion per year. There is a pressing need to improve regional production capacity. As rice is grown mainly by resource-poor farmers, rice research and development can serve as an entry point for poverty alleviation and rural development. Rainfed rice production systems account for 75% of the total rice area in West Africa. Rice yields under rainfed conditions are low on average, ranging from one to two tonnes per hectare. However, these figures hide large disparities among farms: within a given region or village, differences in yields among farms may vary tenfold.
2. Key questions are how to develop and promote technological change and methodological approaches useful to farmers working within diverse farming environments and how to develop enabling institutional settings and policy.

II. ACHIEVEMENTS OF PHASE I

3. The first phase of the Participatory Adaptive Research and Dissemination of Rice Technologies in West Africa (PADS) started in May 2000 and will end in October 2003. It has been implemented in four countries: Côte d'Ivoire, Guinea, Ghana and The Gambia. PADS I has sought to make rice research and development in the four participating countries more client-responsive. The programme has introduced a process-based approach, which involves cycles of participatory diagnosis, planning, implementation and evaluation. The participation of relevant stakeholders is central to this approach.
4. PADS I has successfully promoted WARDA's New Rice for Africa (NERICA) initiative for use in low-input rainfed systems. Through participatory field experimentation, demonstrations and a seed multiplication programme, thousands of farmers have been brought into contact with NERICA. PADS I has also pursued a number of complementary technologies, such as options for low-cost soil fertility management, mechanical weed management and post-harvest issues.
5. PADS I also experimented with a wide range of methodological tools and methods for promoting effective stakeholder participation in the diagnosis, planning, implementation and evaluation cycle. To identify the major constraints on rice cultivation and marketing being experienced by farmers, the four PADS I country teams used various participatory rural appraisal (PRA) tools. Farmers were also involved in planning PADS I activities through participation in workshops organized at the local and national level.
6. To help identify promising varieties according to site-specificity, PADS I adopted WARDA's participatory varietal selection (PVS) approach with farmers playing a key role in testing and selecting varieties according to their needs. PADS I also promoted the most promising varieties selected by farmers through a Community-Based Seed System (CBSS) approach.



ANNEX II

7. PADS I contributed to partnership formation and organization, and individual capacity-building at a number of levels through the formation of a network of stakeholders to implement PADS I activities, including farmers' groups, national agricultural research institutions, and governmental and non-governmental extension services.

III. RATIONALE AND RELEVANCE FOR IFAD

8. Given the highly diverse and dynamic nature of rainfed rice farming in West Africa, technology development must take explicit account of site-specificity. What is practical and profitable for farmers at any given site depends on the unique combination of bio-physical, socio-economic, organizational and institutional circumstances. Within the highly complex environments typical of rainfed rice systems, farmers have an active role to play in the process of fine-tuning technologies and practices to the specific conditions in which they farm. To ensure extensive and effective farmer involvement in technology development, methodological approaches that strengthen their capacities in innovation, experimentation, evaluation and adaptation are needed, so farmers can make optimal use of available resources. With the experience gained under PADS I, the field teams are now well placed to make significant gains in terms of farmers' involvement in the technology development process using PRA, PVS and CBSS.

9. PADS II will build on the technical, methodological and institutional achievements of PADS I and address the major outstanding challenges outlined above. PADS II will be an action-research programme, thereby exploiting the results of more conventional research of potential use for extension and development projects. PADS II will seek close links with development and extension projects and services, with special emphasis on IFAD loan projects in participating countries. Close links will also be established with the African Rice Initiative (ARI), and national CBSS projects, which are to become part of the overall ARI. Implementation of ARI is a major priority of the agricultural pillar of the New Partnership for Africa's Development (NEPAD). PADS II will therefore contribute directly to the realization of NEPAD's objectives.

10. With a view to reaping maximum benefit from the relatively small investments, PADS II will concentrate its efforts on the inland valley systems. The reasons for this focus are twofold. First, inland valleys offer the potential to become the food basket of West Africa and second, water represents a catalysing element for increasing social capital in poor rural communities.

11. While PADS II will concentrate on inland valley systems, upland rice systems will not be neglected. Findings and information emanating from PADS II that deal with upland rice conditions, such as improved management technologies (e.g. NERICA seed production, and storage and post-harvest techniques), will be shared with relevant development or extension services, including ARI and CBSS projects, and interested IFAD loan projects.

IV. THE PROPOSED PROGRAMME

12. In line with IFAD's strategy for rural poverty alleviation in western and central Africa and its regional strategy for agricultural research, the overall goal of PADS II is to reduce poverty and improve the livelihoods of resource-poor farmers in West Africa through more sustainable rice-based farming systems. Generally, PADS II aims to contribute to increased rice production, crop diversification and rural revenue generation through development, testing, evaluation and adaptation of appropriate innovations for improved crop management in inland valley systems. Its specific objectives are to:



ANNEX II

- Identify, evaluate, adapt and scale-out sustainable productivity-enhancing innovations for rice production systems in rainfed lowland ecology.
- Develop, evaluate and fine-tune a methodological process-based approach for participatory learning and action research (PLAR) involving farmers, NGOs, extension and research.
- Help create a more enabling environment for rice producers by evaluating, capitalizing on and further developing existing farmers' networks and associations ('horizontal' connections) and establishing research and development platforms for stakeholders involved in credit, inputs and marketing services at the regional and national level ('vertical' connections).

13. The programme activities are grouped into three main components: (a) development of a technological basis for Integrated Crop Management (ICM) to develop and fine-tune baskets of technological options to address key constraints on the major rice production systems at representative key sites; (b) development of the methodological basis for ICM by developing and fine-tuning a curriculum for PLAR, which will provide the conditions necessary for effective PLAR facilitation; and (c) partnership-building among research and development stakeholders to help create an enabling environment for rice producers. This will be achieved by extending social learning beyond the key sites, developing farmers' networks and associations, and by providing research and development platforms for stakeholders involved in credit, inputs and marketing services at the regional and national level.

V. EXPECTED OUTPUTS AND BENEFITS

14. PADS II will deliver the following direct outputs:

- Baskets of options for ICM based on site-specificity and typology, including varietal choices, improved water management options, integrated weed/pest and soil fertility management options, harvest and post-harvest technologies and a technical manual with a minimum of 40 technical references presented in the form of ICM options.
- A manual for facilitators with a minimum of 35 training modules for PLAR adapted to site-specific conditions and country and site-specific curricula for PLAR on ICM.
- Functional farmers' networks and stakeholder platforms will be established and ways of enhancing relations of trust, reciprocity, exchange and interrelation will be identified and supported. The key elements for developing common rules, norms and sanctions to improve interrelation among farmers will be promoted, thereby providing a model for scaling up and expanding PLAR for ICM.

15. The main target groups are resource-poor, small-scale rice farmers in selected key sites in each of the participating countries. The development, adaptation and adoption of the integrated crop management options should have considerable impact on farmers' livelihoods, through an increase of at least 30% in rice productivity. Experiences with ICM conducted in several African countries using the PLAR methodology prove that this approach can have a substantial impact on farmers' knowledge and their capacity to experiment with new technologies and adapt their practices to changing conditions. This in turn will result in easier adoption of new ideas and improved food security.



16. Substantial involvement of IFAD loan project partners is expected to assist in extending benefits beyond the range of traditional research project partners. The fact that many PADS II activities will be located in IFAD project zones will enhance synergies and potential benefits due to complementarities with IFAD investments in grass-roots capacity-building, infrastructure and microfinance.

VI. IMPLEMENTATION ARRANGEMENTS

17. A Programme Advisory Committee (PAC) composed of the WARDA Programme Coordinator and country representatives will be responsible for planning, implementing and monitoring programme activities. The country representatives will include staff members of the collaborating NARS, extension services, NGOs and IFAD loan projects. The PAC will meet once a year and its responsibilities will include fund allocation for country activities, the organization of monitoring visits, regional workshops and training courses. Approval of the country project proposals will be subject to screening according to a set of criteria related to the level of involvement of stakeholders (including IFAD project staff) in the activities, and clear definition of expected outputs in terms of technologies and/or methodologies that respond to farmers' needs and are likely to be adopted by extension services, NGOs and IFAD loan projects.

18. In each country, a National Programme Management Committee (NPMC) will be set up, comprising one representative from farmers' organisations, research activities, extension services, NGOs and IFAD loan projects and any other relevant stakeholders, respectively. The NPMC will be responsible for the management of the country level activities and will meet at least twice a year.

19. WARDA's Program 3 (Rice Policy and Development) will be responsible for the coordination of PADS II. Program 3 has ongoing related work on the development of sustainable natural resource management strategies for inland valleys, participatory technology development and partnership-building. Apart from its insertion into WARDA's programme structure, PADS II will have close links with ARI and its executing body, the NERICA Consortium for Food Security in Sub-Saharan Africa, an alliance of national agricultural research and extension systems, NGOs, farmers and donors. As ARI is based at WARDA, day-to-day links will be easily established.

VII. INDICATIVE PROGRAMME COSTS AND FINANCING

20. The total cost of the programme is estimated at USD 2.32 million (Table 1). The NARES will make in-kind contributions of professional and administrative staff time, and laboratory and office space equivalent to approximately USD 555 000. WARDA will contribute staff time, laboratory and office space, and operating costs amounting to approximately USD 540 000. IFAD loan projects will also contribute an approximate amount of USD 225 000 in-kind staff time, as well as financial resources for participating in workshops and training, and for supporting some of the research costs in their project zones. Participating loan projects will be requested to budget for a share of research operating costs during the annual budgeting process.

21. IFAD funding of USD 1 000 000 is requested to support WARDA's technical and administrative oversight of the programme, research costs, workshop organization, and monitoring and training of development partners. The annual breakdown of this contribution is presented in Table 2.

**Table 1: Financing Plan
(USD '000)**

Item	Source of Funds				Total
	IFAD	WARDA	NARES Collaborators	IFAD Projects	
Personnel	305	300.0	300.0	100.0	1005
Equipment (operational costs)	30	180.0		100.0	310
Training, workshops, seminars	123		60.0		183
NARES costs	315	30.0	45.0		390
Travel	70	30.0	150.0	25.0	275
Publications	27				27
Indirect costs (15%)	130				130
Total	1 000	540	555	225	2 320

**Table 2: Proposed Budget for IFAD Funds
(USD '000)**

Item	Year 1	Year 2	Year 3	Total
Personnel	103	102	100	305
Equipment (operational costs)	12	9	9	30
Training, workshops, seminars	46	38	39	123
NARES costs	107	104	104	315
Travel	24	23	23	70
Publications	4	8	15	27
Indirect costs (15%)	44	43	43	130
Total	340	327	333	1 000

