

**MINISTRY OF AGRICULTURE
GENERAL SECRETARIAT**

**REPUBLIC OF MALI
ONE PEOPLE - ONE GOAL - ONE FAITH**

**GLOBAL AGRICULTURE AND FOOD SECURITY PROGRAMME
(GAFSP)**

**FOOD AND NUTRITION SECURITY ENHANCEMENT PROJECT IN
MALI**

**Mali's Request for Supplementary Financing for its National Agricultural
Investment Programme**

BAMAKO, MAY 2013

TABLE OF CONTENTS

	Pages
Cover Page, Table of Contents, List of Abbreviations	i-iii
PART I: SUMMARY OF OVERALL AGRICULTURE AND FOOD SECURITY STRATEGY AND CORRESPONDING INVESTMENT PLAN	1
1.1 Objectives, Indicators and Results Obtained	1
1.2 Main Aspects of the Public Action Framework	4
1.3 Proposed Components for achieving the objectives.....	5
1.4 Proposed Expenditure Level and Breakdown for PNIP-SA Implementation	5
1.5 Sources of Financing and Deficit to be Covered.....	6
1.6 Preparation of the Strategy and Investment Plan	7
1.7 Implementation Arrangements and Capacities	9
PART II: SPECIFIC PROPOSAL FOR GAFSP FINANCING	10
2.1 Specific Objectives and Expected Outcomes.....	10
2.2 Activities to be Financed	13
2.3 Implementation Arrangements	18
2.4 Financing Requirements	19
2.5 Preferred Supervision Organ and Government Team	20
2.6 Proposed Aid Schedule	22
2.7 Risk Type and Management.....	22
2.8 Consultation with Development Actors and Partners at National Level	23
2.9 Conclusion.....	23
<u>ANNEXES</u>	
1. Detailed Project Costs by Source of Financing and Component	1
2. Project Logical Framework	3
3. Development and Performance Indicators	1
4. Sector Contribution to the Economy	1

LIST OF ABBREVIATIONS

ABEDA	Arab Bank for Economic Development in Africa
ABN	Niger Basin Authority
ADF	African Development Fund
AfDB	African Development Bank
BCEAO	Central Bank of West African States
BNDA	National Agricultural Development Bank
BOAD	West African Development Bank
CAADP	Comprehensive Africa Agriculture Development Programme
CILSS	Permanent Inter-State Committee for Drought Control in the Sahel
EBID	ECOWAS Bank for Investment and Development
ECOWAS	Economic Community of West African States
EU	European Union
FD	Final Design
GAFFSP	Global Agriculture and Food Security Programme
GDP	Gross Domestic Product
IDB	Islamic Development Bank
IER	Rural Economy Institute
IFAD	International Fund for Agriculture Development
KFAED	Kuwait Fund for Arab Economic Development
LOA	Agricultural Orientation Law
MDG	Millennium Development Goals
NEPAD	New Partnership for Africa's Development
NGO	Non-Governmental Organization
ODRS	Sélingué Rural Development Authority
OFID	OPEC Fund for International Development
OPIB	Baguinéda Irrigated Perimeter Authority
OHVN	Niger Upper Valley Development Authority
ORM	Mopti Rice Authority
ORS	Ségou Rice Authority
PAFISEM	Improved Seed Value Chain Support Project
PAPAM	Fostering Agricultural Productivity Project
PDI-BS	Irrigation Development Project in Bani Valley and Sélingué
PNIP	National Proximity Irrigation Programme
PNIP-SA	National Agricultural Sector Priority Investment Programme
PNISA	National Agricultural Sector Investment Programme
SFD	Saudi Fund for Development
TFP	Technical and Financial Partners
UNDP	United Nations Development Programme
UNO	United Nations Organization
USAID	United States Agency for International Development
USD	United States dollar
WB	World Bank

Part I: Summary of Overall Agriculture and Food Security Strategy and Corresponding Investment Plan

1.1 Objectives, Indicators and Results Obtained

Overview of National Context and Rural Sector

1.1.1 Mali, a landlocked Sahel country in the heart of West Africa, covers a surface area of 1,241,238 km² and had a population of 14 528 662 inhabitants in the 2009 general population census, with a 3.6% annual growth rate. 77% of the population live in rural areas, and 46% are below 15 years old. The population figures show a slight predominance of women (51%). The economy is based essentially on the rural sector, whose activities are highly dependent on changes in climatic conditions. The primary sector accounts for an average of 39% of GDP (2006-2010). Economic growth, which stood at 5.8% rate in 2010, is sustained mainly by the subsistence farming and livestock sub-sectors, as well as the building and trade sub-sectors. In nominal terms, the primary sector recorded a 10.3% average of positive real growth for the 2006-2010 period. In the primary sector's GDP structure over the same period, dry cereals (millet, sorghum, maize, and fonio) contributed an average of 43%, followed by livestock 23%, rice 13%, and cotton 3%.

1.1.2 Despite the improvement in growth, the incidence of poverty has remained high. The proportion of the Malian population living below the poverty line of 1.25 dollar per day in purchasing power parity (PPP) was 50.4% in 2011. The poverty index stood at 43.6% in 2010, with a poverty rate of 22.1%, a poverty gap of 5.3%, and severity of poverty estimated at 1.9%. Extreme poverty (inability to meet basic nutritional needs) affected 22% of the population in 2010. The rural areas, which have 77% of the population, account for 81% to the incidence of poverty. An analysis of the incidence of poverty, by socio-economic group, shows that farmers are the poorest, with a 57% poverty rate. Thus, structurally, poverty remains an essentially rural phenomenon. Any poverty reduction policy for farmers will be beneficial to the entire country. It should be noted that 27% of children under five suffer from chronic malnutrition, 92% of whom are found in the country's southern regions targeted by this project proposal. Acute malnutrition will affect 8.9% of children under five in 2013, including 86% in the country's southern region. Low birth weight affects 18.9% of children; 28% of children under five have retarded growth, while 72% are anaemic. There is still under-nutrition among women, especially in rural areas. Undernourishment affects 12% of the population.

1.1.3 Mali has a rich and diversified agricultural production potential, which has not been adequately tapped. The real challenge is to succeed in removing most of the constraints, or at least mitigating them. To that end, it will be necessary to draw on lessons learnt from the implementation of previous or ongoing strategies and policies, by adopting a participatory and prospective approach. In this regard, by contributing to make agricultural production less vulnerable to the vagaries of the weather, the development of irrigation is of capital importance in improving the country's food and nutrition security.

Strategic Documents and Indicators

1.1.4 Since the holding of the 1991 Rural Global Forum, the Government of Mali has prepared various policy frameworks, strategies and investment plans, with the support and collaboration of regional and sub-regional institutions, technical and financial partners (TFP), farmers, the civil society and all stakeholders in order to promote agricultural development, ensure food and nutrition security, and fight against poverty in the country. The current structure

of agricultural sector planning focuses on the following four main elements: (i) the 2012-2017 Growth and Poverty Reduction Strategy Framework (GPRSF); (ii) the Agricultural Orientation Law (LOA); (iii) the Agricultural Development Policy; and (iv) the National Agricultural Sector Investment Programme (PNISA), prepared as part of the framework of the ECOWAP/CAADP Pact. The National Agricultural Sector Priority Investment Programme (PNIP-SA) is PNISA's first operational component.

1.1.5 PNISA: Broadly speaking, PNISA is Mali's national agricultural sector programme which takes into account (operation and investment) needs, gains, and financing requirements to be sought for the sector's investments and operation over a 10-year rolling period. PNISA includes all current and future projects and programmes of the sector over this 10-year period and seeks to: (i) increase productivity and production in key agriculture sectors that affect the lives of the vast majority of low-income Malian citizens. This objective, which will concern all agricultural sub-sector links from production to final consumption, will lay special emphasis on income-generating activities, particularly for women and youths; (ii) build the capacities of decentralized authorities and local farmer organizations to empower them to take charge of agricultural development, improvement of nutrition and implementation of well-targeted social food security and nutrition programmes; (iii) boost agricultural research and education so as to develop new technologies and skills that can improve Mali's agricultural policies and meet challenges posed by climate change; (iv) invest in water control, including improved irrigation systems and better surface water management (rains, runoff, rivers, etc.) in non-irrigated areas, so as to reduce the great climate risks faced by farmers; (v) promote a better business environment and rural infrastructure so as to encourage investments aimed at modernizing agriculture, especially through produce processing and development of the marketing of agricultural produce at national, regional and international levels; and (vi) use natural resources rationally and protect the environment to ensure sustainable development.

1.1.6 PNIP-SA: Mali's National Agricultural Sector Priority Investment Programme (PNIP-SA), which corresponds to PNISA's first five-year phase, constitutes its first operational component in the transition from the project to sector approach, and is fully consistent with the CAADP framework and all the principles underpinning aid effectiveness. PNIP-SA helped to initiate a series of investments in 2011 to meet the challenges identified in the PNISA. PNIP-SA aims to ensure food and nutrition security for the Malian population, in accordance with LOA requirements and ECOWAS agricultural policy guidelines. It will thus contribute to the country's achievement of food sovereignty so as to ensure the population's well-being, and thereby help to achieve Goal 1 of the Millennium Development Goals by 2020. This overall goal will be achieved by stimulating agricultural growth in five priority value chains. Indeed, PNIP-SA aims at achieving 6% growth rate in the agricultural sector by 2015. PNIP-SA has retained five priority intervention sub-sectors: rice, maize, millet/sorghum, cattle/meat/milk, and fishery/aquaculture, while laying emphasis on a cross-cutting nutritional education support programme. These sub-sectors were retained because of their actual expansion potential, the considerable number of the poor population concerned, and their important role in food and nutrition security. These sub-sectors receive special attention from the Government, and have been at the core of ECOWAS's ECOWAP regional mobilizing programmes since the crisis created by the upsurge in food prices in 2007/2008. The sub-sectors also offer the best chances of achieving CAADP objectives. The specific objectives of PNIP-SA are to: (i) increase cereal production (maize, millet/sorghum, rice) through increased productivity and modernization of production and marketing systems; (ii) increase animal production (meat/milk/fish) through harnessing of resources and intensification of pastoral and aquaculture production systems; (iii) improve farmers' incomes through better economic valuation of surplus production; and (iv) improve the nutritional status through information, education and communication (IEC) activities.

1.1.7 The population targeted by PNIP-SA is about five million farmers in the various selected sub-sectors. The expected outcomes in terms of additional production in the various sub-sectors by 2015 are 494 594 tonnes of maize, 407 683 tonnes of millet, 157 780 tonnes of sorghum, 168 262 tonnes of paddy rice, 91 467 tonnes of meat, 362 235 000 litres of milk, and 13 322 tonnes of fishery and aquaculture products. PNIP-SA's main indicators are: (i) the cereal production growth rate; (ii) the livestock production growth rate; (iii) the fishery production growth rate; (iv) the poverty reduction rate among farmers; and (v) the population's nutritional status improvement rate.

1.1.8 **PRED:** The 2012 political, security and institutional crisis had serious consequences on the Malian economy, whose short-term reconstruction, following the favourable evolution of the country's overall situation, is formulated in Mali's 2013-2014 Sustainable Recovery Plan (PRED). PRED, which comprises core components of the 2012-2017 GPRSF, is consistent with the transition's roadmap and the 2013-2014 Emergency Priority Action Plan (PAPU). It constitutes a tool for dialogue in the conference held in Brussels on 15 May 2013 on the theme "Together for Mali's Development". Targeted support for the rural sector in PRED concerns: (i) security of the River Niger, (ii) development of the immense potential of the lake area in Tombouctou Region, and (iii) development of proximity irrigation for farmers in localities far away from big river basins (development of lowlands, small dams and other hillside reservoirs).

1.2 Main Aspects of the Public Action Framework

1.2.1 To achieve the growth targets set for the MDGs through development of the country's enormous productive potential, the Government of Mali has signed an ECOWAP/CAADP Pact for the formulation, implementation and monitoring-evaluation of a Priority Investment Programme under the GPRSF and LOA. The Pact aims at providing a partnership framework between the Government of Mali, the African Union, ECOWAS, farmers, local authorities, civil society associations and organizations, the private sector and technical and financial partners. It creates conditions for better coordination of rural development policies.

1.2.2 At the operational level, the main aspects of the public action framework over the past few years have generally made progress in the area of public finance through: (i) the preparation and implementation of the Government Action Plan for Improvement and Modernization of Public Finance Management (PAGAM-GFP); (ii) the strengthening of decentralization, financial authorization and control, and the improvement of taxation; and (iii) the adoption of a new public procurement code. Other areas of progress include initiation of the administrative reform process with the establishment of the Institutional Development Programme (PDI). Considerable progress has also been made in regional development, particularly with regard to providing access to the population and agricultural areas.

1.2.3 Concerning the agricultural sector more specifically, the activities carried out have helped to enhance the LOA operationalization. In this regard, the laws and decrees enacted cover various fields: establishment of the Higher Council of Agriculture, creation of the National Agriculture Support Fund, control of the quality of fertilizers and crop seeds, rules and regulations governing farms and farmers, and the quality and labeling of products. In addition, rules and regulations have been defined for (i) the registration and licensing of family farms and agricultural enterprises; (ii) the establishment of inter-professions and local and municipal land commissions; and (iii) the organization of specific intervention mechanisms in case of threats to food and nutrition security. As concerns the cereal sub-sector, measures to support input availability contributed significantly to growth in production, particularly under the Rice Initiative, subsequently extended to the major rainfed crops. The domestic market of agricultural

produce has benefited positively from actions to promote actors' access to credit, as well as actions to improve marketing infrastructure and information and advisory support systems.

1.2.4 Support actions have also been taken in compliance with sub-regional reforms (WAEMU-ECOWAS); the actions mainly concern: (i) the strengthening of budgetary control and public investment programming; (ii) the adoption of tax incentives in the 2005 tax reform (adoption of a new investment code to allow for the establishment of production plants (production of low-cost inputs and equipment); (iii) the elimination of export taxes with quantitative restrictions on imports/exports; (iv) the simplification of export duties and taxes, and the liberalization of prices; and (v) compliance with measures taken to reduce barriers to sub-regional trade with the reduction of the number of control posts, the construction of juxtaposed control posts, and the creation of corridors.

1.3 Proposed Components for Achieving the Objectives

1.3.1 At the institutional level, there are still many challenges to be met, including: (i) further operationalization of the Agricultural Orientation Law; (ii) effective coordination of investments and improvement of public expenditure management in the rural sector; (iii) capacity and skills building for the sector's workers and professionals; and (iv) improvement of the institutional framework and incentive mechanisms for the private sector.

1.3.2 PNIP-SA covers five programmes and six sub-sectors (maize, rice, millet/sorghum, cattle/meat, milk, and fishery/aquaculture) organized, in line with PNISA structure, into components. The various PNISA components are: (i) **Capacity building** aimed specifically at "Ensuring institutional development and capacity building for all public and private community actors to enable them accomplish all their missions and meet the major agricultural sector development challenges"; (ii) **Farm modernization** aimed at "Modernizing the agricultural and rural world through mobilization of massive investments in the basic factors of production (land, financing, structures, equipment) and ensuring sustainable use of arable land, in compliance with environmental constraints"; (iii) **Production and competitiveness** aimed at "Making Malian produce more competitive and enabling them to gain more space on the domestic (national), sub-regional (West Africa) and international markets (outside ECOWAS)"; (iv) **Training and research** aimed at providing the agricultural productive sector with innovative techniques that can meet the production, productivity and sustainable environmental management objectives set out in the PDA and enabling all sector actors to acquire appropriate skills for accomplishing their public service missions (for institutional actors) and sustainably managing their farms (for private actors); and (v) **Food and nutrition security** aimed at "Ensuring food and nutrition security for Mali's population by covering all the nation's food and nutrition needs by 2020".

1.3.3 Since PNIP-SA is the first stage of PNISA implementation, it helps to harmonize interventions (design, implementation, monitoring-evaluation, etc.) by applying sector approach principles, especially alignment on national approaches. It also helps to develop synergy with ECOWAP's regional mobilizing programmes.

1.4 Proposed Expenditure Level and Breakdown for PNIP-SA Implementation

1.4.1 The cost of PNIP-SA is estimated at USD 712 million¹ or about CFAF 358.8 billion, for five years (2012-2017). This represents an investment of USD 142.4 million or about CFAF 71.72 billion to be devoted annually to the rural development sector. The budget of PNIP- SA is presented below by component and programme/sub-sector.

¹ Conversion as at 17 August 2010.

Table 1
PNIP-SA Budget Breakdown by Component (USD Thousand)

PNIP-SA Components	Amount (USD Thousand)	%
Capacity building	85 000	12
Farm modernization	393 264	55
Production and competitiveness	196 755	28
Research and training	22 101	3
Food security	14 880	2
Total	712 000	100%

Table 2
PNIP-SA Summary Budget by Programme/Sub-sector (USD Thousand)

PNIP-SA Programmes	Amount (USD thousand)	%
Maize sub-sector programme	90 305	13
Millet/sorghum sub-sector programme	51 003	7
Rice sub-sector programme	214 097	30
Cattle/meat/milk sub-sector programme	168 181	24
Fishery and aquaculture sub-sector programme	146 746	21
Cross-cutting activities programme	41 667	6
Total	712 000	100%

1.4.2 Over the past decade, the resources allocated to the rural sector increased from USD 95.1 million in 2002 to USD 99.4 million in 2008 and to about USD 250 million in 2010. The average proportion of effective agricultural sector expenditure in total expenditure between 2004 and 2010 was 13.5% (cf. Annex 4), which is higher than the Maputo standard rate. The budget allocated by the State to the agricultural sector² stood at CFAF 112.361 billion in 2011 and CFAF 111.759 billion in 2012. The Government and its technical and financial partners want to sustain this trend so as to achieve the objectives set in the GPRSF, as well as the national agricultural policy and its investment plan.

1.4.3 This plan is realistic in terms of the financial proposals which are compatible with the absorption capacity and in terms of the recurrent costs which can be borne by the country. In Mali's 2010 Finance Law, the annual contribution by PNIP-SA (USD 142.4 million) accounts for 16.95% of the Special Investment Budget (USD 840.1 million). This percentage is considered as reasonably absorbable by Mali. In addition, PNIP-SA's annual contribution (USD 142.4 million) will help provide about 17% of the public expenditure devoted to the agricultural sector as from 2011. This is close to the target set in the LOA, which is that 20% of the budget should be devoted to the sector by 2022.

1.5 Sources of Financing and Deficit to be Covered

PNIP-SA's budget for the five years stands at USD 712 million, 35% of which is to be financed by the national budget and the beneficiaries. The deficit to be covered is USD 463 million, which represents 65% of the total budget. This deficit will be financed from external resources (grants and loans to be sought). The breakdown is as follows:

² In Mali, the agricultural or primary sector refers to the development sector, comprising the agriculture, livestock, fishery, environment, and forestry sub-sectors. The term Agricultural with "A" refers to the Agricultural Orientation Law.

Table 3
PNIP-SA Summary Financing Plan (in USD Thousand)

PNIP-SA Components	Total	Gov't	Beneficiaries	Deficit to be Covered
Capacity building	85 084	17 017	12 763	55 305
Farm modernization	393 655	78 731	59 048	255 875
Production and competitiveness	196 950	39 390	29 543	128 018
Research and training	22 123	4 425	3 318	14 380
Food security	14 896	2 979	2 234	9 682
Total	712 707	142 541	106 906	463 260
Percentage (%)	100%	20%	15%	65%

1.6 Preparation of the Strategy and Investment Plan

1.6.1 The process for preparing the National Agricultural Sector Investment Programme was determined through a participatory, progressive and iterative approach, which involved all the stakeholders (administration, private sector, civil society, farmer organizations, NGOs, technical and financial partners, etc.). The process started in August 2009 with the holding of the second meeting of the PNISA Preparatory Committee established under the Minister in charge of Agriculture by Decree No. 08-610/PM-RM of 9 October 2008. In this regard, a technical group and a management committee were simultaneously established under the Ministries of Agriculture by Decision No. 09-00087/MA-SG of 7 May 2009 and the Ministry in charge of African Integration by Decision No. 003/MMEIA-SG of 7 May 2009 respectively. The analysis was done by a team of two consultants in charge of modeling, with IFPRI's technical assistance and ECOWAS's financial support. The two organs prepared the draft Pact and two documents called "brochures" and "briefs", summarizing the review and analysis of the sector promotion strategies by defining investment options and financial needs. The documents were validated during a national workshop on 24 September 2009, before presentation to the Round Table which, on 12 and 13 October 2009, brought together all the country's agricultural sector stakeholders, as well as African Union and ECOWAS representatives. The Round Table witnessed the signing by the Malian Government and its partners of the "ECOWAP/CAADP Pact for the formulation, implementation and monitoring/evaluation of the National Agricultural Sector Investment Programme under the Agricultural Orientation Law and the Growth and Poverty Reduction Strategic Framework".

1.6.2 Mali's National Agricultural Sector Priority Investment Programme (PNIP-SA) was prepared by harmonizing its structure with that of PNISA in the same participatory process, and submitted for NEPAD/ECOWAS external review from 4 to 6 June 2010. It was subsequently reviewed by Mali and an MSU-INSHA support team, and presented to the Dakar Business Meeting of 14 to 17 June 2010. At that meeting, attended by Malian representatives of the pact's signatories (State, civil society, Higher Council of Local Government, private sector, agricultural organizations, and TFPs), it was recommended that Mali's PNIP be subject to further review. For its finalization, the PNIP-SA document was successively submitted: (i) on 30/07/2010 to the Inter-Ministerial Committee for Monitoring the Transition Plan to the Sector Approach-PNISA (created by decision of the Minister of Agriculture); (ii) on 03/08/2010 to Partner Signatories to the Pact (including TFPs); (iii) from 15 to 19 September 2010 to the ECOWAS country/support mission; and (iv) from 20 to 24 September 2010, to the ECOWAS/NEPAD independent team for further external review of the previously made recommendations. The Business Meeting, which brought together all the national stakeholders, TFPs and ECOWAS representatives around the PNIP-SA, was held on 4 and 5 November 2010 in Bamako. In line with the recommendations of the Business Meeting, the costs of the post-pact plan were subsequently reviewed with USAID technical support.

1.6.3 In addition to the formulation and successive submission of two requests in response to GAFSP's calls for proposals (first and second calls), two important projects, each covering the 2011-2016 period, have since been negotiated and implemented by the country under its agricultural sector investment plan; the projects are: (i) the Baní and Sélingué Areas Irrigation Development Project (PDI-BS) for a total cost of about USD 214 million, financed by some 10 donors with the African Development Bank as lead, and including BOAD, BIDC, Arab funds and banks and the Government of Mali; (ii) the Agricultural Productivity Enhancement Project in Mali (PAPAM) for a total cost of USD 80 million, jointly financed by IDA, EU, IFAD, UNDP and the Malian Government.

1.7 Implementation Arrangements and Capacities

1.7.1 **Implementation:** PNIP-SA implementation by permanent State and non-State national institutions according to roles shared and described in the Mali Pact will help to guarantee proper institutional functioning. The implementation and monitoring/evaluation of the plan will be coordinated by the Development Sector Planning and Statistics Unit (CPS/SDR), which will work in synergy with the CPS of the other services involved and under the guidance and supervision of the Ministry of Agriculture, to ensure proper implementation of the investment plan. The intervention implementation mechanism is based on: (i) the identification/analysis of intervention requests with the technical services based on agro-ecological potentials; (ii) the selection of intervention areas with the local authorities, beneficiaries and implementation partners; and (iii) the participation of all stakeholders in the implementation and monitoring-evaluation, namely: the beneficiaries, technical services, local authorities, occupational organizations, civil society organizations, the private sector, and financial partners.

1.7.2 **Monitoring:** The monitoring mechanism will include the CPS/SDR monitoring-evaluation system, which is results-oriented and supported by the organization of annual Project and Programme reviews. It is based, at the operational level, on three complementary approaches: (i) the timely and systematic monitoring of all the sector projects and programmes (P/P review); (ii) results-based monitoring (MENOR) of a representative sample of projects and programmes; and (iii) use of the results of other specific evaluations (impact evaluations, TFP support missions, country review by donors). At the strategic level, the monitoring of sector indicators will be supported by: (i) the agricultural business survey and ECOWAS national SAKSS system, (ii) annual performance reports of the various sector Ministries (programme budgets), and (iii) annual organization of a joint sector review between the State, the Agriculture profession, TFPs and the civil society. The joint sector review is organized before the GPRSF national review, and helps to make an annual assessment of the sector's situation, analyze prospects with all the actors and provide final appraisal elements to the Higher Council of Agriculture. Considering the rather limited capacities of the various actors involved, capacity building and training activities will be organized in PNIP-SA programmes.

1.7.3 Since PNIP-SA is a national plan, the scheduled and acquired resources are included in the Medium-Term Expenditure Frameworks (MTEF) of each Ministry concerned for their respective Programme Budgets. This will contribute to the preparation of the annual Finance Law. The LOA organs, especially the Higher Council of Agriculture, the GPRSF review and the Government, through the annual report on Mali's economic and social situation, monitor and coordinate the resources allocated to the sector. The CPS/SDR and other CPS contribute to the preparation of basic documents for these organs.

Part II: Specific Proposal for GAFSP Financing: Food and Nutrition Security Enhancement Project in Mali

2.1 Specific Objectives, Expected Outcomes and Targeted Beneficiaries

2.1.1 **Project Presentation and Rationale:** The project proposed for GAFSP financing is entitled: “Food and nutrition security enhancement in Mali”. The proposed activities cover all PNISA aspects and target more particularly: (i) investment in water control to reduce climatic risks that farmers face; (ii) increased productivity in key agricultural sectors by adopting the value chain approach; and (iii) capacity building for local authorities and farmer organizations to enable them to take charge of agricultural development and improve food and nutrition security. Project linkages with the investment plan are created mainly through the Rice Sub-sector Programme and the Cross-cutting Activities Programme, laying emphasis on income-generating and nutrition education activities for the population. In each of the said programmes, the five PNIP-SA components will be affected.

2.1.2 The project content is related to the promotion, through proximity irrigation, of the rice and horticultural sub-sectors that constitute two key components for food and nutrition security. The irrigation strategy will be based essentially on small irrigation areas and lowland development under the National Irrigation Development Strategy (SNDI) updated in 2009 and the National Proximity Irrigation Programme (PNIP) adopted in 2012. The PNIP forms an integral part of the national priority investment plan, as a unifying framework for all proximity irrigation actors. Its objective over a 10-year period (2012-2021) is to develop 126 000 ha so as to enable the population of the areas concerned to use the economic potential of proximity irrigation and increase their incomes through productive and sustainable agriculture. In light of experiences in Mali, the development of small irrigation areas and lowlands has turned out to an effective irrigation farming practice that offers tangible benefits to the population. One of the collective benefits is increased production and productivity within a climate change context. In addition, the opportunity to diversify crops constitutes a source of improved nutrition, as well as increased incomes for the poorest groups, particularly women, through market gardening activities. There are also environmental benefits resulting from the impact of small dams and/or reservoirs on water table level improvement, ecosystem regeneration, and soil protection against erosion. Lastly, these agricultural water control structures secure agricultural products by making them less dependent on rainfall. The opportunity to create off-season jobs, especially for women and youths, is another socio-economic benefit.

2.1.3 For these structures, experience has shown that the aspects least taken into account are the social dimension and land issues, especially as concerns women. The main lesson to be learnt is the need for well-structured organizational support, especially in relation with the creation of irrigation structures management committees, which must be really representative of the beneficiary groups. Equal presence of men, women and youths must be sought to reduce risks of social exclusion, optimize project benefits and promote more equitable structures management. Land tenure must overcome traditional contingencies so as to ensure ownership of land developed by women and youths.

2.1.4 The special interest in rice growing and horticulture in the implementation of this project is due to: (i) the production potential of these crops, (ii) the existence of a substantial and unexploited irrigable potential in the targeted areas, (iii) the availability of conclusive feasibility studies, and (iv) lessons learnt from previous interventions with achievements to be consolidated. By promoting producers’ access to inputs (seeds, fertilizers) and minor equipment

and strengthening supervision, the rice initiative has achieved significant results in terms of increased production and productivity in the various production systems. Experiences from the implementation of the Moyen Bani (PMB) and Maninkoura Irrigation Area (PAPIM) projects, financed by the AfDB have shown that women's involvement in the development of irrigation structures enables them to diversify their sources of income through services such as specific custom work in the structures.

2.1.5 Project Areas: The project is located in Kayes, Koulikoro, Sikasso and Ségou administrative regions. In Koulikoro Region, the targeted sites are made up of plains under the supervision of: (i) the Baguinéda Irrigation Area Authority (OPIB), referred to as Baguinéda area, and (ii) the Upper Niger Valley Authority (OHVN), subdivided into two areas, as regards the producers' farming and social characteristics, namely the Nyamina area, mainly populated by the Bambaras/Sarakolés, and the Mandé area, comprising mainly the Malinkés.

2.1.6 Baguinéda area has a developed irrigation area of about 3 000 ha distributed among 22 villages. The irrigation area faces serious difficulties due to its weak primary and secondary networks, leading to heavy water loss and inadequacy for irrigation, especially in the dry season mainly for market gardening practiced by women, who now account for 45% of the area's farmers.

2.1.7 Nyamina area has low annual rainfall ranging from 400 to 800 mm, with an erratic spatio-temporal distribution. This area, which relies exclusively on rainfed agriculture for its food, has benefitted very little from rural development projects. It has a large plain that can be developed, covering a surface area of more than 3 000 hectares, about 1 000 ha of which will be developed in this project.

2.1.8 The rural population of Mandé area lives in poverty and food insecurity, despite the presence of many plains and lowlands. Controlled flooding, as undertaken previously in this area, has faced enormous difficulties due to the weak floods and river flood variability. A 1 050-ha developable potential has been selected in this area.

2.1.9 An important component of the dissemination of NERICA rice will be implemented in the lowlands to be developed in Kayes, Sikasso and Ségou regions. This will involve building on the good outcomes of a previous NERICA rice dissemination operation, which helped to significantly increase rice production in areas previously devoted to dry crops. The specific project sites for implementation of the NERICA component will be defined according to their rice production potential and the interest shown by producers, as well as the existence of farmer organizations that support the development of rice farming. The sites will be selected with the approval of the extension and research services. The beneficiaries of the structures and rainfed and lowland NERICA rice dissemination support will, in priority, be women (70%). The beneficiaries, estimated at about 27 000 small farmers, will be organized into rice producer groups and associations.

2.1.10 The Government of Mali wants the project to strengthen existing or scheduled activities aimed at food and nutrition security as well as poverty reduction in the various project areas. The project implementation will also help to implement the provisions of Law No. 06-045 of 5 September 2006 relating to facilitation of women's access to developed land by giving them the same rights as men.

2.1.11 Project Objectives: The project's sector goal is to contribute to poverty reduction and food and nutrition security enhancement in the extremely vulnerable areas of Kayes, Koulikoro,

Sikasso and Ségou regions. The specific objective is to sustainably increase rice and horticultural sub-sector production and productivity, as well as the target population's incomes.

2.1.12 Expected Outcomes: The project's expected outcomes are: (i) irrigation and development of 6 550 ha with an intensification level of about 150%, for additional production of 29 738 tonnes of rice and 7 000 tonnes of garden produce (tomato, cucumber, cabbage, onion, shallot, eggplant, okra); (ii) additional incomes generated by producers, especially women and youths, the key market gardening actors, whose produce is generally of high market and nutritional value; (iii) increase and diversification of foodstuffs to improve families' nutritional status, especially children and pregnant and breastfeeding women; (iv) support for farmer organizations to make them more autonomous and efficient in rice and horticultural sub-sector management; (v) private sector involvement in development to improve farmers' working conditions, through service centres and local financing institutions; (vi) promotion and specific support for women through rice growing and market gardening support, and activities to alleviate women's daily chores with the procurement of grain mills, and promote income-generating activities with the procurement of onion driers, horticultural produce processing units and small livestock (sheep, goats, poultry). The equipment provided will be managed by specific committees established by the beneficiary women's associations; (vii) allocation of developed plots to women and youths so as to give them access to lucrative activities and incentive incomes, and thereby facilitate their settlement in villages; (viii) easy access for agricultural produce to consumption markets by opening up the areas with rural road construction/rehabilitation; (ix) increase in storage capacities with the construction of storage warehouses; (x) increase in rice cropping surface areas with the dissemination of rainfed and lowland NERICA varieties; and (xi) improvement of the nutritional situation of children under five, as well as pregnant and breastfeeding women.

2.1.13 Project Beneficiaries: The direct beneficiaries, estimated at about 59,750 people, are farmers of the project areas, including women and youths involved in specific activities. The total number of direct and indirect beneficiaries is estimated at 811 720 people, including 415,612 women and 396,108 men. About 100,000 youths will also benefit from the project. The project will also be beneficial to local authorities, local technical services, NGOs and civil society organizations, private enterprises, as well as banks and micro-finance institutions.

2.1.14 Monitoring Mechanisms: To monitor and measure the progress of the project, an internal and external monitoring mechanism will be established and will be based on the Project Management Organ and the monitoring-evaluation system within the Ministry of Agriculture, particularly the Rural Development Sector Planning and Statistics Unit (CPS/SDR), in synergy with the technical departments concerned. Donor supervision, the mid-term review and the final evaluation will also constitute project monitoring-evaluation tools. In terms of indicators, activities will be evaluated using the indicators mentioned in the Project Logical Framework (cf. Annex 2), which will be updated with the results of the baseline situation preparation survey. These indicators will also be taken into account in the PNIP-SA indicators.

2.2 Activities to be Financed

2.2.1 The main activities to be financed by the project comprise: (i) irrigation structures and land leveling and smoothing with the development of a total of 6 550 ha of irrigated land with total water control for rainy season rice growing; 50% of this land will be used off-season for rice and market garden products; (ii) the development and/or rehabilitation of irrigation and drainage networks with the lining of primary and secondary canals, and the improvement of the tertiary networks of certain plots to save irrigation water, extend irrigation capacity and increase the land use rate to 150%; (iii) the development of 2 250 ha of ponds and lowlands to ensure good production and better yields for small farmers, who do not have access to irrigation and are

farming in a chronic food insecurity environment; and (iv) the construction of rural roads, drinking water points, health centres, and schools.

2.2.2 Agricultural inputs (fertilizers, seeds, phytosanitary products, minor agricultural equipment) and agricultural and post-harvest equipment for private operators (producers and private integrated service centres) will be financed on credit by specialized local financing institutions with acceptable conditions. The State, through the project, will be responsible for linking private operators (producers and private integrated service centres) with Micro-finance Institutions (MFI) and/or the National Agricultural Development Bank (BNDA). In addition, their access to appropriate windows of the National Agriculture Support Fund (FNAA) will be ensured. The project's relations with credit structures will be governed by mutual agreements indicating the obligations and duties of all parties. However, considering the lessons learnt from previous projects, the various activity proposals submitted for financing will first be subject to a market study to ensure their economic profitability, and must be validated by the project.

2.2.3 The project will be implemented through the following four components: (i) Component A: Development of production and marketing infrastructure, (ii) Component B: Increased productivity and improved competitiveness, (iii) Component C: Capacity building and support measures, and (iv) Component D: Project coordination and management. The project activities by component are as follows:

Component A: Development of Production and Marketing Infrastructure

2.2.4 The areas concerned are highly subjected to irregular rainfall and low and variable floods; this situation leads to difficulties in mobilizing water for rice growing and horticulture, despite the land potential. In addition, the landlocked nature of the areas is a major constraint. This component concerns the development of irrigation structures to ensure water control and offer the possibility of practicing large-scale double irrigated cropping. It also concerns the rehabilitation and construction of new roads to open up production sites, and facilitate the marketing of harvests. The component also seeks to provide basic social services (schools, health centres, water points, and multipurpose centres). The objectives of Component A are consistent with Component 2 of PNIP-SA relating to investments. The proposed activities are in line with CAADP's Pillar 1 (Sustainable increase in land cultivated and serviced by reliable water control systems) and Pillar 2 (Development of markets and marketing capacity).

2.2.5 More precisely, the project infrastructure works by area are as follows:

- i) Nyamina Area: The proposed works concern the development of 1 000 ha with total water control, including 900 ha for rice growing and 100 ha for vegetable crops. The works comprise the construction of a pumping station, a belt dyke and dividing dykes, a 6,000-m supply channel, the main canal and secondary canals, a main drain and, as well as distribution and drainage networks.
- ii) Mandé Area: The works in this area concern the construction of irrigation infrastructure on about 1 050 ha with total water control, including 900 ha for rice growing and 150 ha for vegetable crops. They will comprise the construction of a pumping station in Figuiratomo plain, the construction of a small dam on the lowland in Faragoué, the further deepening of two ponds in Koursalé and Balazan, the establishment of protection, distribution and drainage networks in the four identified plains, as well as the construction of access roads to villages and on dykes.

- iii) Baguinéda Area : The proposed activities concern the lining of irrigation canals (main canal over 16.5 km and 60 km of secondary canals); the reinforcement of the main canal's dyke road over a distance of 35 km, the 25 km belt dyke, secondary roads over 60 km and 135 km of tertiary roads; the rehabilitation/repair of network structures; the resizing and cleaning of 135 km of tertiary irrigation canals, 21 km of primary drains, 70 km of secondary drains and 110 km of tertiary drains; the land leveling and smoothing of 100 hectares and the restoration/improvement of 100 ha of plots; the construction of socio-economic infrastructure (equipped boreholes, five multipurpose centres for women) to support Baguinéda municipal communities.
- iv) Kayes, Sikasso and Ségou Area: The project will develop 2 000 ha of lowland in Kayes, Sikasso and Ségou regions, and support the transfer of NERICA rice production technologies to 30000 ha of land; these technologies, which were introduced through participatory approaches, have already helped to produce many outputs and strengthen links between research, extension, producers and the private sector.

2.2.6 **Mitigation measures** for the impacts of development and road works will be implemented through various activities: compensation reforestation (hedges, windbreaks and village plantations); treatment of borrow pits by transforming them into fish ponds or cattle watering points; monitoring of the quality of irrigation and drainage water to prevent its contamination and even pollution and soil salinization/alkalization risks. In addition, latrines will be constructed in villages around the development sites to promote hygiene and sanitation; there will also be an epidemiological monitoring of the prevalence of waterborne diseases and their prevention, as well as sensitization on the use of improved wood-based energy-saving stoves in households. Lastly, a partnership framework will be established for project environmental monitoring, with specialized services in specific areas. Land security will also be enhanced in the village communities concerned through the preparation of development schemes and plans and the establishment of land registries, in collaboration with the Regional Chamber of Agriculture (CRA) and the Ministry in charge of lands.

Component B: Increase in Productivity and Improved Competitiveness

2.2.7 The development of rice growing and horticultural crops in the project areas is hampered by farmers' weak productive capacities and difficulties in marketing quality produce. In this regard, this component will help to significantly enhance the competitiveness and production of irrigated crops by providing support to producers through access to developed plots, provision of quality inputs (improved seeds, fertilizers and phytosanitary products), as well as the dissemination of farming and processing best practices. Private cooperatives and operators will also be provided with efficient equipment and material for production, post-harvest and processing operations. An adapted financing system will be established with local financing institutions to facilitate beneficiaries' access to funds and ensure financial resource sustainability. An agricultural material and equipment leasing mechanism (production, harvest, post-harvest, processing, etc.) involving professional organizations, private operators and financing institutions will be also be put in place. The objectives of Component B are consistent with Component 3 of PNIP-SA relating to production and productivity. The proposed activities are in line with CAADP's Pillar 2 (Development of markets and marketing capacity), Pillar 3 (Food and nutrition security for the vulnerable segments of the population) and Pillar 4 (Research and dissemination of agricultural technologies).

2.2.8 To achieve the objectives, the following activities will be carried out in Component B:

- i) Equipment of cooperatives and private service centres: The project will support the creation and/or strengthening of 50 agricultural cooperatives in all the intervention sites (see Component C). As regards intensification of paddy rice production and improvement of packaging, the project will provide the cooperatives with cultivators and water pumps, and each cooperative will be provided with a 100-tonne cereal storage warehouse and a 50-tonne input storage warehouse. The private service centres will be provided with two tractors and accessories, and will have two silos of a capacity of about 10 000 tonnes.
- ii) Access to land, inputs, minor equipment and agricultural best practices: As regards production intensification, targeted support will be provided to rice and horticulture farmers, who will benefit from improved rice and horticultural seeds, as well as fertilizers. Women and youths will be given priority in production and processing activities. There will be close monitoring to ensure their equitable participation in management and benefits, including access to irrigated plots. They will be given other equipment, in addition to the minor equipment allocated to all farmers, as well as support for income-generating activities. Close advisory support for the extension of technical packages and the use of agricultural best practices will be provided through supervision.
- iii) Crop protection: To reduce the risk of crop destruction by birds, a bird control brigade will be created in each area and run by the cooperatives. It will have a monitoring-prevention role and work in close collaboration with Crop Protection Authority services.
- iv) Produce processing and post-harvest equipment: The production of high commercial value rice requires the use of efficient equipment for paddy hulling and rice cleaning/grading. In order to obtain marketable rice, the project will facilitate the procurement of three mini-rice processing factories for youths to manage three integrated service centres. A threshing machine with a kit (tarpaulins, weighing machine, etc.), a huller and a baler will be procured for each of the cooperatives. This equipment will be procured through credit by the cooperatives or by young private operators in the area, organized into economic interest groups (EIG). The target groups will, under the responsibility of specific management committees, benefit from further support relating to rice (hulling, grading, marketing, transportation, parboiling, labelling, promotion of rice byproducts) and horticulture (storage, packaging, transportation, marketing and processing) value chains.
- v) Private service centres: Considering the many offers spread over the three targeted areas and the high and varied service needs of producers and their organizations, activities will be carried out to promote private service centres. The project will facilitate the creation of new centres or support the revitalization of existing ones in the three project areas. These integrated centres, with local private actors (private companies or cooperatives), will also receive support from the regional chambers of agriculture, which provide this type of services in their activities. Private service centres will help to facilitate access to credit, as well as ensure strong mobilization of the banking sector and optimum management of inputs and rice stocks, and other products. Each centre will take charge of the cooperatives in the project area and offer the services of 7 to 10 specialized private service providers.

Component C: Capacity Building and Support Measures

2.2.9 One of the constraints on the rice sub-sector and market garden produce value chains is the weak capacity of the stakeholders, especially producers, private operators, technical services and local officials. This component will build the capacity of professional organizations, local authorities, technical services and the private sector. The component will also help to carry out support measures in communication to inform, sensitize and make project outcomes more visible. Support measures will also concern research and advisory support indispensable for the development strategy defined in PNIP-SA. Capacity building will be particularly beneficial to women and youths, as it will give them the opportunity to take part in activities in the same capacity as men, and strengthen their level of organization. The objectives of Component C of the project are consistent with Components 1 and 4 of PNIP-SA relating to capacity building and research/training respectively. The proposed activities are consistent with CAADP's Pillar 3 (Food and nutrition security for the vulnerable segments of the population) and Pillar 4 (Research and dissemination of agricultural technology).

2.2.10 The proposed activities for Component C are as follows:

- i) Capacity building for farmers with the following objectives: (a) creation and/or relaunching/revitalization of 50 cooperatives in the three project areas; (b) participation in the rice inter-profession and support for structuring of the horticultural sub-sector; and (c) training of the leaders of target cooperatives. Among the cooperatives to receive support, special attention will be paid to women and youth organizations, with at least 10 specific cooperatives for each group.
- ii) Capacity building for local authorities and technical services with the following objectives: (a) training of elected municipal officers in project planning and monitoring-evaluation techniques; (b) capacity building for State structures (public and parastatal); (c) support for the creation and structuring of private integrated service centres; (d) capacity building for local training structures; (e) training of trainers for capacity building of agricultural organizations, farmers' leaders and local elected officers; and (f) sensitization and prevention of HIV/AIDS and waterborne diseases by the competent technical services under collaboration protocol agreements.
- iii) Information, communication and documentation: A communication plan will be prepared; this will give visibility to rice and horticultural activities carried out by the project.
- iv) Support for nutrition: Considering the precarious nutritional situation with chronic and acute malnutrition rates that have remained high, the project will carry out specific activities in the area of nutrition: support for the detection of malnutrition cases at community level and strengthening of the referral and counter-referral system of detected cases to the appropriate health centres; support for health units for the care of children under five as well as pregnant and breastfeeding women suffering from acute malnutrition in line with the national care protocol; prevention of malnutrition through promotion of best practices in the feeding of infants and young children (ANJE); support for the implementation of an efficient nutrition supervision system in collaboration with the health district in districts and communities. In addition, information, education and communication activities on the nutritive values of available products as well as culinary demonstrations with the products will be carried out. Strong sensitization on the improvement of diet and food hygiene, through outreach activities and the local media, will be encouraged together with incentive prizes in kind such as

- procurement of plots and/or agricultural equipment for the best women's groups. These interventions will in priority target the most vulnerable targets.
- v) National information system, namely the Agricultural Market Observatory (OMA), which is already collecting, disseminating and analyzing data on the prices of basic foodstuffs on the country's main markets, will be used by the project.
 - vi) Capacity building for the private sector and civil society: Advisory support for farmers is coordinated by national directorates in charge of agriculture and rural engineering through their regional services (DRA, DRGR) and by the Authorities in their intervention areas. The local officials of these structures will work in close collaboration with approved private integrated service centres, laying emphasis on themes relating to water management and infrastructure maintenance, mechanization, storage and processing units, and marketing.
 - vii) Dissemination of research results and training: The project will implement a NERICA rice variety dissemination programme, as well as carry out pre-dissemination tests to further strengthen the commercial value of Malian rice. In addition, measures to support the intensive rice growing system (SRI) will be taken, especially as concerns the use of specifically developed seed drills for pre-germinated seeds and herbicides. The project will train stakeholders (producers, supervisors and private operators) each year in areas relating to improved rice production technology, integrated pest management, water management, and infrastructure and equipment upkeep and maintenance. An essential capacity building component will focus on prevention and management of disaster risks, as well as training of producers and their communities for the adoption of resilient strategies. Advanced training workshops will be organized in post-harvest technologies and packaging as well as their dissemination on a larger scale.

Component D: Project Coordination and Management

2.2.11 This component concerns all activities and expenditures linked to project management, and its technical, financial and environmental monitoring. It will concern planning, coordination, implementation of operations, human, financial and material resource management, monitoring-evaluation, procurement, auditing, the preparation of a procedures manual and establishment of a monitoring-evaluation system, the baseline situation, the mid-term review and the final evaluation. The project will be managed and coordinated by the Rural Development Sector Planning and Statistics Unit (CPS/SDR), which will be represented in each area by the Development Authority of the area concerned (OHVN, OPIB and concerned local extension unit). The CPS will have a team, whose main mission will be to coordinate all project activities to be implemented by operators (contractors, design offices, NGOs, the administration, farmer organizations, etc.). Special emphasis will be laid on results-based management, as well as on the monitoring and measurement of socio-economic impacts on target groups (disaggregated data for women and youths, FO performance monitoring). The environmental monitoring of the project will be conducted by the National Directorate of Sanitation, Pollution and Nuisance Control (DNACPN), which is the environmental assessment and impact study structure, in consultation with the Environment and Sustainable Development Agency (AEDD).

2.3 Implementation Arrangements

2.3.1 Institutional Arrangements: The project will be implemented by the Rural Development Sector Planning and Statistics Unit (CPS/SDR), under the supervisory authority of the Ministry of Agriculture. To that end, the CPS will be reinforced by a team comprising: a

coordinator specialized in project management; a rural infrastructure specialist, a financial and administrative management officer, a procurement officer, and a monitoring-evaluation specialist. These experts will be recruited through competition. The CPS/SDR Director will be the Project Manager. On the ground, project activities will be implemented under the responsibility of project focal points in the Authorities concerned and in the field services of the National Directorate of Agriculture. The project team members will sign performance contracts. The project will closely involve the technical services concerned (DNA, DNGR, OPV, DNACPN, DNPIA, DNP, etc.) through their field services and partnership protocols and agreements.

2.3.2 A steering committee will be established. It will be chaired by the Minister of Agriculture or his/her designated representative, while the Project Manager will provide secretarial services. The committee will comprise representatives of the Ministries and Authorities concerned, representatives of the producers, associations of breeders/agropastoralists and women's groups of the project area. The steering committee will approve activity programmes and annual budgets, as well as annual activity reports and annual project account audit reports. It will also ensure implementation of the recommendations of the various missions, as well as synergy with the other projects and programmes, and particularly those of various donors. This committee will meet once a year in ordinary session. At local level, consultation committees will be created to encourage the participation of all local stakeholders.

2.3.3 *Procurement arrangements:* Goods, works and services financed under the project will be procured in compliance with African Development Bank Group rules of procedure for procurement of goods and works, and the use of consultants or in compliance with national rules of procedure. The Bank's standard bidding documents will be used in all cases. The executing agency will prepare the procurement plan, which will be examined by the stakeholders.

2.3.4 *Operational arrangements:* For the implementation of activities, in collaboration with the Authorities and population concerned, the project will use enterprises, private operators, design offices, NGOs and individual consultants on contractual bases and in compliance with Bank rules of procedure. The project will therefore adopt a make or buy approach, which will require rigorous planning, the preparation of many bidding documents, acquaintance with the Bank rules, and good technical knowledge of the fields concerned. The field activities will be carried out by existing agricultural organizations structured or established with support of the project. The structures will intervene directly in the participatory planning process, and will make their physical and/or financial contribution to the activities to be carried out. For the conduct of certain activities (extension, research/development, reforestation, water management, animal and human health, environmental supervision, fishery and cultivation), the project will call on specialized structures and sign agreements submitted to the Bank for prior approval.

2.4 Financing Requirements

2.4.1 The total cost estimates for the above-mentioned activities stand at sixty-seven million three hundred and ninety-seven thousand United States dollars (USD 67 397 000), provided by the Government, the private sector (producers and local promoters of private integrated service centres), the African Development Fund (ADF) and the GAFSP fund. The Government's contribution is estimated at USD 9.759 million (14.5%), that of the private sector is USD 3.077 million (4.6%), comprising USD 1.067 million (1.6%) from producers and USD 2.011 million (3%) from private merchants. The ADF contribution stands at USD 4.950 million (7.3%). An amount of forty-nine million six hundred and ten thousand United States dollars (USD 49.610 million) is requested from the GAFSP fund, representing 73.6% of the total project cost.

2.4.2 The Government's contribution will finance infrastructure (USD 1.450 million), increase in productivity and competitiveness of products (USD 2.902 million), capacity building and support measures (USD 2.500 million), and project management and coordination (USD 2.020 million). Farmers' contribution will cover costs relating to human investment work, contributions in kind, physical participation in plot development works, maintenance of structures, input and equipment procurement, and family labour. The contribution of private service centre promoters concerns investments made by local economic operators in agricultural services for processing and marketing produce upstream and downstream of production. The contribution expected from the African Development Fund (ADF) will cover mainly the development of production and marketing infrastructure and part of the project management costs. The amount requested from the GAFSP Fund will finance two essential components of the project, namely construction of production and marketing infrastructure, and activities to increase productivity and the competitiveness of products. The breakdown of financing by component and source is as follows:

Table 4
Breakdown of Project Financing by Source and Component (USD Thousand)

COMPONENTS	SOURCES OF FINANCING					TOTAL
	GAFSP	ADF	GOV'T	BENEFICIARIES		
				FARMERS	SERVICE CENTRES	
Infrastructure development	29 260	1 375	1 595	330		32 560
Increase in production	17 490	1 100	4 842	737	2 011	26 180
Capacity building	2 860	935	1 100			4 895
Coordination and management		1 540	2 222			3 762
TOTAL COST	49 610	4 950	9 759	1 067	2 011	67 397

2.4.3 The total amount proposed for GAFSP fund financing stands at USD 49.610 million, corresponding to 73.6% of the project costs. GAFSP fund financing represents about 6.9% of the PNIP-SA costs estimated at USD 712 million, comprising USD 249 million from the national budget and USD 463 million from public aid. This partial financing of the PNIP-SA will have a significant impact on productivity and production, since it will supplement the financing already acquired, especially under the PDI-BS and PAPAM.

2.4.4 Several bilateral and multilateral financial agencies and institutions provide most of the resources required for financing rural development in Mali, in the form of grants or loans, based on their own criteria and procedures. The main bilateral donors are: the French Cooperation Agency, USAID, Netherlands, the European Union, the Federal Republic of Germany, Canada, and Denmark. The main multilateral donors are the AfDB Group, the World Bank Group, BOAD, IFAD and the Arab Fund/bank group (IDB, ABEDA, SFD, KFAED, and OFID).

2.5 Preferred Supervision Organ and Government Team

2.5.1 The Government of Mali has requested African Development Bank support as the preferred supervision organ for the preparation and implementation of the project submitted for GAFSP financing. The Bank has long intervention experience in Mali in various fields, with special focus on the rural development sector. Indeed, since 1974, the Bank has financed 106 operations for commitments, net of cancellations, amounting to UA 1 004 million, or about USD 1 405 million, broken down as follows: (i) 35 operations in the agriculture and rural development sector with UA 327.79 million or about USD 459 million; (ii) 26 infrastructure operations (transport, water and energy) for UA 167.63 million or about USD 234.6 million; (iii) 18 operations in the social sector (education, health, micro-credit) for UA 128.88 million or about USD 180.43 million; and (iv) 27 multi-sector operations (institutional support,

decentralization, budget support) for UA 379.84 million or about USD 531.77 million. Rural development sector operations have focused mainly on: (i) irrigation structures and development of irrigation areas in Gao (PRODECA), Tombouctou (Daye, Hamadja and Kouriomé), Koulikoro (OPIB Baguinéda, PAPIM Maninkoura) and Ségou (PMB Bla) regions; (ii) NERICA rice dissemination in Kayes, Koulikoro and Sikasso regions; (iii) seed sub-sector development throughout the country (PAFISEM); (iv) environmental protection with silting control in the River Niger regions of Tombouctou and Gao (ABN project) and harmful aquatic plants control on the River Niger in Bamako, Koulikoro and Ségou. The 2011 Year Book of rural development sector projects and programmes, prepared by the Rural Development Sector Planning and Statistics Unit (CPS-SDR), indicates that the AfDB Group is the leading contributor to external financing for rural development sector projects and programmes, out of a total of 32 Technical and Financial Partners (TFP) listed, with 25% of the external financing.

2.5.2 The portfolio of AfDB projects in Mali as at April 2013 comprises: (i) nine national projects for an overall amount of UA 124.9 million or about USD 175 million, and (ii) two multinational projects for an overall amount of UA 15.320 million or about USD 21.45 million. In volume, the rural development sector accounts for 37% of AfDB operations in Mali, followed by the social sector, and water and sanitation sector with 18% each. In terms of value, the rural development sector accounts for 53% of Bank commitments in Mali, followed by the water and sanitation sector with 23%, and the social sector with 11%.

2.5.3 The Bank's prospects for the rural development sector for the 2013-2014 period, in addition to support to the formulation and co-financing of this proposal, concern: (i) continuation of four ongoing operations; (ii) approval of a food security enhancement project in 2013; (iii) further work in formulating a regional food and nutritional security resilience enhancement programme in Sahel countries, including Mali (P2RS); and (iv) identification of a reconstruction programme in 2014 in the rural development sector for the country's northern regions. The Bank plays a coordinating and leadership role in the Irrigation Development Programme (PDI). It has solid experience in its support to Mali in the irrigation sector.

2.5.4 In light of the foregoing, it is important for Mali to learn from and build on experiences in these operations, particularly: the implementation of simple technical solutions to key problems, the systematic application of the participatory approach and the development of partnerships, the involvement and empowerment of all stakeholders, and the indispensable support for producers.

2.5.5 In view of the enormous challenges, a Government team has been established for the preparation of this project. The team comprises representatives from the following Institutions: (i) three (3) representatives from the Rural Development Sector Planning and Statistics Unit (CPS-SDR); (ii) one (1) representative from the National Directorate of Agriculture (DNA); two (2) representatives from the National Rural Engineering Directorate (DNGR); (iii) one (1) representative from the Sélingué Rural Development Authority (ODRS); (iv) one (1) representative from the Ministry of Livestock and Fishery; (v) one (1) representative from the Rice Initiative Unit of the Ministry of Agriculture; (vi) one (1) representative from the Permanent Assembly of Mali's Chambers of Agriculture (APCAM); (vii) one (1) representative from the Niger Upper Valley Authority (OHVN); (viii) one (1) representative from the Baguinéda Irrigation Area Authority; (ix) and one (1) representative from the Public Debt General Directorate (DGDP).

2.6 Proposed Aid Schedule

The Food and Nutrition Security Enhancement Project in Mali will cover a period of five years (2014-2018). The project indicative implementation schedule is presented in the table below. The project will be prepared and appraised by the Bank upon GAFSP approval of the proposal. The duration of the GAFSP programme for Mali is included in PNISA's priority programme implementation.

ACTIVITIES	2013	2014	2015	2016	2017	2018
GAFSP request approval	■					
Preparation/Appraisal	■	■				
Project approval		■				
Launching of project		■				
Implementation		■	■	■	■	■
Mid-term review					■	
Closing of project						■
Completion report						■

2.7 Risk Type and Management

2.7.1 The main risks likely to hamper achievement of expected project outcomes are:

- i) Climate change effects, which could affect the project with the lowering of water levels and a decrease in available flow rates.

Mitigation measures: The basic assumptions concerning the design of water management structures (building of sills, irrigation schemes) will take these climate hazards into account to secure water resources, in accordance with the national policy guidelines on adaptation to climate change adopted in 2007.

- ii) Inadequate land security: The need for better water resource availability and control as well as for developed land could increase the risks of land disputes among the population and thereby result in delays in the exploitation of the developed land.

Mitigation measures: Land security for the developed areas will be improved as a result of the preparation of development plans for the land concerned, as well as the establishment of land registries. These instruments will be established with the existing regional land commissions as part of the ongoing agricultural land policy preparation process, with involvement of all the stakeholders (Government services, local authorities and communities). Information, communication, sensitization and inclusive consultation will help avoid interpretation errors and ensure land security.

- iii) Low level of ownership of the structures by producers could result in low production levels and limited lifespan for the structures and infrastructure.

Mitigation measures: Consultation with stakeholders, their participation in the construction of the structures and capacity building in management, maintenance and monitoring of the structures will guarantee project ownership by the beneficiaries.

- iv) Administrative procedures that can lead to delays in the implementations of activities.

Mitigation measures: The system established through the AfDB, as supervisory entity, and the Government (especially the project monitoring committee and the executing agency), will ensure compliance with administrative procedure time-limits. An administrative, financial and accounting procedures manual will also be prepared before project start-up.

- v) Low absorptive capacity of financial aid by national structures.

Mitigation measures: Supervision by AfDB and implementation of measures recommended by annual sector reviews will help boost the country's absorptive capacity.

2.8 Consultation with Development Partners at National Level

2.8.1 For preparation of the project submitted to GAFSP for financing, consultations were held with various national stakeholders and the technical and financial partners (TFP).

2.8.2 **Consultation with national stakeholders:** The Ministry of Agriculture, in its capacity as the process authority, organized exchange meetings with members of the inter-Ministerial group responsible for implementation of the National Agricultural Sector Investment Programme (PNISA), as regards aspects specifically focused on the sub-sectors in the areas concerned. These meetings helped to assess the project's consistency with the PNISA and PNIP-SA in October 2011. The meeting with the Secretary-General of the Ministry of Agriculture on 3 April 2013 provided guidelines on the selection of areas, and confirmed the major aspects of the formulation of this proposal. The working session of 8 May 2013 with all the technical services involved, chaired by the Ministry of Agriculture, made relevant comments on the draft report; the comments were taken into account in this report.

2.8.3 **Consultation with technical and financial partners:** During the consultation process, this project proposal submitted for GAFSP financing was examined by the TFPs present in Mali. The comments received were used in consolidating and finalizing the project proposal.

2.9 Conclusion

2.9.1 As a Sahel country faced with climatic hazards, production security through hydro-agricultural land development constitutes a major Agricultural Development Policy guideline and a priority thrust of the National Programme of Adaptation to Climate Change in Mali. The country is endowed with enormous land and water resources, as well as huge comparative advantages due to existing irrigated farming practices, adequate capacity of the support structures and an enabling administrative decentralization for initiatives and greater empowerment of stakeholders at local level. These resources have been reinforced by the implementation of a National Irrigation Development Strategy (SNDI) adopted since 1999 and updated in 2009, and the adoption of the National Proximity Irrigation Programme (PNIP) in 2012 which makes it possible to reach most of the country's regions, in addition to the major irrigation areas along the River Niger. Mali's solid experience and current capacities in irrigation development have helped to produce significant results, especially in the following areas: (i) inventory of the developable potential (2.2 million hectares in the river valleys and 900 000 ha of lowlands) and related social and technical factors; (ii) development designs for river water control, lowland development and runoff water recovery; (iii) extension of

agricultural research to irrigation techniques and technical packages for other staple products, especially horticultural products; (iv) intensification of agricultural advisory services for the market gardening and horticultural sub-sectors, through major projects such as the PCDA; (v) management and maintenance of structures, particularly local structures, through the various Government, local authority and NGO projects. As result of the increase in product, the potential developed so far (367 095 ha) shows that the irrigation strategy is one of the key factors in the fight against food and nutrition insecurity and the most relevant response to the effects of climatic hazards.

2.9.2 Nyamina area, with its under-developed irrigation potential, has a high poverty and food and nutrition insecurity rate. Indeed, production there is unpredictable and dependent on rainfall and natural floods. This leads to frequent episodes of food and nutrition difficulties. The project's implementation will help improve local food security and producers' incomes in the targeted areas. Mandé area has a very high agricultural production potential, and its population is under close OHVN supervision. The development of structures in this area will contribute significantly to securing supply at national level. As for Baguinéda area that benefits from OPIB's advisory support, its proximity to Bamako and its rice and horticultural crop development potential constitute key factors for rice and vegetable supplies to the market. The proposed works in this area will be beneficial mainly to women for the vegetable production value chain.

2.9.3 On the whole, this project will contribute to finding a lasting solution for improving productivity, production, and food and nutrition security for the population in the areas concerned. It will increase the supply of food products at national level; the NERICA dissemination sub-component will contribute significantly to the supply in Kayes, Ségou and Sikasso regions. The project will also ensure better development of the potential offered by the plains and lowlands concerned, through simply designed and tested structures that can be managed by the beneficiaries. Through the proposed support actions and strict compliance with its results monitoring framework, the project will help to improve the population's living conditions and incomes and contribute to achieving the PNIP and GPRSF objectives.

Detailed Project Costs by Source of Financing and Component
(in USD Thousand)

Sources of Financing Project Components	GAFSP	ADF	GOVT	Producers/Private		TOTAL
				Farmers	Service	
I. Infrastructure						
Irrigation structures	15 345	1 100	1 155			17 600
Land leveling and improvement of plots	2 420	275	220	110		3 025
Development of ponds and lowlands	5 280		220	220		5 720
Social infrastructure (rural roads, health, ...)	2 200					2 200
Studies and supervision of works	4 015					4 015
Sub-Total	29 260	1 375	1 595	330		32 560
II. Farm Development						
Agricultural equipment (mini rice-processing plants, etc.)	5 830		1 289		2 011	9 130
NERICA rice dissemination	8 800	825	880	220		10 725
Crop intensification	825	275	2 200	242		3 542
Consultancy services	2 035					2 035
Land security			473	275		748
Sub-Total	17 490	1 100	4 842	737	2 011	26 180
III. Capacity Building						
Training/Communication	1 760	770	275			2 805
Research Development	1 100	165	825			2 090
Sub-Total	2 860	935	1 100			4 895
IV. Project Management						
Support for extension services		220	467.5			687.5
Vehicles		550				550
Office equipment & furniture		330	132			462
Operating costs		220	370.7			590.7
PMU staff salaries and allowances		220	1 251.8			1 471.8
Sub-Total		1 540	2 222			3 762
TOTAL COST	49610	4950	9759	1067	2011	67397
<i>Percentage of Total</i>	<i>73.6%</i>	<i>7.3%</i>	<i>14.5%</i>	<i>1.6%</i>	<i>3.0%</i>	<i>100%</i>

Project Logical Framework

Hierarchy of Objectives	Hierarchy of Outcomes	Outcome Indicators	Sources of Verification	Assumptions and Risks
<p>Sector goal:</p> <p>Contribute to poverty reduction through food security enhancement in Kayes, Koulikoro, Sikasso and Ségou regions</p>	<ul style="list-style-type: none"> - Poverty and vulnerability to food insecurity is reduced 	<ul style="list-style-type: none"> - Sector growth rate - Poverty index - Food security level - Chronic malnutrition rate in children under five (weight/height index) 	<ul style="list-style-type: none"> - National and local statistics - Project evaluation reports. 	<p><u>Assumption:</u> Political stability in the country, policies are favourable</p> <p><u>Risks:</u> Bad governance</p> <p><u>Mitigation measures:</u> The institutional framework is favourable</p>
<p>Specific objective:</p> <p>Increase and sustainably secure rice and horticultural production in the project areas</p>	<ul style="list-style-type: none"> - Rice and horticultural production is increased and sustainably secured. 	<ul style="list-style-type: none"> - Production growth rate - Farmers' average income growth rate 	<ul style="list-style-type: none"> - Project activity and evaluation reports. 	<p><u>Assumption:</u> Land is developed</p> <p><u>Risks:</u> Insecurity in the areas,</p> <p><u>Mitigation measures:</u></p> <ul style="list-style-type: none"> - The Government's good security policy
<p>Component A: Development of production and marketing infrastructure</p> <p>A1 Irrigation structure and rural infrastructure works</p> <p>A2 Mitigation measures</p>	<ul style="list-style-type: none"> - Pumping stations constructed and operational - Belt and dividing dykes constructed and operational - Main, secondary and tertiary canals constructed/lined and operational - Main drains constructed and operational - Protection, distribution and drainage networks established and operational - Small dams constructed and operational - Ponds further deepened and operational - Rural and dyke roads constructed/reinforced - Network rehabilitation - Land leveling, smoothing and restoration - Equipped boreholes constructed - Multi-purpose centers constructed 	<ul style="list-style-type: none"> -Number of pumping stations -Linear dykes -Linear canals -Number of main drains -Linear distribution and drainage network -Number of small dams -Number of further-deepened ponds -Km of rehabilitated roads -Linear renewed network -Leveled, smoothed and restored land areas -Number of equipped boreholes -Number of multi-purpose centers 	<ul style="list-style-type: none"> - Technical implementation reports - Work acceptance reports - Activity reports 	<p><u>Assumption:</u> Funds are available; works are executed according to technical standards and within the time-limits</p> <p><u>Risks:</u> Poor infrastructure ownership by the population, land conflicts</p> <p><u>Mitigation measures:</u> Technical studies and rigorous control of works, capacity building for beneficiaries, land security.</p> <p><u>Assumption:</u> Supportive population</p>

<p>A3 Land development</p>	<ul style="list-style-type: none"> - Surface areas developed - Compensation reforestation and borrow pit treatment conducted -Land commissions created and operational -Rural land registry and land use plans established. 	<ul style="list-style-type: none"> -Developed surface areas -Reforested or treated surface areas -Number of operational land commissions and land development plans established 		<p><u>Risks:</u> Lack of authority by decision-making organs</p>
<p>Component B: Increase in productivity and improved competitiveness</p> <p>B1 Agricultural equipment</p> <p>B2 Construction of storage and input warehouses and cereal silos</p> <p>B3 Access to land and inputs, improved seeds and phytosanitary products</p> <p>B4 Produce processing and post-harvest equipment</p>	<ul style="list-style-type: none"> -50 cooperatives are provided with production equipment -3 private service centres are provided with tractors and ploughing equipment -50 cooperatives are provided with cereal storage and input warehouses -3 private centers are provided with cereal storage silos -Inputs are subsidized and made available to producers -Plots developed are allocated to women and youths -Income-generating activities are initiated - 3 mini-rice processing factories are established in private service provision centres - 50 cooperatives are provided with post-harvest equipment 	<ul style="list-style-type: none"> -Number of cooperatives -Number of operational equipment procured and established -Number of warehouses constructed and used -Number of silos constructed and used -Quantity of inputs distributed and used -Surface area developed and distributed to rural women and youths -Number of beneficiaries of income-generating activities -Number of mini-rice processing factories installed and operational -Number of cooperatives provided with post-harvest equipment 	<ul style="list-style-type: none"> -Equipment acceptance reports - Works acceptance reports - Periodic activity and evaluation reports - Acceptance reports and activity reports 	<p><u>Assumption:</u> Access to land, inputs and equipment is ensured ; beneficiaries and the population are able to bear the recurrent costs</p> <p><u>Risks :</u> Production is inadequate; private sector participation is low</p> <p><u>Mitigation measures:</u> Facilitation of access to and use of developed land by producers, capacity building for producers, dissemination of high-yield varieties; sensitization and consideration of sector needs for effective participation in the project.</p>
<p>Component C: Capacity building and support measures</p> <p>C1 Capacity building for farmers</p> <p>C2 Capacity building for local authorities</p> <p>C3 Capacity building for the private sector and civil society, and specific support for women</p>	<ul style="list-style-type: none"> -50 cooperatives are restructured or created; participation in the rice inter-profession is facilitated and leaders trained. -Local elected officers, decentralized and Government services are strengthened. - Women’s organizations receive support in specific areas 	<ul style="list-style-type: none"> -Number of cooperatives restructured or created. -Number of agreements signed with the inter-profession -Number of structures strengthened and their officers trained -Number of women’s organizations that receive support in specific activities 	<ul style="list-style-type: none"> - Activity and evaluation reports - Agreement documents - Training reports 	<p><u>Assumption:</u> Supportive population</p> <p><u>Risks:</u> Undemocratic choice of leaders of farmer organizations</p> <p>Non-mobilization of beneficiaries’ counterpart contributions</p> <p><u>Mitigating measures:</u> Support for establishment of</p>

<p>C4 Socio-economic infrastructure</p> <p>C5 Environmental protection actions</p> <p>C6 Research-development actions</p> <p>C7 Information, communication and documentation</p>	<ul style="list-style-type: none"> - Private integrated service centers are trained in the services to be provided - Socio-economic infrastructure is constructed for the population -Environmental monitoring protocols are signed with AEDD and DNCC -Research-development protocols are signed with specialized research centres -A communication plan including the gender aspect is prepared and implemented 	<ul style="list-style-type: none"> -Number of service centers that receive support and are operational -Number of socio-economic infrastructure constructed -% of environmental guidelines issued and monitored -Number of agreements signed with research centres, -Number of high-yield varieties tested and disseminated in the rice and horticultural areas -Number of advisers trained in production and post-harvest techniques -Level of implementation of the communication plan and mainstreaming of gender issues 	<ul style="list-style-type: none"> - Activity and evaluation reports -Agreement documents -Training reports 	<p>well-structured FOs, Sensitization on mobilization of counterpart contributions</p> <p><u>Assumption:</u> Expression of precise needs in seeds and varieties</p> <p><u>Risks:</u> Inadequate human, financial and phylogenetic resources</p> <p><u>Mitigation measures:</u> Support for farm tests</p>
<p>Component D: Project management and coordination</p> <p>Coordination of activities, Staff management, Procurement, Monitoring-evaluation</p>	<ul style="list-style-type: none"> - Financial resources are well managed - Management, implementation and monitoring-evaluation activities are well coordinated and conducted with the national level (CPS/SDR) in compliance with the indicative schedule and general Bank conditions for procurement of goods and services. 	<ul style="list-style-type: none"> -Absorptive rate of funds allocated, -Qualified audit, -Monitoring-evaluation report quality, -Quality of communication among actors -Project objective achievement rate 	<ul style="list-style-type: none"> - Activity, supervision and evaluation reports - Agreements, service provision contracts and protocols signed 	<p><u>Assumption:</u> Funds are available</p> <p><u>Risks:</u> Disbursement delays, non-mobilization of the national counterpart contribution.</p> <p><u>Mitigation measures:</u> Close project supervision by donors, including AfDB through MLFO.</p>

Development and Performance Indicators

Fields	Development and Performance Indicators	Values
1. Environment and agriculture	Agricultural land in ha	46.6 million
	Cultivated land	12.2 million
	Pastures	30 million
	Wildlife reserves	3.3 million
	Forest reserves	1.1 million
	Land suitable for irrigation	2.2 million
	Ground water resources (estimate)	2 700 billion m ³
2. Population	Resident population (RGPH 2009) <i>including</i>	14 517 176
	Women	7 314 432 (50.4%)
	Men	7 202 744 (49.6%)
	Rural population (RGPH 2009)	10 162 023
	Urban Population (RGPH 2009)	3 048 607
	Average population growth rate	3.60%
3. Rural and agricultural sector performances	Proportion of farmland used	33.6% (2009)
	Value of agricultural exports/total exports (FAOSTAT)	17.7% (2009)
	Value of agricultural imports/total exports (FAOSTAT)	14.3% (2009)
	Proportion of small farms – less than 5ha (RGA, 2004)	68%
4. Inputs market and sub-sector development	Fertilizer use, kg/ha of arable land (WDI)	3.04 (2009)
	Proportion of farms provided with a tractor (RGA 2004)	1% (2005)
5. Macro-economic performance	Total GDP in billions of current CFAF (INSTAT-2010)	4 520.60
	Primary sector GDP in billions of current CFAF (INSTAT-2010)	1 551.52
	Agricultural GDP at constant prices (2007-2010) in % of Total GDP	34.32%
	Agricultural GDP growth rate (2006 to 2010)	10.28% (2010)
6. Poverty, inequalities and employment	Proportion of the population living below the poverty line (INSTAT)	43.6% (2010), rural: 50.6%
7. Migration and urbanization	Proportion of the rural population out of the total population (INSTAT)	67% (2010)
	Urban population growth (INSTAT)	4.7% (2010)
8. Food security and social and health conditions	Under-nutrition prevalence rate (INSTAT)	12% (2008)

Sector Contribution to the Economy (in billions CFAF at current prices)

Components	2006	2007	2008	2009	2010	2006 to 2010
Cereals, excl. rice	430.90	466.00	616.70	638.31	738.59	578.10
Consolidated rice	101.00	106.70	199.40	200.83	256.50	172.89
Other industrial crops	44.70	47.70	59.40	66.31	74.79	58.58
Cotton	57.10	34.60	31.40	38.57	44.94	41.32
Livestock	270.60	290.20	321.40	343.57	369.62	319.08
Fishery	22.20	23.50	25.20	26.83	28.21	25.19
Forestry	137.20	146.10	158.60	172.06	185.37	159.87
Primary Sector	1 063.70	1 114.80	1 412.10	1 486.48	1 698.02	1 355.02
Secondary Sector	705.10	699.34	714.79	801.58	828.75	749.91
Tertiary Sector	1 129.87	1 265.21	1 417.69	1 521.85	1 635.00	1 393.92
TOTAL GDP at factor costs	2 898.67	3 079.35	3 544.58	3 809.91	4 161.77	3 498.86
<i>Indirect Taxes</i>	<i>302.80</i>	<i>345.20</i>	<i>368.10</i>	<i>423.00</i>	<i>480.00</i>	<i>383.82</i>
TOTAL GDP at market costs	3 201.47	3 424.55	3 912.68	4 232.91	4 641.77	3 882.68

Source: INSTAT, 2010