



ECONOMIC GROWTH PROJECT

CONTRACT 685-I-00-06-00005-00
TASK ORDER 5

2012 WORK PLAN



September 2011

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Submitted by International Resources Group (IRG)

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Acronyms

AfDB	African Development Bank
AGOA	African Growth and Opportunities Act
ANI	African Natural Ingrédients
ANCAR	Agence Nationale de Conseil Agricole et Rural
ASPRODEB	Association Sénégalaise pour la Promotion du Développement à la Base
APIX	Agence de Promotion des Investissements et des Grands Travaux
BEO	Bureau Environmental Officer
BFPA	Bureau de la Formation Professionnelle Agricole
BDS	Business Development Services
CNAAS	Compagnie d'Assurance Agricole du Senegal
CTS	Centre de Traitement des Semences
DA	Direction de l'Agriculture
DAPS	Direction de l'Analyse, de la Prévision et des Statistiques
DCA	Development Credit Authority
DHORT	Direction de l'Horticulture
DISEM	Division des Semences
E-ATP	Extended Agribusiness and Trade Promotion Project
ECOWAS	Economic Community of West African States
EMMP	Environmental Mitigation and Monitoring Plan
ENEA	Ecole Nationale d'Economie Appliquée
ENSA	Ecole Nationale Supérieure d'Agriculture
FTF	Feed the Future
GFSR	Global Food Security Response
GIE	Groupement d'intérêt Economique
GPS	Global Positioning System
GMO	Genetically Modified Organism
IFAD	International Fund for Agriculture Development
ISFAR	Institut Supérieur de Formation Agricole et rurale
ISRA	Institut Sénégalais de Recherches Agricoles
IRG	International Resources Group
JICA	Japan International Cooperation Agency
LOASP	Loi d'Orientation Agro-Sylvo-Pastorale
MCC	Millenium Challenge Corporation
M&E	Monitoring and Evaluation
NGO	Non-Governmental Organization
OECD	Organization for Economic Cooperation and Development
PMP	Performance Management Plan
PAFA	Projet d'Appui aux Filières Agricoles
PERSUAP	Pesticide Evaluation Report and Safe User Action Plan
REO	Regional Environmental Office
REPROSENER	Réseau de Production des Semences Nerica
SAED	Société Nationale d'Aménagement et d'Exploitation des Terres du Delta du Fleuve
SFZ	Southern Forest Zone
SPCRS	Société de Promotion et de Commercialisation du Riz Sénégalais
SRV	Senegal River Valley
SODEFITEX	Société de Développement et des Fibres Textiles
UCAD	Université Cheikh Anta Diop
UNIS	Union National Interprofessionnelle des Semences
USDA	United States Department of Agriculture
USAID/PCE	USAID Projet Croissance Economique
USAID	United States Agency for International Development
VC	Value Chain
WASA	West Africa Seed Alliance

1. INTRODUCTION

IRG and the entire Economic Growth Project consortium hereby submit the Fiscal Year 2012 Work Plan for Task Order 5 under the Senegal Accelerated Growth and Increased Competitiveness IQC. Task Order 5, issued in April 2009, is one of several projects in support of USAID Senegal's **Feed the Future** Strategy. The project is planned to operate through November 2013. Fiscal Year 2012 corresponds to a critical period in the project's life cycle characterized by aggressive scaling up of interventions to achieve ambitious Feed the Future goals.

The 2012 work plan is structured to align with a recent proposal of USAID Senegal for a standard reporting template for all Economic Growth projects. It includes the following sections. **Section 1**, the introduction, revisits important changes in the operating context from FY2011, introduces a number of strategic considerations for FY12 that are central to both scaling up and sustainability of results. Section 1 concludes with a brief look at the project's primary goals for 2012. **Section 2** is an in-depth presentation of planned activities and expected results. Section 2 is organized according to FTF results themes, such as Value Chains, Infrastructure and Policy. For each theme, the work plan narrative revisits the context and project strategy and explains the objectives and activities for the coming year. The section also includes a brief review of project results in FY11.

Section 3 discusses cross-cutting themes within the project that are also important to achieving Feed the Future and require separate reporting. The cross-cutting themes include Climate Change, Gender, Science, Technology and Innovation, Communications and Partnerships. **Section 4** presents the project's planned Environmental Compliance activities in FY12, based on an approved Environmental Mitigation and Monitoring Plan and a Pesticide Evaluation Report and Safe User Action Plan. **Section 5** presents project Monitoring and Evaluation Activities including a table showing targets per quarter for each project indicator.

2.1 Changes from Fiscal Year 2011

A number of important changes took place during Fiscal Year 11 that merit mention here. These changes involve the Economic Growth Project (PCE, in French) staffing pattern and internal organization, adoption of the FTF Senegal strategy, USAID budgetary constraints, and the adoption of a Performance Management Plan.

First, regarding project staff and organization, at the beginning of FY11, the PCE had a 6-person management team, including five expatriates. In March, the Chief of Party announced his resignation and in June the Senior Manager for Capital Access completed his two-year assignment, as planned. These departures led to adjustments in the management team. The former Deputy Chief of Party, Andrew Keck, became the Chief of Party. The new Deputy Chief of Party is Matar Gaye, who has been the project's Senior Manager for Capacity Building since 2009. Two other senior managers were also nominated from within. Ibrahima Diakhoumpa became the Senior Manager for Capital Access while Souleye Wade became a Senior Manager for Business Environment and Trade. The result is a senior management team with three expatriates and three Senegalese professionals.

Another important evolution in FY11 was the formal adoption of USAID/Senegal's Feed the Future Strategy, in February. The strategy calls for a focus on four value chains (rice, maize and millet, and

fisheries) and on two zones, the Senegal River Valley (SRV) and the Southern Forest Zone (SFZ). The adoption of the strategy confirmed the necessity for PCE to close-out any remaining activities in livestock and dairy value chains and to ensure that support to priority cereals is located within the two intervention zones. At this point, PCE work through Task Order 5 only involves rice (irrigated and upland), maize, and, to a lesser extent, millet.

A third and very significant change in 2011 was a reduction in resources for Feed the Future Senegal. In that context, USAID notified IRG of a 40% reduction in resources for Fiscal Year 2012. The project has been obliged to take a hard look at its goals to ensure a focus on the highest operational priorities and at the same time has initiated a series of cost cutting measures to ensure availability of funds and, in particular, to protect the value of the Senegal Local Support Fund.

Finally, in FY 11, USAID approved a Performance Management Plan (PMP) for Task Order 5. The PMP represents a more focused response to United States Government goals under Feed the Future compared to the broader set of indicators found in the original scope of work. The indicators and targets for FY12 presented in this work plan correspond to the approved PMP. The one exception is the introduction of an additional indicator on climate change that reflects the allocation of climate change resources to PCE for FY12.

3.1 Strategic considerations

The Economic Growth Project is essentially at its midpoint. If the first two years provided opportunities to undertake studies and to test various approaches and partnerships for achieving results, the next two years must be characterized by intense focus on deploying proven approaches that ensure scale-up while simultaneously ensuring the sustainability of project interventions. The project team understands fully that the goal is not to reach a few villages and smallholder farmers. The project must demonstrate the possibility of reaching a broad swath of farmers in both the SFZ and SRV zones with improved seeds, favorable harvest contracts, agriculture credit, and more. Fortunately, the project already began establishing foundations for achieving such a scale-up during FY 2011 and we have reason to be confident that the results in FY12 will be dramatically higher than in FY11.

Consider briefly the project's approach and results in the maize value chain in FY11. The project established partnerships with two "consolidators", companies that were prepared to invest their own resources in establishing structured outreach systems to support a network of producer groups. By signing purchase contracts months before harvest, the more than 2,000 participating farmers were eligible for microfinance loans that in turn ensured availability of quality seed and fertilizer and access to technical advice and waste-reducing post-harvest technologies. Producers sold over 1,700 tons through these contracts and loan repayments were 100%. Importantly, the producers sold even more outside the contracts. The success of this model has allowed PCE to expand its effort by working with six consolidator partners for the current season, including a farmer's cooperative, with the expectation of achieving sales of more than 10,000 tons and involving around 5,000 farmers. The local poultry feed and food formula industries are extremely pleased with the quality and prepared to shift a greater percentage of their orders to local suppliers instead of imports. The other good news is that the multiplication of consolidator partnerships is ensuring broad geographic coverage across USAID priority zones.

As the maize example shows, the PCE team's approach in the three priority value chains recognizes that both scale and sustainability rely on strong private sector involvement and a clearly defined set of market opportunities. The discussion in the Value Chains Section (2.2) provides considerable detail on the strategic and operational approaches PCE is pursuing to scale up and sustain results. Suffice to say here that we believe the key ingredient to achieve transformation is in fostering the role of "middle man" entities; we call them consolidators, who are already investing in agriculture value chains and in farmers in Senegal and who are ready and willing to go further in partnership with USAID. Today PCE is working with more than 30 of them, selected on the basis of their capacity and interest to invest in providing on-going Business Development Services and, in many cases, to act as direct buyers. These consolidators are a mixed bunch, including traditional agriculture input companies, former parastatals, farmer cooperatives and grass roots NGOs. The entry of more consolidators is also good for the farmers who welcome increased competition for their product.

But PCE's approach for sustainability and scaling up is not simply about working with consolidators. There is recognition that success requires building a logistics solutions that can out-compete imports (for maize and rice) that benefit from operationally streamlined and well-funded systems. PCE is, in essence, working to integrate Senegal's smallholders into a systematic and demanding supply chain. As the context discussions in the sections on infrastructure, seed, capital access and market access all illustrate, the basic approach of structured pre-season contracting is woven together with strategic USAID investments to ensure that the other dimensions are covered as well, notably a market-driven seed supply system.

Exit strategy questions also loom large at this point in the project's lifecycle. The USAID Forward strategy seeks to shift resources increasingly to direct assistance to local entities, both governmental and non-governmental. In this context, the project has a responsibility to assess the capacities and functions of its many partners and identify those with greatest potential to play some sort of direct role as a conduit of USAID resources after PCE closes out.

Finally, it is essential to recall that there are planned presidential elections in February 2012. While the electoral process can be expected to have minimal impacts on actual farm production and commercialization, we do anticipate a slow-down in project efforts on the policy reform front, although it should be a short-lived phenomenon of 4-6 months.

4.1 Overview of Expected Results

The PCE team has converted its successful strategies and approaches into an ambitious scope of results that makes a substantial contribution towards USAID Feed the Future goals in Senegal. The table on the following page provides a quick look at the expected results for Fiscal Year 2012 as captured in the project's leading indicators.

PCE EXPECTED RESULTS IN NUMBERS FOR FY 2012

Indicator	FY 12 Targets
Number of additional hectares under improved technologies or management practices as a result of USG assistance	22,000 ha
Number of farmers and others who have applied new technologies or management practices as a result of USG assistance	24,420
Number of rural households benefiting directly from USG interventions	47,000
Volume and Value of production processed and sold	101,000 MT \$30.8 million USD
Value of incremental sales (collected at farm- level) attributed to FTF implementation	12.7 million USD
Value of Agricultural and Rural Loans (USD)	\$6,000,000
Amount of private financing mobilized with DCA Guarantee (USD)	\$4,000,000
Number of MSMEs receiving USG assistance to access bank loans	4,000
Number of new technologies or management practices made available for transfer as a result of USG assistance	20
Number of jobs attributed to FTF implementation	7,500
Quantity of foundation and certified seed produced (tons)	9 and 1,300 tons
Number of policies and regulations prepared with USG assistance passed/approved	12
Number of institutions/ organizations undertaking capacity/competency strengthening as a result of USG assistance	50
Number of private enterprises, producers organizations, water users associations, trade and business associations and community-based organizations (CBOs) that applied new technologies or management practices as a result of USG assistance	800
Number of public-private partnerships formed as a result of FtF assistance	30
Value of new private sector investment in the agriculture sector or food chain leveraged by FTF implementation (USD)	\$1,450,000
Number of business-to-business partnerships developed	700

2. PLANNED ACTIVITIES AND EXPECTED RESULTS

The information presented in this section follows the thematic structure recently proposed by USAID for all Economic Growth Office projects. There are seven sub-sections as follows: Value Chains, Infrastructure, Seeds, Access to Finance, Market Access and Trade, Policy and Institutional Capacity Building. Each sub-section is organized around the following elements: Context, Strategy, FY11 Results, FY12 Objectives, FY12 Activities.

2.1. Value Chains

Context

As of Fiscal Year 2012, USAID/PCE Feed the Future funding is channeled to support three critical cereals for Senegal: rice, maize and millet. In the case of rice and maize, Senegal's traditional food production and distribution systems are finding it difficult to compete against imports from global food supply chains currently dominating the country's urban markets. Local distributors can readily access tightly programmed imports, consistent quality at competitive prices, and built-in financing mechanisms that facilitate inventory build-up and transactions along the supply chains. Although Senegal produced the equivalent of 350,000 tons of white rice in 2010, imports exceeded the 800,000 ton mark. The same can be said of local maize production, which currently needs to be complemented by imports exceeding 110,000 tons yearly. In the current uncertain international cereal production and trade context this represents a critical food security threat for the country – as well as a lost economic opportunity for Senegal's farmers worth more than 250 million US dollars.

Irrigated rice production in the Senegal River Valley (SRV) has the potential to compete against imports. The existing production base is composed of both large and small scale farmers operating under private and collective irrigation systems, supplying 15 industrial/mid-scale rice mills and a large number of small scale processors; the latter currently representing an estimated 70% of the current milled output. Several existing and upcoming public and private investments will increase irrigated area from 95,135 ha to 117,000 ha. The production driven initiatives of the past decade have been successful in achieving high yields, an average 5 to 6 tons per hectare, but have fallen short in getting farmers to systematically take advantage of the valley's two cropping seasons with an intensification ratio well below the 1.5 mark. Linking the SRV to the greater Dakar and other major urban growth markets is yet to be achieved at scale and apart from Saint-Louis and Touba, SRV rice has so far met the farmers' own consumption needs and supplied proximity informal markets. Processing is usually contracted out by farmers through piecemeal work picked up by the small-scale millers, leaving the larger mills operating below capacity.

The recent commodity crisis has spurred an interest within prevailing import distribution channels to establish durable links with the valley. The *Société de Promotion et de Commercialisation du Riz Sénégalais* (SPCRS), created in late 2010 under the auspices of the Ministry of Commerce with support from AFD, has brought together import distributors, millers and producer associations to work out supply and financing arrangements, and is due to begin operations in 2012. JICA has supported selected mills to upgrade their facilities to include grading equipment. USAID/PCE is supporting the structuring of emerging consolidation networks and has supported the establishment of initial contracts between Dakar distributors, SRV millers and producer groups. Finally the recent introduction by SRV seed producers, with USAID/PCE support, of government-approved aromatic Sahel varieties developed by Africa Rice, opens up the popular "fragrant rice" segment, which makes up 60% of imported volumes. Yet if the SRV is to consistently meet the country's monthly requirements for over 60,000 tons of quality rice, daunting challenges remain to be addressed: increasing output by attaining optimal intensification ratios, improving both paddy and white rice quality management, building up storage and logistics capacity and introducing integrated value chain finance mechanisms.

Rainfed rice production is concentrated in the South Forest Zone (SFZ) regions of Ziguinchor, Sédhiou, Kolda, Kédougou, Tambacounda and Fatick. Estimated at 105,000 tons of white rice, rain fed rice production represents 30% of Senegal's total output. This production has traditionally been characterized by its dependence on hazardous climatic conditions, low use of inputs or selected seeds resulting in low

yields, and the massive presence of women producers farming small individual plots. At 3+ tons/ha, more than doubling traditional yields, the performance of NERICA varieties, developed by Africa Rice and field-tested by USAID/PCE supported farmers, has opened growth opportunities for rain fed rice. Significant surpluses generated by higher NERICA yields have the potential of opening a second marketing front for local rice to roll back imports in southern urban centers up to Kaolack – generating additional income for SFZ producers.

Maize is produced in southern and eastern Senegal. It is one of the cereals consumed by the population and therefore an important food crop in the SFZ, particularly in the Tambacounda, Kedougou, and Kolda regions where food insecurity is higher. Senegal's production statistics indicate 153,000 MT of maize produced in 2010 (down from previous years). The production base is composed of a mix of large producers (>4ha) and smaller producers spread around the SFZ with a current concentration north of the Gambia border. A limited portion of the local production is marketed through the informal food trade, leaving the supply needs of the animal feed and human food processing industry to be met mostly by imports (exceeding 110,000 MT) from origins that are able to meet their stringent quality standards and logistics requirements at a competitive price.

Since 2009, PCE has been working to improve the capacity of local producers to tap into the opportunity to sell to animal feed and food processor companies. This involves improving cost competitiveness, quality and consolidation logistics of locally produced maize, in order to offer a reliable substitute to imports. This market niche has the potential to absorb production from as many as 40,000 farms. Achieving the structuring of a competitive Senegalese maize value chain will open a new income opportunity for local farmers and contribute to the country's food self sufficiency: in terms of inputs for the livestock industry as a whole and poultry in particular, as well as for a range of processed foods.

Millet, with an estimated 1,050,000 ha under cultivation in 2009/2010, is the most cultivated cereal in Senegal. The prevalence of millet across the country and its resilience under varying climate conditions makes it a strategic cereal from a food security perspective. Main production zones include the Peanut basin (Kaolack, Kaffrine, Fatick, Diourbel, Thies) and Eastern Senegal (Tambacounda, Kolda, Kedougou) involving 370,000 rural households. At 770 kg per ha, yields achieved on average by producers are very low and represent one third of the potential of varieties developed by research. Currently certified seeds of improved varieties are used by less than 5% of producers, fertilization is generally non-existent and infestations of *Striga hermonthica* affect 50% of farms reducing yields by 50%. The resulting 800,000 tons produced are for the most part destined for self-consumption by farm households, leaving 20% or an estimated 150,000 ton surplus marketed through informal wholesale networks consolidating production through rural markets (loumos). Successful farmer led consolidation models have emerged but remain exceptions as the production base remains disorganized and farmers resort to spot marketing through the loumos. The growth potential for commercial millet is limited to the processed cereal segment currently estimated at less than 20,000 tons and export niches targeting emigrated Africans and organic feed buyers. Processing is carried out by thirty semi-industrial units based in Dakar, Thies, Touba, Louga and Saint-Louis, supplied through direct sourcing or through wholesalers. Both processors and wholesalers contend that significant quality issues exist.

USAID/PCE's value chain interventions are thus designed to address the challenges specific to each value chain. Our VC assistance is wholly within the two FTF geographic priority zones. However, the coastal and western regions (Dakar, Kaolack, Touba, Thies and Saint-Louis) are the most important markets for cereals. Thus FTF investments through PCE will continue to have impacts on supply channels to the country's urban centers, reinforce the country's food security and generate other positive externalities beyond the immediate beneficiaries. For example, productivity gains in maize will help to satisfy both the consumption needs in SFV zone households and the burgeoning livestock feed sector and industrial fortified flours, culinary, and enriched supplementary food sectors amongst others. Strategically, USAID support to maize contributes to the animal feed sector by reducing production costs and increasing the competitiveness of value chains like dairy and poultry, and contributes to the modernization of the broader livestock sector.

USAID/PCE Strategy

The USAID/PCE value chain support program is working on an extensive geographic scale across the rice and maize value chains. Efforts in these two value chains touch on virtually all aspects and constraints including seeds, field productivity, quality, logistics performance, and facilitation of farmer linkages with markets that, when combined, demonstrate strong potential for rolling back the country's dependence on imports. Indeed, after two seasons in the maize value chain we already see a dramatic jump in quality and productivity and industries began procuring locally. Our interventions in millet are restricted to a smaller zone and PCE focuses on constraints to expanding the relatively small local market for processed millet.

The project's **value chain approach** focuses on strengthening and structuring the relationships between the core supply chain actors composed of industrialists, distributors, millers, consolidators and producers. Over 30 cost-sharing partnerships are in place this year with a wide range of entities that include traditional agriculture consolidation and/or milling enterprises, farmer cooperatives and committed non-profits. These partnerships are the primary conduit for outreach to tens of thousands of farmers. But the approach goes well beyond simple outreach on farming techniques. The partners are learning with USAID/PCE support how to put in place structured and mapped networks of farmers and through that process are developing their capacities to serve as quality-assurance and logistics hubs that are essential to beating out the highly organized cereal imports systems.

The partnerships for farmer outreach and product consolidation are central to sustainability of the entire system. The partners have worked with PCE and with producer groups to draw up formal contract agreements. The introduction of formal contractual arrangements between consolidators and producers leads to increases in bank credit mechanisms thus overcoming through private means the perennial challenge of having sufficient seed and fertilizer available at the right moment. These structured relationships result in stronger vertical integration. The participating farmers and companies are emerging as drivers to increased cereal productivity and quality standards. Positive market outcomes (more sales, reimbursement of loans) build the capacity of local producers, improve the conditions for success within value chains and increase the share of agricultural processing by domestic agri-businesses.

To be effective, USAID/PCE has adjusted its implementation strategy to the specific context of each value chain. The following present the thematic activities and implementation approach adopted by USAID/PCE to contribute to FTF strategic objectives for the rice, maize and millet value chains.

Irrigated rice

Currently, the key driver for impacting productivity in the rice value chain is fostering the ability of actors to generate a consistent and sustained supply of quality rice, with optimal processing yield and which meets consumer demands. Irrigated land developed and rehabilitated by the USG (MCC in particular), the GOS, and other donors will become more efficient from input to market, through the adoption of a market focused value chain approach by beneficiaries. USAID/PCE support to the irrigated rice value chain in the SRV therefore aims at bringing supply chain performance up to par with the imported rice and promotes the integration of the SRV into the sourcing strategy of large-scale distributors servicing urban consumer markets of greater Dakar and regional capitals.

To this end USAID/PCE has selected the following strategic interventions to improve value chain management practices for irrigated rice:

- Promote the adoption and dissemination of **improved aromatic Sahel varieties** across the SRV to help the production networks position themselves on growing rice consumer trends.
- Train farmers involved in contract farming on field level **paddy rice quality standards** and associated post harvest practices.
- **Strengthen the capacity of rice production consolidators** to monitor contracted farmer groups, develop the adequate production and quality management tools to monitor field productivity, reduce transaction costs through planned logistics and trace the key quality parameters of paddy rice supply.
- **Foster market linkages** and the development of adapted contracting mechanisms along the irrigated rice supply chain involving producers, consolidating organizations, millers and leading distributors.

- Support the development and dissemination of **commercial norms and standards** for milled rice reflecting rice distributor's expectations and build the capacity of industrial and small-scale rice millers to adapt their processes and production monitoring tools to achieve consistent quality output meeting consumer demand.
- Provide technical assistance to value chain actors for the development and adoption of a **paddy rice storage Code of practice**, which are compatible with third party warehousing, and inventory credit mechanisms.

The above value chain strengthening interventions designed for the irrigated rice sector will be **complemented by** project interventions described in subsequent sections covering certified seed supply, infrastructure development and access to capital initiatives.

Rain fed rice

USAID/PCE's strategy targets the improvement of rain fed rice productivity as its central concern. The project will continue to promote the large-scale dissemination of NERICA varieties and other adapted varieties in all zones presenting the adequate agro-climatic profile. To this end, partnerships with other programs such as USAID/Wula Nafaa and AfDB/PAPIL will be established to link a wide number of farmer groups to NERICA supply. The USAID/PCE program for rain fed rice includes the following actions:

- Secure tight linkages between producer networks with the seed supply chain actors to ensure adequate growth of supply commensurate to the evolution of NERICA market demand.
- Train producers in integrated production systems and production techniques adapted to the NERICA varieties focused mainly on land preparation, harvest and post harvest. To this end, demonstration plots and farmer exchange events will be organized in all targeted zones in collaboration with local institutional partners.
- Link farmer groups to BDS providers and buyers capable of providing milling and distribution services for the marketing of their surplus.
- Promote NERICA rice with local distributors and the more mature maize consolidating networks to get them involved in the development of a local rice supply chain in the SFZ.

The rain fed rice program will be supported by activities at the seed VC level promoting certified NERICA seed production, structuring supply through the reinforcement of the recently created association of NERICA seed producers, REPROSENER, as well as financing mechanisms developed by the access to capital component of USAID/PCE, designed to secure input funding for commercial seed programs.

Maize

USAID/PCE's strategy for maize targets the development of strong producer networks capable of linking with wholesale consolidators and processing companies to supply these channels with competitive quality maize – with a total objective of substituting 30% of the processing industries' annual maize requirements (about 35,000 tons). Project interventions continue to focus on rain fed areas in the SFZ along the Kaolack, Kaffrine, Tambacounda and Kolda axis. PCE is pursuing partnerships to integrate Kedougou farmer groups into this approach. Maize farmer networks are structured around lead farmers who will group the production of nearby smaller scale farms. The lead farmers are field-level contact points for large-scale consolidators who are positioned to supply industrial processors with quality maize. USAID/PCE interventions will be carried out through these networks and engage value chain actors to achieve the following:

- Secure tight linkages between producer networks with the seed supply chain actors to ensure adequate growth of supply commensurate to the evolution of market demand.
- Improve production practices including the promotion of quality composite variety seeds and the introduction of hybrids, improved fertilizer-use efficiency, conservation farming and other soil management technologies to increase fertilizer and rainwater-use through training, doubling yields for composite varieties from 1.6 MT/ha to 3 MT/ha.
- Increase area of maize production linked to market contracts from 2,000 to 15,000 hectares managed by 15,000 participating farms through improved outreach, the development of

production planning and monitoring management tools and associated contracting/financing mechanisms.

- Develop and implement product norms and standards reflecting the requirements of the processors and include them as the basis of supply contracts within the producer networks.
- Improve post harvest methods and productivity through the promotion of mechanized harvesting and kernel processing and complementary equipment financing programs (see access to capital),
- Develop streamlined consolidation logistics and stockpiling ability through a maize storage Code of practice providing guidelines for the management of grain inventories compatible with third party management and inventory credit mechanisms.

The above value chain strengthening interventions designed for the maize sector will be complemented by USAID/PCE interventions described in subsequent sections covering certified seed supply, infrastructure development and access to capital initiatives.

Millet

To target the most food security vulnerable people of Senegal, and benefit a high number of women processors, USAID/Senegal will contribute under Feed the Future to increase millet production by 35 percent, with a potential impact on a total production of 1M metric tons by 2015. As a crop with national coverage and consumption, the improvement of millet productivity through the adoption of certified seeds and soil fertility management practices, will contribute significantly to this food security objective. Furthermore, sustainable access to high quality adapted seed material will improve farmer responsiveness to climate variability. Finally, higher yields will directly impact farmer income or will free up areas for complementary commercial cereal crops (millet or others) and improve the financial income of rural households. As high-yield (and high viability) certified seed becomes available through USAID/PCE supported seed producers supplying value chain networks, additional households will benefit from increased food security and increased woman- owned micro-processing opportunities. USAID/PCE's contribution to the FTF strategy is the improvement of productivity and climate resilience of the farmer base within selected zones of the SFZ in Eastern Senegal, while concurrently structuring and streamlining marketing channels supplying cereal processors targeting urban centers such as Dakar, Thies and Touba.

The project will:

- Provide direct support to certified millet seed producers in accessing foundation seed material, financing production and accessing the services of newly constructed seed testing laboratories.
- Promote the use of certified seed varieties through field demonstrations integrating them with improved production practices, mainly centered on the reduction of Striga Hermonthica, the application of conservation farming techniques and post harvest technologies to improve grading.
- Pilot and mainstream contract models integrating producer-wholesaler-processors for the supply of quality raw material.
- Support the creation of improved market infrastructure addressing quality and logistics issues in targeted loumo towns.

Local institutions, NGOs and farmer organizations will be capacitated by USAID/PCE to ensure the involvement of value chain actors at all levels in the implementation of these activities. These direct collaborations will serve as a platform for PCE to extend market links, share best practices and leverage support with several other programs promoting millet across the SFZ and the region such as USAID/Wula Nafaa, IFAD/PAFA, AfDB/PAPIL, USDA/PRODIAKT and USAID/West Africa's EATP.

FY 2011 Results (Value Chains)

Scale-up: In 2011, with the re-focusing of its activities on rice, maize and millet to meet the FTF agenda, the project made it a priority to scale up the impact of initial pilots. To this end, the project established cost-shared protocols with 35 organizations across the irrigated rice (11 networks), rain fed rice (9), maize (6) and millet (2)/sorghum (7) value chains. These organizations were selected on the basis of their capacity to provide on-going BDS and training to a web of village level farmer organizations beyond the

life of the project. A majority of them are directly engaged in building sustainable commercial cereal value chains involving contractual arrangements with farmers covering seed and fertilizer supply, fixed price and volume marketing commitments and adequate financial backing:

- The 11 irrigated rice networks, grouping a total of 20,000 farmers, are currently engaged in the demonstration of aromatic rice on 240 hectares on more than 50 sites spread throughout the SRV from Saint-Louis to Podor and will contract their farmer base for the upcoming rain season harvest based on defined paddy rice quality parameters.
- The 9 rain fed rice networks, composed of grassroots NGOs and local ANCAR teams, are supporting SFZ farmer organizations in promoting high yield Nerica during the 2011 rain season through 200 x 0.5 ha demonstrations doubling up as DISEM certified seed multiplication sites. In parallel these networks aim to link participant farmers into commercial programs of Nerica with traders present in the zone's urban centers.
- The successful maize commercial program has grown from being driven by a single firm and a contracted base of 1200 tons to 6 different commercial entities having set up for the 2011 rain season contract engagements, totaling 12,000 tons with a farmer base of 6000+ farmers across the SFZ, from Fatick to Sedhiou.
- The millet/sorghum program has grown from a small set of field trainings in striga control and conservation farming to a series of field demonstrations piloted by ANCAR through local farmer groups, as well as a subset of sorghum grower network which have gained organic certification for animal feed and are positioning themselves to supply the local industrial feed market.

Market development: The sustainability of USAID/PCE's value chain work hinges on successfully connecting farmers to long-term growth markets. Currently USAID/PCE work has enabled promising linkages and initial pilot contracts with leading rice importers and distributors who are interested in building stable sourcing from SRV suppliers as an alternative to imports. Similar interest has been raised on SFZ region urban centers with smaller scale traders interested in building a Nerica supply once surplus develops. In millet linkages have been established with small scale processors to contract supply and in sorghum, an organic certified export pilot has proved successful to the point of being scaled up to include 5000 farmers and has captured the interest of local feed processors. All these supply chains should eventually progress to the integration level of the very successful industrial maize program which has been able to enlist all of the major industrial buyers as contracting partners with a keen interest in building up volume.

Farm productivity: The widespread supply base of these value chain networks provides a strong communication channel for the promotion of farm level productivity enhancing technologies and best practices, raising the quality and value of local output. In 2011, USAID/PCE worked with its partner network to showcase newly homologated cereal varieties with a strong market potential: AfricaRice's aromatic Sahel rice series (S177, S328 and S329) and its Nerica 1 and 6 high productivity upland rice, maize and millet varieties successfully tested by USAID/WASASP, selected commercial maize hybrids and low-tanin sorghum adapted to animal feed. These demonstrations are paired with best practice trainings to secure optimal yields. Partnerships were developed with equipment and input suppliers to demonstrate land preparation equipment required to scale up maize production as well as a mechanized seeder adapted to animal traction suited to upland Nerica rice. Soil fertility preservation practices were demonstrated to maize and millet farmers as well as the effect of organic fertilizer. Finally, beyond the demonstration and mainstreaming of higher yielding varieties and adapted cultivation practices, maize farmers recognize the determining effect on productivity of securing a timely delivery of inputs through contracted supply arrangements with consolidators, as promoted by USAID/PCE, rather than waiting passively for the attribution of subsidized inputs.

Contract models: The first set of contracts in the maize program was closed out in the first quarter of calendar 2011. Although volume and price commitments relative to credit reimbursement were met 100% by the farmer groups, issues remain to ensure that farmers also meet commitments beyond this minimal requirement. In the irrigated rice sector, contracts were developed between the newly formed SPCRS and the farmer cooperatives supported by ASPRODEB however these were not fulfilled due to lack of funding of the SPCRS. Prior to the 2011 rain season, USAID/PCE organized capacity building programs

in the maize and rice sector that generated a second generation of farmer contracts with specific clauses concerning the pricing of purchases beyond the credit reimbursements.

Quality standards and post harvest systems: USAID/PCE supported the maize buyers participating in the 2010 rain season program in the acquisition of 6 maize dehusking/shelling units that were positioned at village marketing points. Harvest in maize was carried out to meet specific quality requirements set by industrialists with on-site shelling and direct bagging improving the quality of the cereal. Post season debriefings showed general satisfaction by the animal feed sector, however the food processor needed to add additional cleaning steps on some lots. The 6 USAID/PCE network agreements for maize in 2011 all provide for the acquisition of such equipment to be used during the upcoming harvest, due to begin end of November 2011. Network agreements for the 2011 rain season for maize and rice also include farmer training in basic farm gate norms for maize and paddy rice. These will prepare maize and rice farmers for systematic testing of delivered lots, including the testing of humidity levels using portable digital testers. Systematic testing results will be captured into the individual farmer profiles of the network databases and set the basis for traceability.

FY 2012 Objectives

Scale, outreach and access: In FY2012, value chain development activities will support successful networks to expand their commercial outreach by enlisting additional farmers around currently contracted village level groups and expanding into new zones. USAID/PCE support to the maize, irrigated and upland rice commercial networks for the 2012 rain season will ensure more remote small farmer populations are integrated in the supply chains and gain access to improved certified seeds, timely input distribution, efficient post harvest and financial services. A particular focus will be to ensure equitable access by small farmers in the SRV and SFZ to the now popular aromatic Sahel and upland Nerica varieties. This will be done through the expansion of the dual-purpose *demonstration/multiplication* site format, as well as through cost share partnerships with the seed producer associations to ramp up availability of popular varieties.

Markets: In FY2012, USAID/PCE will put a priority in ensuring the local markets are aware of the availability of differentiated high quality cereals such as the Sahel aromatic rice produced in the SRV, quality yellow maize including new hybrid types, upland Nerica, well graded millet and low tannin sorghum. USAID/PCE will support communication events and focus groups on market centers and field visits by leading buyers. The integration of end market buyers into the supply chain will be intensified on 2012 as USAID/PCE Value Chain staff will get leading urban distributors of rice, maize and millet/sorghum to contract with local farmer networks. Collaboration with the maize industrial buyers and the *Société de Promotion et de Commercialisation du Riz Sénégalais* will program local industry purchases and help local producers set seasonal targets.

Field productivity: Main field productivity drivers successfully demonstrated in FY2011 and adopted by farmer populations linked to the project's partner networks are: certified seeds of adapted varieties, adequate and timely fertilizer applications and soil fertility management. In 2012, USAID/PCE will leverage the reach of the 2011 efforts by expanding demonstrations and sensitization beyond the boundaries of existing contracted networks and by partnering with like programs with similar farmer outreach activities. Specialized technology demonstrations and pilots by BDS providers through the existing networks will be encouraged by USAID/PCE. It is expected that themes such as specialized complex fertilizer formulations, hybrid maize varieties and harvesting equipment will be included in the 2012 program.

Quality standards: Work initiated since the beginning of the project will feed USAID/PCE's work in 2012 which will intensify the training of farmers in the application of farm gate quality testing and traceability, in the context of value chain contracts between consolidators and farmer groups. The objective will be to have detailed quality testing and documentation procedures included in the contracts for the 2012 rain season for maize and irrigated rice program, and the systems to trace compliance on a farm by farm basis. Lessons learned from the organic sorghum program in terms of product traceability and quality assessment will be migrated into the network management practices for rice and maize. The introduction of these concepts to upland rice farmers through training and pilots with the more market-

ready groups will be included in the 2012 season network agreements. In the case of irrigated rice, USAID/PCE will partner with the *Société de Promotion et de Commercialisation du Riz Sénégalais* and the programs involved in the sector such as JICA and AFD, to develop and implement a generally accepted *Code of practice* setting quality standards for milled rice and monitoring processes and templates adapted to the context of mid- and small-scale millers.

Post harvest and logistics: The successful 2010 rain season commercial maize program was harvested over 2 months ending mid february 2011, with the cereal shipped directly to the industrial buyers for immediate processing. For the 2011 rain season harvest and subsequent years, harvests will exceed spot industrial uptake capacity, and consolidated stockpiling will be necessary to avoid price crashes and spoilage. Relying on farm level storage bears significant quality deterioration risks, intrinsically inefficient transport logistics and severely limit access to inventory collateral financing methods. The same issue will present itself quickly for irrigated rice commercial programs where Dakar distributor contracts will require millers to stock-up and operate during the off-season. However, despite positive market signals, the construction of storage capacity to the scale required by these opportunities, is for the time being considered a risky operation and is beyond the means of project infrastructure investments. To get the ball rolling, USAID/PCE will capitalize on the completed rehabilitation of the Sodefitex grain silo (1000MT), as well as on getting industrialists and consolidators to secure the same public warehousing arrangements as those being used by maize importers. In the case of irrigated rice USAID/PCE will engage the Spanish Cooperation to pilot third party stock piling based on recently constructed 1,500 ton paddy rice warehouses. In each case USAID/PCE will work with consolidators and buyers to establish a *Code of best storage practices* which would be accepted by banks willing to enter into inventory financing programs. Potential private ventures to invest in grains storage will be pursued by the USAID/PCE infrastructure and Access to capital activities.

Value chain integration : USAID/PCE will continue to support contract farming approaches across the rice, maize and millet/sorghum value chains. In the more mature networks, emphasis will be on setting workable pricing arrangements in the currently volatile context. USAID/PCE will support emerging grassroots farmer groups with demonstrated management skills to contract with more than one consolidator or directly with industrial buyers, if their collective volume permits. USAID/PCE technical staff will support the networks in improving their production planning and monitoring skills, building up on the geo-referenced databases initiated in 2011.

Value chain sustainability : Beyond the transfer and dissemination of value chain productivity enhancing technologies and know-how, the central concern of USAID/PCE for FY2012 onwards is to ensure partner networks and linkages fostered between actors remain commercially and institutionally sustainable, and will grow beyond the project's end in November 2013. This means that once contractual/financing frameworks are set and tested, USAID/PCE will systematically pull back from its initial catalyst role, to that of counsel and guidance as the actors learn to sort out issues independently. In FY2012 this shift in the positioning of the technical assistance will be most visible in the maturing maize value chain. However this beneficiary empowerment concern will be present in the implementation of the commercial programs for irrigated and upland rice as well as millet/sorghum.

Table 1 - Value Chains Planned Activities and Expected Results

Activities and tasks	Expected Results
Irrigated Rice Value Chain	
<p>1. Aromatic rice: Introduction on a commercial scale of recently approved Sahel aromatic rice varieties 177, 328, 329 through:</p> <ul style="list-style-type: none"> - cost share support to UNIS-Nord for the accelerated multiplication of certified seeds of aromatic varieties; - field demonstrations of aromatic varieties across the Senegal River Valley through PCE partner networks. - Market development activities (consumer auctions, focus groups) carried out in collaboration with Dakar wholesale distributors involved in aromatic rice import and distribution. 	<ul style="list-style-type: none"> - Farmers of partner networks have access to certified seeds of aromatic varieties for their commercial production program. - Small farmers working on collective perimeters and women’s groups throughout the Valley are aware of the varieties and access to certified seeds. - Commercial programs and specific brands are developed for local aromatic rice varieties. - Aromatic rice production reaches 5,000 ha and 20,000 Tons.
<p>2. Paddy rice norm: Training to disseminate and implement through partner networks improved paddy rice post-harvest practices and systematic quality monitoring of shipments against critical criteria: humidity level, homogeneity, and foreign matter level.</p>	<ul style="list-style-type: none"> - Introduction and adoption of improved post harvest practices by partner farmer networks. - Adoption by farmer networks of quality monitoring practices: inclusion in contract formulation and use as a standard performance-monitoring tool.
<p>3. Rice value chain contracts: Partner consolidator networks are provided technical and market linkage support to establish and manage value chain contractual schemes involving Dakar wholesale distributors, local rice mills, paddy rice consolidators and rice farmers (including value chain financing arrangements – see Access to Capital section).</p>	<ul style="list-style-type: none"> - Partner consolidators have developed capacities and information tools to plan, manage and monitor a supply chain involving a wide producer base. - Smaller scale GIE’s, Unions and Cooperatives sign and manage value chain contracts with one or more consolidators. - PCE supported contractual arrangements involving urban wholesalers reach 30,000 tons of white rice.
<p>4. Rice milling quality code of practice: Mid-scale rice mills, involved in contractual programs with urban wholesalers, and small-scale millers operating in the Rosso, Richard Toll and Ross Bethio clusters, are supported by PCE to develop and implement internal production and quality management practices.</p>	<ul style="list-style-type: none"> - A code of practice covering standard production management and quality monitoring is developed and adopted by mid-scale millers. - Mid-scale rice mills implement production planning and monitoring tools. - Mid-scale rice mills implement quality-monitoring tools as part of the order-fulfillment process of ongoing contracts. - The milling standard, developed for mid-scale rice mills, is introduced to small-scale millers operating in the Rosso, Richard Toll and Ross Bethio clusters.
<p>5. Paddy rice inter-season stockpiling: Rice value chain actors (wholesaler buyers, millers,</p>	<ul style="list-style-type: none"> - A Code for best storage practices is developed by consolidators, millers and distributors to be

Activities and tasks	Expected Results
consolidators, farmer organizations) develop inventory consolidation, management and collateral financing methods enabling the stockpiling of paddy rice to ensure continuous supply.	<p>acceptable under inventory financing programs.</p> <ul style="list-style-type: none"> - A pilot paddy inventory-financing program is developed for 5,000 tons of paddy rice and implemented by PCE partner networks.
Rainfed Rice Value Chain	
1. Access to certified NERICA seeds: Cost share support to REPROSENER (association of private NERICA seed producers) for the accelerated multiplication of certified seeds.	<ul style="list-style-type: none"> - An increased number of farmers across the SFZ access certified seeds of NERICA for their commercial production program.
2. Expand NERICA production: Promotion of the adoption of NERICA varieties on a commercial scale through the expansion of field demonstrations of NERICA and associated rain fed rice production technologies across the South Forest Zone through PCE supported and other development partner networks.	<ul style="list-style-type: none"> - Small farmers working on collective perimeters and women's groups throughout the SFZ are aware of the performance of NERICA varieties and include it in their production program. - NERICA rice production reaches 3,000 ha in 2012 for a forecast harvest of 9,000 Tons.
3. Market development: NERICA market development activities (consumer auctions, focus groups) carried out in collaboration with Regional and Dakar wholesale distributors involved in rice import and distribution.	<ul style="list-style-type: none"> - Commercial potential for NERICA varieties against import varieties is assessed and communicated. - Commercial programs are developed for NERICA on a regional level.
4. Value chain contracts for rainfed rice: Partner consolidator networks establish and manage value chain contractual schemes with NERICA farmers to contract, process and market surplus production (including value chain input financing arrangements – see Access to Capital section).	<ul style="list-style-type: none"> - Partner consolidators sign contract with NERICA farmer groups in the course of VC input financing schemes. - Smaller scale GIE's, Unions and Cooperatives sign and manage value chain contracts with one or more consolidators. - PCE supported contracts involving regional wholesalers reach 1000 tons of white rice.
Maize Value Chain	
1. Sustain growth: Support to maize consolidator networks (either PCE supported or with support from partner development organizations) to strengthen and expand the supply base as well as the scope of BDS provided to the farmers within contracted networks.	<ul style="list-style-type: none"> - Expansion of the number of small producers from the SFZ engaged in commercial maize production. - Expansion of mechanization: land preparation, field harvesting and post harvest processing. - Smaller scale GIE's, Unions and Cooperatives sign and manage value chain contracts with one or more consolidators. - Supply chain databases used for production planning, input financing programs, harvest programming and quality monitoring. - Contracted commercial maize program for 2012 rain season reaches 15,000 T (expected total marketed output of 30,000 T).

Activities and tasks	Expected Results
<p>2. Foster industry-led innovation: Demonstration of improved production practices involving hybrid varieties, improved fertilizer formulations, mechanized field preparation and soil fertility preservation practices.</p>	<ul style="list-style-type: none"> - Demonstration sites and farmer training program set up in collaboration with BDS and product suppliers through VC farmer networks. - Identification of successful varieties and technologies for expanded use and funding in subsequent commercial program.
<p>3. Market integration: Collaboration of PCE with Cadre de Concertation Maïs to improve market integration of industrial end buyers through field visits, joint procurement planning sessions with consolidators, production monitoring, pricing, logistics network planning and development.</p>	<ul style="list-style-type: none"> - Production by the industrial buyers of a procurement plan for locally purchased maize. - Establishment of a set of quality criteria to be met by local production. - Development of joint storage and logistics options and assorted investment plans. - Joint lobbying by Industry and local networks on taxation and transfer issues (subsidies) of concern to the maize industry.
Millet/Sorghum Value Chain	
<p>1. Productivity: Support to farmer groups and Unions in the SFZ either through PCE or associated development partner support to promote improved production practices (certified seeds, soil fertility management and striga control) with their production base.</p>	<ul style="list-style-type: none"> - Smaller scale Millet/Sorghum farmer GIE's, Unions and Cooperatives sign and manage value chain contracts with one or more processors. - Increased adoption of certified millet seeds and improved cropping practices by millet farmers within targeted networks. - Increase in marketable surplus for millet/sorghum producers participating in commercial programs.
<p>2. Market integration: Market linkage support by PCE for millet and sorghum producer groups to open and expand formal market channels.</p>	<ul style="list-style-type: none"> - Organic Sorghum value chain expands to 3000T. - Other cereal marketing programs developed to be supplied by local farmers for the local food and feed buyers.

2.2. Rural Infrastructure

Context

The lack of adequate rural infrastructure is a key limiting factor in Senegal's local cereal value chains. The long-term sustainability of the rice, maize and millet/sorghum value chains require that the actors meet critical harvesting, storage and processing issues. USAID/PCE approaches the three cereal value chains with from a perspective of developing integrated solutions that will allow broad networks of smallholder farmers to achieve a scale of consolidation that makes them competitive with imports.

Post harvest infrastructure: The speed and efficiency of field harvesting, a condition for cereal quality and cost-efficient logistics, is currently a constraint for most small farmer based networks. Relying on traditional methods of threshing rice and shelling maize, often directly on the ground, is very time consuming, delays marketing of the cereals and will often result in the inclusion of foreign matter, if not

mycotoxins. Basic thresher and shelling services are not readily available and limit the capacity of farmers to consolidate large volumes for shipment. In the case of millet, current methods require processors to perform additional basic grading and cleaning before they can process the cereals – adding additional costs.

Storage: The lack of storage capacity, both for seed and paddy rice, limits the capacity of the SRV rice value chain actors to provide Dakar and other urban distributors with a continuous supply of white rice. For the time being, the SRV's limited stockpiling capacity imposes on larger mills a "2 x 3 months" production calendar, corresponding to two harvest seasons, starting in November and May each year. Comparatively, imports are available year-round and importers have sufficient storage space available in Dakar to secure continuous supply. Further, imported rice stocks are placed under third party storage and considered by banks as secure collateral for the underlying inventory credit facility. Currently the lack of adequate storage facilities in the SRV does not permit such collateral practices to stock up on paddy rice for year round milling. The same can be said for maize and millet/sorghum. In the case of millet/sorghum, traders will either stock-up or rely on the progressive release by farmers of their surplus stock stored in their own homes. For maize the situation is critical as there is only one harvest season and industrial buyers are not used to stockpile for their own needs but proceed to progressive purchases from importers' periodic orders. So beyond basic farmgate storage facilities is the need for a consolidation system that will enable the stockpiling and financing of the yearly harvest, in which all the supply chain actors have a role to play.

Processing: Most of the large rice mills in the Senegal River Valley are in need of repair and improvements if they are to be in a position to compete with imports in productivity, scale and quality. Significant equipment purchases are required and are deemed beyond the financial capacity of many of these enterprises. However a few entrepreneurs have been able to develop the throughput, which has enabled them to successfully fund their expansion. Small-scale millers operate as clusters in SRV centers such as Ross-Bethio, Rosso and Richard Toll. Such small mills have populated the center of these towns to the extent of spreading rice to dry on public roads, with adverse effects on quality. These clusters are nevertheless able to provide farmers with responsive milling services on small volumes, either for self-consumption or for proximity purchase and distribution by informal traders. Currently these millers are estimated to process 60-70% of the rice produced in the SRV – which is consistent with the fact that SRV rice consumption is confined to the SRV and regional informal markets. In the SFZ, commercial milling is not well developed as most of the rice is grown for self-consumption. Marketable surpluses of upland varieties such as Nerica will change this situation and there will be a growing need for competent small-scale milling to develop to meet regional demand, as has been the case in the SRV. Finally small scale processing of cereals provides employment to a large number of women, for example milled maize flour for infant formulas or rice parboiling are being introduced and developed in production zones by entrepreneurial women's groups.

USAID/PCE Strategy

USAID/PCE is strategically investing to improve the number and quality of milling, processing and other post-harvest processes from field to market. Our support is designed to respond to the specific circumstances of each value chain and zone.

For **irrigated rice**, USAID/PCE strategy will focus on the following types of support in the Senegal River Valley:

- Promotion of financing of **private projects for paddy rice warehouses** which can serve as the basis for collateral financing, with local banks and donors involved in large-scale infrastructure (the World Bank, Spanish Cooperation, JICA).
- Identification and pilots with local millers to adapt available technology to improve their productivity and processing/energy efficiency as well as their capacity to grade the end product to market needs.
- Collaboration with local women's groups to support small-scale rice processing such as parboiling.
- Development, in collaboration with local small-scale millers and local authorities, of a processing platform concept in the town of Rosso to improve the existing operating conditions of millers and support them in presenting the project to SRV investment programs.

In the SFZ, USAID/PCE will position pilot rice milling equipment to enable participant groups to process and market their initial surpluses and, based on the demonstrated results, scale an investment or partnership strategy for the following season.

In the case of maize, USAID/PCE will support farmer groups and consolidators in introducing mechanized harvesting services such as moveable de-husking/shelling units or harvesting combines. This will be done initially through cost-share initiatives to pilot the technologies, and increasingly by supporting the acquisition of equipment through leasing and other long term financing arrangements. Cost share maize storage investments will be initiated with consolidator partners to ensure an initial storage capacity. These are to be followed up by supporting the private sector in piloting large-scale inventory financing mechanisms to absorb seasonal output. These systems will need to involve existing industrial buyers. USAID/PCE will support small scale maize food processing, mainly for infant formulas through a grant process.

For millet and sorghum, USAID/PCE will work with processors, traders and farmer groups to introduce cereal cleaning and grading equipment adapted to the requirement of the end markets.

FY 2011 Results

Post harvest: Maize de-husking and shelling equipment (6 units) was tested during the 2010 rain season harvest and 20 additional units will be positioned during the 2011 season's harvest next December, through cost share agreements.

Storage: Cost-share complementary storage projects in maize and millet/sorghum were completed in the SFZ, including the renovation of the SODEFITEX silo that provides a 1,000-ton storage capacity in Tambacounda.

Processing: Support to several rice millers focused on developing bankable improvement and expansion projects to boost quality and output. In the specific case of Coumba Nor Thiam, a bio-gas generating unit was installed with USAID/PCE cost share support, which reduced the mill's energy bill significantly. USAID/PCE also engaged the Rosso small-scale millers to develop a pre-feasibility for the development of a platform where the millers could re-locate. Grants have been awarded to three women's groups involved in maize processing (infant formulas) to improve their equipment and management capacity.

FY 2012 Objectives

Post harvest: During the 2011 season maize harvest, all USAID/PCE network partners in the SFZ will promote improved maize de-husking and shelling technologies. In the perspective of the 2012 season, USAID/PCE will then support farmer networks willing to adopt mechanized harvesting technologies secure the necessary financing such as leasing and other value chain financing arrangements.

Storage: For the SRV rice and the SFZ maize commercial programs, USAID/PCE will work with the industry (SCPRS in the case of rice and maize industrial buyers and consolidators) to initiate partnerships (private or PPPs), for the promotion of cereal storage projects. This will result in pilot operations and subsequently into business plans for public warehousing projects prepared and submitted for funding by public and private institutions.

Processing: In FY2012 USAID/PCE will have a particular focus on building up rice milling capacity in the SRV by getting mid-size millers to finance their upgrade and increase in capacity through adapted financing mechanisms developed with assistance from the project's capital access team. For small scale millers, USAID/PCE will pursue the development of the Rosso small-scale milling platform with the objective of gaining buy-in from other development partners such as the World Bank willing to invest in such infrastructure. USAID/PCE will also support several cost-share pilot Nerica rice milling points in the SFZ in order to demonstrate the commercial interest and prepare for a subsequent scale-up in private investment. Finally the project will test, in partnership with USAID West Africa's E-ATP project, a millet grading facility to be managed jointly by local cereal traders to supply local processors and distributors.

Table 2 - Rural Infrastructure Planned Activities and Expected Results

Activities and tasks	Expected Results
<p>1. Maize harvesting: Promotion of improved maize de-husking and shelling technologies with maize farmers in the South Forest Zone.</p>	<ul style="list-style-type: none"> - Pilot maize de-husking and shelling equipment set up by participating networks to demonstrate technology to SFZ farmer groups involved in the commercial maize VC program.
<p>2. Post harvest equipment acquisition: Promotion of the acquisition of mechanized agriculture, harvesting combines and post harvest equipment by farmer groups and consolidators through leasing and other value chain financing arrangements. (See Access to capital section)</p>	<ul style="list-style-type: none"> - Lead firms and farmer groups participating in Value chain network acquire farming, harvesting and grading equipment through private financing mechanisms.
<p>3. Cereal public storage: Identification and support to private firms and donors interested in investing in cereal public storage installation projects - either rehabilitation or new constructions – destined to service the rice, maize cereal sectors. (see Access to capital section)</p>	<ul style="list-style-type: none"> - Creation of partnerships, private or PPPs, for the promotion of cereal public storage projects. - Business plan for public warehousing projects are prepared and submitted for funding by public and private institutions. - Implementation of cost-share pilots to demonstrate feasibility.
<p>4. Mid-scale rice mill expansion: Support to mid-scale rice millers in upgrading their capacity through the acquisition of new units or the extension of existing ones – such projects funded through leasing and other mid-term credit mechanisms. (See Access to capital section).</p>	<ul style="list-style-type: none"> - Several mid –scale rice millers upgrade their milling equipment through private funding.
<p>5. Small-scale rice milling infrastructure: Small scale rice milling clusters in the SRV are supported by PCE to improve current operating conditions and practices:</p> <ul style="list-style-type: none"> - Finalization of Rosso miller platform concept and promotion with local authorities and infrastructure funding programs (see Access to Capital). - Introduction of grading technologies adapted to small-scale mills. (Concurrently, development of a leasing or midterm credit mechanisms to fund acquisition of grading equipment – see Access to capital section). 	<ul style="list-style-type: none"> - The Rosso miller platform project design is completed and being discussed by development partners. - Rosso, Richard Toll and Ross Bethio miller clusters develop and implement technologies.
<p>6. Nerica rice mills: Promotion of small-scale rice milling with Nerica rice farmers in the South Forest Zone.</p>	<ul style="list-style-type: none"> - Pilot rice mills set up by participating networks to demonstrate technology to SFZ farmer groups involved in the PCE Nerica pilot.
<p>7. Millet/Sorghum grading: Millet and Sorghum traders test cereal cleaning and grading equipment in facilities situated at Loumo level (point of consolidation).</p>	<ul style="list-style-type: none"> - Pilot unit tested by a group of local traders.

2.3. Seed Sector Development

Context

The productivity and competitiveness of most agricultural value chains depends strongly on access to certified seeds and rootstock. In the cereal sector, a central role is attributed to ISRA for the production of breeder foundation seeds and the Ministry of Agriculture's seeds division (DISEM) for the certification of base and commercial seeds to be produced by accredited seed producers.

ISRA is in charge of producing breeder seeds up to the "pre-base" stage, at which point private seed producers take over the multiplication and distribution value chain. ISRA stations, managed by the "ISRA Production" administrative unit, perform this task on an ad hoc basis, in a public service perspective. Such public sector management practices of both ISRA and DISEM limit their full integration in the VCs on a commercial basis and limit their ability to develop market based production plans, set clear pricing policies, recover costs and maintain infrastructure.

Currently, DISEM central and regional laboratory facilities urgently need to be renovated and equipment replaced to be able to play an effective role in the certification process and reach the Ministry of Agriculture's objective for DISEM certification to gain OECD recognition. Field controllers lack training to improve certification practices in order to meet higher efficiency and documentation standards. This has resulted in a limited use of quality certified seeds by farmers with consequent negative effects on commercial yields.

In addition to the unavailability of efficient certification services, actual certified seed production is constrained by outdated, inefficient seed cleaning and grading equipment, as well as inadequate treatment and conservation infrastructure. These severely limit the capacity to produce quality seeds in sufficient volume to meet commercial production needs and align with growing markets. In addition, this encourages the introduction of non-recommended varieties and slows down the introduction of improved ones.

Several value chains require the introduction of certified seeds of improved varieties to reach competitive yields. However these require effective public private collaborations result in a sustainable supply. Such collaboration is lacking which impedes the development of several value chains. ISRA and DISEM need to establish institutional arrangements with private seed producer organizations to ensure that producers access competitive and reliable supply of certified seeds.

USAID/PCE Strategy

In line with FTF objectives to increase access to certified seed, USAID/PCE supports the development of a sustainable and value chain driven seed system. For a relatively small investment in seed certification labs alone, hectares planted in high-yielding certified seed and provided with appropriate land management treatments are expected to realize a two-fold increase in yield. The strategy focuses on increasing capacity of the seed development system and production of breeder foundation seeds with ISRA and AfricaRice, and certification services by DISEM for commercial seeds. Key elements of USAID/PCE's strategy are the following:

- Secure the regional availability of certification services for commercial seeds by investing in the renovation and equipment of the laboratories under DISEM oversight – of which the Richard Toll unit in the SRV irrigated rice zone and the Kaolack unit in the SFZ has been completed.
- Complement these investments by technical support to DISEM in the implementation of management systems, which will improve the productivity of the certifying agents and ensure the proper costing of seed certification services in view of securing financial sustainability.
- Develop cost share and PPP arrangements to have the private sector contribute to the sustainable increase in seed processing and cleaning services available to the SRV rice seed producers and the SFZ maize, upland rice and millet producers.

- Work with the seed producer professional associations active in the SRV and the SFZ (UNIS-Nord, REPROSEM, REPROSENER) to plan supply and provide ISRA with long term foundation seed requirements.
- Involve the seed producer professional associations in the promotion of recently approved aromatic and upland rice varieties developed by Africa Rice and multiplied by ISRA, as well as recently approved maize and millet varieties tested by USAID/WASASP: testing consumer acceptance, introducing it to large-scale distributors and developing a multiplication program in line with expected growth.

FY 2011 Results

In FY2011, USAID/PCE completed the following activities in support of the seed sector:

- Two fully equipped seed labs in Richard Toll (SRV) and Kaolack (SFZ) were completed and handed over to DISEM management.
- Completion and validation of a technical study to define and cost the investments required for the rehabilitation of ISRA seed production units in Fanaye (SRV) and Nioro (SFZ).
- Assistance to ISRA to develop a management and accounting framework with the objective of piloting the systems at the Fanaye and Nioro foundation seed production facilities.
- Completion of construction of a privately-operated (KASEC) seed cleaning facility in Kaolack.
- Technical support that led to creation of REPROSENER (an association of Nerica seed producers) and REPROSEM (an association of maize seed producers) as coordination bodies for planning and ensuring future needs for certified seed. The project has collaborated with these organizations to develop programs aiming the acceleration of the multiplication of upland rice Nerica varieties and the commercial distribution of certified maize seeds to farmers involved in the commercial program as well as demonstrations of newly approved varieties with WASASP support.
- Support to UNIS-Nord in a cost shared effort to increase supply of three recently introduced AfricaRice aromatic rice varieties in the SRV.

All of these programs have met an enthusiastic response from farmers.

FY 2012 Objectives

In FY2012, USAID/PCE will further reinforce the components of the certified seed production system in its capacity to provide a sustainable and growing supply to the rice, maize and millet/sorghum value chains. Interventions target the following results:

- Renovation of the ISRA Nioro and Fanaye foundation seed production stations and implementation of commercial management and accounting practices as agreed with ISRA management.
- Renovation of a seed laboratory in the SFZ zone (Tamba or Kolda) to provide certification services.
- Renovation of the Dakar central DISEM laboratory according to OECD guidelines.
- Support the seed producer associations to develop strategic production programs and a procurement plan for foundation seeds to be agreed to with ISRA and other sources accessible through the recently approved ECOWAS seed regulations.
- Complete the PPP agreement and supporting contracts for the transfer and expansion of the Richard Toll seed processing facility by the private sector. USAID/PCE will support the private sector in developing an investment plan to fund the replacement of the seed processing units through capital contributions and long term bank financing.
- Support seed producer associations in accelerating the multiplication of newly introduced Sahel Aromatic varieties and upland NERICA.

Table 3 – Seed Sector Planned Activities and Expected Results

Activities	Expected Results
<p>1. ISRA fondation seed supply: Support to ISRA in establishing an improved management system at the Fanaye and Niore research stations.</p>	<ul style="list-style-type: none"> - Investment in basic infrastructure refurbishment (irrigation systems and cold storage). - Adoption by ISRA of a set of procedures and accounting practices for the operation of the seed production units as commercial entities. - Launch of a pilot phase.
<p>2. Seed certification services: Support to the Ministry of Agriculture and the DISEM to improve the seed certification capacity of current laboratories and the development of more efficient seed controller guidelines and procedures</p>	<ul style="list-style-type: none"> - Investment in the renovation of the Dakar central laboratory in conformity with OECD guidelines. - Investment in one (1) new seed laboratory in the SFZ (Kolda or Tambacounda). - Support to DISEM for the development of standard laboratory practices and their enforcement in regional labs. - Seed controller guidelines and procedures improving controller productivity.
<p>3. Foundation seed requirement planning: Support to private seed producer associations to establish a multi-year production and procurement planning for all stages of the multiplication cycle for irrigated rice, rain fed (NERICA), maize, millet and sorghum varieties.</p>	<ul style="list-style-type: none"> - Multi-year plan produced by UNIS-Nord, REPROSENER, REPROSEM and Millet seed producers supported by PCE. - Order of foundation seeds placed with ISRA or other foundation seed producers (as permitted by ECOWAS regulations) in accordance with planned requirements
<p>4. Seed processing center PPP: Support to the Ministry of Agriculture in developing a long term PPP arrangement with Senegal River Valley rice seed producers for the operation and expansion of the Richard Toll seed cleaning and grading station.</p>	<ul style="list-style-type: none"> - Installation of autonomous power generator to improve current seed processing capacity. - Adoption by the Ministry of a legal framework for a long term PPP involving private financing of equipment and infrastructure. - Business plan for the private investment associated to the operation of CTS under a concession agreement. - Concession agreement signed.

2.4. Access to Finance

Context

The Feed the Future intervention in Senegal is taking place in a context of chronic underinvestment driven by low rates of bank lending in the agriculture sector (less than 6% of total bank financing). The objective of improving agricultural productivity to meet market demand for cereals value chains is strongly correlated with the level of private investment. The low level of financing in agriculture is not due to a lack of financial resources, but rather reflects a lack of familiarity among financial institutions and their discomfort with the informal nature of transactions in agriculture products. These factors make agriculture a “high risk” sector in the eyes of banks and microfinance entities. The PCE approach to improving capital access is based on the postulate that the strengthening and even formalization of relationships among value chain stakeholders creates the conditions for greater and more diverse lending.

The results over the past two years show that Banks and MFIs are willing to lend when commercial and financial transactions are formalized through written contracts that can serve as collateral to finance producer-level needs for seed and fertilizer. The financing models developed by PCE in the maize value chain have demonstrated their usefulness in reducing risk and costs while building trust amongst value chain actors.

To date, PCE has worked with several financial institutions, sometimes in partnership with other programs and projects, to mobilize over \$3 million for short-term, medium and long term financing. Meanwhile, repayment rates on seasonal credit in 2010 were extraordinarily high. These results have helped to create an image of PCE as the bearer of new market-based approaches to agricultural financing.

In the current context, despite the successes, several factors converge to make agriculture a relatively high risk enterprise for financial institutions. The portfolio of Development Credit Authority (DCA) guarantees will therefore continue to play an important role as a hedging mechanism to boost the supply of financial services for agriculture. Recall that in Fiscal Year 2011, this instrument served to back-up 2,516 agricultural micro-enterprises for a total amount of \$7 million. Three new credit facilities for Ecobank, PAMECAS and MEC FEPRODES, will provide opportunities to guarantee a portfolio of over \$8 million.

USAID/PCE Strategy

For the Capital Access component, the FY 12 strategy is a logical continuity of the approach in previous years with adjustments foreseen to address the financing needs for equipment and infrastructure, especially storage. Furthermore, PCE will pursue a targeted strategy to support the financial needs for the development of a seed value chain. This will naturally imply developing appropriate financial instruments and strengthening financial engineering activities.

Specifically, the 2012 strategy will be based on:

- pursuit of synergies and partnerships with other projects and programs to achieve a pooling of resources but also to avoid distortions that could stem from conflicting approaches;
- capacity building and financial advisory services to professional organizations (consolidators, producer organizations, etc.) in order to sustain the value chain-based financing models and manage difficulties that might arise;
- outsourcing to specialized local firms the role of financial planning services for select cereal value chain businesses (elaboration of business plans, balance sheets, income statements, cash flows statements, etc.), in order to meet bank and other financial institutions requirements;

- expansion of a training program for financial institutions focusing on the development of new financial products and risk management tools;
- support for MFIs targeting women in rural areas, particularly with MEC FEPRODES, in order to expand and strengthen economic opportunities for women in Feed the Future value chains.

FY11 Outcomes

Activities undertaken during the previous year set the stage for greater integration of supported actors in the financial sector. A selection of project outcomes includes:

- Strengthening the maize integrated financing model for the maize value chain with the extension of the model to seven other regions and mobilization of \$2.6 million for the purchase of inputs;
- Adaptation of the integrated financing model to value chains such as millet (\$75,000 mobilized), rain-fed rice, organic sorghum (\$70,000 mobilization in progress) and sesame, with the use of commercial contracts as collateral;
- Facilitation of credit and leasing schemes that mobilized 15 new tractors for farmer groups this season.
- Implementation of a mutual guarantee cooperative lending scheme in the Senegal River valley;
- Facilitation of three new DCA guarantees: PAMECAS (\$2 million), Ecobank (\$5.82 million), FEPRODES (\$1 million);
- An increase in bank lending to agriculture amongst DCA guarantee holders (U-IMCEC, ACEP), with 2,516 loans issued with DCA backing for a total of over \$7 million.
- Financial coaching to 30 SMEs on improved traceability of financial information and planning capabilities;
- Initiation of a training program intended for banks and MFIs on "financing of agricultural value chains";
- Preparations for a pilot rain-indexed insurance program for the maize value chain in partnership with PlaNet Guarantee, CIRAD and CNAAS;
- Support for thematic meetings around the financing of agricultural value chain, notably a co-sponsored national event with APIX lending in agriculture.

These results provide a solid foundation for further significant increases in bank lending to supported agriculture value chains. One of the major challenges of the project this year will be the successful adaptation of the maize value chain-based financing model to the upland rice value chain.

FY 2012 Objectives

Capital access activities respond directly to the need to increase access for cereals producers, consolidators, millers, seed growers and others to a broad range of financial services. These services include short, medium and long term lending, insurance, leasing and capital investment. Specifically, the following operational objectives will be pursued:

- i. Mobilize \$6 million in new bank loans to value chains supported by the project, through various financing models;
- ii. Strengthen the technical capacity of 15 financial institutions through special training on the financing of cereals value chain;
- iii. Launch a rain-indexed crop insurance product for 3,000 maize farmers;
- iv. Help mobilize \$4 million for the sector by encouraging the strategic use of the DCA;
- v. Provide financial management capacity building to 1,500 borrowers;

- vi. Expand financing strategies and opportunities for grain/seed storage and for production and processing;
- vii. Provide coaching to five financial institutions using the DCA to deepen their impact against FTF indicators;
- viii. Develop at least a pilot financing program on warehouse receipts (warranting/third party holding) with banks, agribusinesses, farmers and other value chain actors.

USAID/PCE activities in FY 2012 are organized around three themes:

- 1. Increase the financial support for priority value chains.** This theme is focused on addressing the financing needs of the project priority value chains via the development of financing models, financial intermediation and improvement of the creditworthiness of those involved in them. Support in FY 12 will be focused on seed, rice and maize value chains and, to a lesser extent, on millet/sorghum and a small sesame program linked to Task Order 6.
- 2. Improving the environment for agricultural financing.** The sustainability of the project's facilitation and promotion of financing models is to a certain extent dependent on the broader environment and conditions for financing in agriculture, including the capacity of both lenders and borrowers. PCE's Capital Access team will work in following five areas of capacity building and sector-level conditions
 - i. Definition of standard financing and profitability models that apply within and across value chains;
 - ii. Financial training for borrowers;
 - iii. Capacity development of financial institutions;
 - iv. Development of agricultural insurance to reduce risk of weather-related losses;
 - v. Support for using the "Development Credit Authority" guarantee mechanism and reporting on results.
- 3. Development and adaptation of new financial products.** Agricultural financing has been compromised by the lack of financial products suitable for value chains. This brought to light a mismatch between supply and demand for financial services. The project support consists of implementing new structured finance instruments with focus on: the mobilization of short medium and long terms credits and the implementation of flexible financing mechanisms based on warehouse receipts (rice and maize). Specifically, the project will work to adapt leasing models to respond to needs in rice and maize value chains, develop third-party warehousing financing, and facilitate implementation of a joint venture for a modernized milling platform in Rosso (in collaboration with the value chain team).

Table 4 – Capital Access Planned Activities and Expected Results

Activities and tasks	Expected Results
Theme 1: Increase financial support for priority value chains	
Irrigated rice value chain	
Implementation of a multi-party financing model (Rice-processing factory-distributor-producer organization , financial institution)	<ul style="list-style-type: none"> • Thanks to commercial contracts at least \$500,000 of financing is mobilized for pre-harvest credit and working capital intended for rice-processing factories, producer organizations, etc. • At least three (3) institutional partners use commercial contracts to increase their loan portfolio for the benefit of stakeholders in the rice value chain.
Support for the extension and	<ul style="list-style-type: none"> • Enterprises such as CNT, GICOPA, DIAGNE & Frères et NAXADI DERET have improved their capacity to manage

Activities and tasks	Expected Results
improvement of existing supplier finance products.	credit, risk and strengthened their financial structures. <ul style="list-style-type: none"> • At least \$500,000 is mobilized to strengthen the financial structures of CNT, GICOPA, DIAGNE & Frères and NAXADI DERET.
Financial coaching for processing enterprises	<ul style="list-style-type: none"> • Eight (8) processing enterprises receive periodic coaching on financial information traceability. • Six (6) units have improved their financial planning capacities and are capable of elaborating their business plans.
Solutions for financing of storage infrastructure, production and processing equipments	<ul style="list-style-type: none"> • Financing schemes developed and at least \$ 250 000 leveraged for investment in storage infrastructure and in production and processing equipment. • Financing plans developed for ten (10) rice huller businesses to acquire sorters.
Capitalization on irrigated rice value chain financing methodologies	<ul style="list-style-type: none"> • A guide on rice value chain financing approach, developed and shared with stakeholders
Rain-fed rice value chain	
Strengthen existing financing models for the rain-fed rice value chain	<ul style="list-style-type: none"> • Two (2) new financial institutions have integrated existing multi-party financing models within the rain-fed rice value chain ; • At least \$ 250 000 have been mobilized for credit needs of operations such as processing, marketing, supply of inputs.
Maize value chain	
Strengthening of existing financing models	<ul style="list-style-type: none"> • \$ 3 million mobilized to meet the credit needs in inputs and marketing operations for key players participating in the maize value chain program; • Producers, consolidators and financial institutions are able to manage the lending process without project support • Involvement of six financial institutions in maize lending
Financing program for mechanization of production and post-harvest operations	<ul style="list-style-type: none"> • Producers have access to long credit (bank loans, leasing) to acquire tractors, threshers and shellers, etc ...
Promotion of the maize value chain financing model	<ul style="list-style-type: none"> • A guide on maize value chain-based financing approaches is developed and shared with stakeholders.
Seed Value Chain	
Financial Coaching for seed operators,	<ul style="list-style-type: none"> • UNIS Nord, FEPRODES, REPROSEM (Réseau producteurs de semences de maïs), RPS/Mil-Sorgho (Réseau producteurs de semences Mil, Sorgho), REPROSENER (Réseau producteurs de NERICA), have improved their managerial and financial skills ; • 61 producers of rice and corn seed have an accounting and financial monitoring system and participate in a capacity

Activities and tasks	Expected Results
	development program on entrepreneurship
Financing system for the production and marketing of rice , maize, sorghum and millet seeds	<ul style="list-style-type: none"> • \$37,000 mobilized by REPROSENER for marketing of 50 tons of NERICA. • UNIS-Nord mobilizes \$11,000 to sell 150 tons of rice seeds. • REPROSEM mobilizes \$35,000 for the production and sale of 100 tons of maize seeds. • RPS/Mil-Sorgho has access to a credit of \$45,000 to produce and sell 50 tons of sorghum and 40 tons of millet seeds.
Support for the development of a Public Private Partnership on the management of CTSR (Centre de Triage de Semence de Richard Toll)	<ul style="list-style-type: none"> • A business plan and a financial intermediation program are designed to create a public and private partnership around CTSR (in collaboration with the PCE value chain team)
Millet/Sorghum Value chain	
Strengthening the organic millet/sorghum financing program	<ul style="list-style-type: none"> • Mobilization of \$ 300,000 in credit to strengthen the commercial programs on millet • An additional funding of \$ 350,000 mobilized for 4000 acres of organic sorghum.
Sesame value chain	
Implementing a sesame financing system	<ul style="list-style-type: none"> • Credit of \$ 400,000 mobilized to implement a supplier finance model developed with ANI, ACEP and producers organizations in the region of Kaffrine
Theme 2: Improving the agriculture financing environment	
Definition of financing models within each cereal value chain	<ul style="list-style-type: none"> • Broad dissemination within MFIs of model profit/loss statements for the key investments (for each “link” such as producer or consolidator) in each of the priority value chains (rice, sorghum / millet, and maize).
Development of a training program focusing on financial analysis for borrowers.	<ul style="list-style-type: none"> • 1500 players within the cereals value chains receive training on credit management and information on financial services available and their pricing method.
Capacity development for financial institutions partners	<ul style="list-style-type: none"> • Fifteen financial institutions (banks, MFIs and leasing companies...) have strengthened their skills in agricultural financing (with the development of toolkits in agricultural credit management).
Development of agricultural insurance	<ul style="list-style-type: none"> • 3000 maize growers have access to insurance policies to cover their risks of loss due to rain shortfalls. This will be a rainfall-indexed insurance program. • 300 rice farmers have access to a range of insurance products covering various risks (seed-eating birds, flooding, etc.) through the PMAA (Programme Microassurance Asurance Agricole), implemented in the Senegal River Valley.
	<ul style="list-style-type: none"> • Funding of \$ 4 million is raised through DCA.

Activities and tasks	Expected Results
Facilitation and tracking of use of the "Development Credit Authority"	<ul style="list-style-type: none"> • 5 financial institutions have been trained via a coaching program intended to improve the use of "DCA" • A report is produced to document the DCA impact
Theme 3: Development and adaptation of new financial products	
Expansion of agriculture leasing programs	<ul style="list-style-type: none"> • \$500,000 mobilized in the form of leasing to ease producers access to agricultural equipment (tractors, offset, harvesters, threshing machine, etc.)
Implementation of a financing program with the use of warehouse receipts financing model.	<ul style="list-style-type: none"> • A third party holding model on local maize is in place (a financial institution, consolidator and a third party (bonded warehouse)
Development of joint venture at the rice processing stage	<ul style="list-style-type: none"> • A joint venture pilot is developed with rice-processing factory (with a high potential and interested in opening its capital to investor).

2.5. Market access and trade

Context

When Task Order 5 began in 2009, the project's scope of work took a broad view of the range of potential actions to improve market access and trade conditions. Prospective themes of intervention included warehousing and cold storage, reduction of barriers on the Dakar-Bamako corridor, increased capacity of grain traders, market information systems, and assistance to negotiate reduced regional tariffs. At the time, PCE was intended to intervene in a broad range of value chains, including horticulture products for export. However, over the past two years, a number of lessons learned have emerged and USAID has also made some adjustments in its priorities. These lessons and changes argue for a more focused and revised approach to market access and trade issues in FY 12.

The following points summarize some of the lessons learned and the recent adjustments in our operating context and USAID strategy.

- The Senegal FTF strategy, adopted in 2011 selected rice, maize and millet as the priority value chains (in addition to fisheries). This represents a narrower operational focus compared to the original plans of PCE. Indeed, PCE ceased interventions in the livestock and dairy value chains in July 2011. Moreover, the separate Task Order 6, designed to promote export value chains will close in early 2012 as a result of a cut in funding.
- Project experience and studies demonstrate that the local/national market represents the main opportunity for all three priority cereals. Maize has the potential to break into the growing local animal feed and human food formula markets that rely on imported maize. For rice, the opportunity lies in penetrating the urban market demand that drives Senegal's large rice imports. For millet, the situation is more nuanced where growth opportunities are significantly smaller but still primarily found within Senegalese urban markets.
- USAID/PCE's budget was cut by 40% going into FY12. This cut requires looking carefully at the most urgent priorities and opportunities to ensure the project achieves its more central goals of expanding production and sales of cereals.
- Project work on the Dakar-Bamako corridor has resulted in the adoption of an action plan between Senegal and Mali. Two USAID regional projects, E-ATP and West Africa Trade Hub, continue to intervene to reduce trade barriers, including corridor road barriers, to improve

application of regional legislation on trade, and to build capacity of trade associations in different countries, including Senegal.

- Experience now shows that cereal **quality and logistics** constitute the two major constraints to better market access for rice, maize and millet. Logistics refers to the management of the flow of goods between the point of origin and the point of use in order to meet the requirements of the customer. Logistics involves the integration of information, transportation, inventory, warehousing, material handling, and packaging.

In light of these observations and other findings, the chief concern will be to improve the flow of quality cereals from the Southern Forest Zone and the Senegal River Valley to Senegal's urban markets, especially the greater Dakar area. Successful penetration of these markets will be the first and most important test of a boost in organization and conditions for market access of local cereals. Success in the meeting local market expectations and needs will set the stage for Senegal to position as an exporter to the sub-region.

USAID/PCE Strategy

Our strategy in 2012 focuses on four dimensions of market access: (i) promotion of formal consolidator-farmer contracts that are linked to agreed on quality norms and standards; (ii) facilitation of mobilization of private financing to put in place large-scale warehousing programs with harmonized storage codes of practice and a warehouse receipts framework; (iii) tracking of road barriers along the corridor and within cereal collection and transport routes within Senegal; and (iv) promotion of local cereals. Each element is discussed in the following paragraphs.

The project's strategy for improving market access and trade is rooted in our value chain approach as described in Section 2.1. The project's value chain approach focuses on strengthening and structuring the relationships between the core supply chain actors composed of industrialists, distributors, millers, consolidators and producers. Over 30 cost-sharing partnerships are in place this year with a wide range of entities that include traditional agriculture consolidation and/or milling enterprises, farmer cooperatives and committed non-profits. These partnerships are the primary conduit for tens of thousands of farmers to sell their increased cereals production in Senegal's competitive urban markets. These consolidator-farmer group arrangements offer a market-driven approach to raising product quality standards including the effective application of **commercial norms and standards**.

Warehousing remains another critical dimension for boosting market access and retains a significant role in USAID/PCE's strategy for rice, maize and millet. However, the project has adjusted its approach away from direct financial support to build a few community-level storage facilities that can hold 100-200 tons. At this point in time, volumes produced through contract agreements have not reached a volume that requires storage. In maize for example, local industries require upwards of 10,000 tons per month. Networked farmers can optimistically offer the equivalent of two months of production, or 20,000 tons. That means that the product is not stored for more than a few days as it moves from village to processing facility. The emerging challenge is to prepare for a rapid growth in demand for locally grown maize, rice and seed with a number of larger storage facilities that can ensure a smooth supply chain outside the harvest period. Thus the project's strategy focuses, at this time, on identifying a relatively small number of potential investors (including banks) with an interest in building and operating more centrally-located storage facilities that can incorporate a warehouse receipts system. PCE intends to focus on providing technical assistance to prepare business plans, raise money as needed and, especially, to develop harmonized storage codes of practice.

Turning to transport barriers, whereas earlier PCE work looked at the Dakar-Bamako transport corridor and its constraints, the emerging strategy for FY12 is to focus much more on the transport barriers specific to rice, maize and millet, especially within Senegal. The methods of analysis and tracking barriers along the corridor can be directly applied to understanding the costs and barriers faced by the numerous "consolidators" who are co-investing with PCE to set up structured sourcing networks spread over vast areas. In order to increase competitiveness in this segment of the supply chain, PCE will assist consolidators to develop a better understanding of the geographic segments and the routes for collecting

and transporting cereals, the transport conditions, and the costs and delays associated with road stops within Senegal. .

Another dimension of the PCE strategy is to continue activities that raise consumer awareness about the virtues of local cereals. Complementary activities will engage local rice, maize and millet producers, processors and distributors in promotional events of their products.

FY 2011 Results

1. Structured consolidator-farmer relationships for market access. In FY '11, PCE significantly expanded the number of consolidator partners and farmers reached through structured outreach and sales relationships. For example, the first set of contracts in the maize program closed out in the first quarter of calendar 2011. Thousands of farmers sold a part of their harvest to two consolidators who in turn sold to a handful of local animal feed businesses. These arrangements ensured availability of credit for farmers to get timely inputs.
2. USAID/PCE supported maize buyers in the 2010 season to acquire 6 maize dehusking/shelling units that were positioned at village marketing points. Harvest in maize was carried out to meet specific quality requirements set by industrialists with on-site shelling and direct bagging improving the quality of the cereal. Post season debriefings showed general satisfaction by the animal feed sector, however the food processor needed to add additional cleaning steps on some lots.
3. Corridor conference. The border conference on trade facilitation issues between Senegal and Mali was held the 20th and 21st may in Kayes, Mali. The conference was presided by the Prime Ministers of the two countries with the participation of highly ranked public officials, private sector representatives, technical experts from the administration, economic operators involved in the Dakar-Bamako trade, and civil society actors. The Kayes Conference was an opportunity to fine tune recommendations and gain the public support and endorsement of the heads of government do diligently pursue the implementation of actions to reduce constraints specific to trade along the corridor by reducing the number of control points to three, reduce transit costs, limit truck weights, improve road maintenance, and set up a Senegal-Mali joint monitoring committee to oversee the planning and execution of all approved recommendations.
4. Corridor cost study. PCE, in collaboration with the CPI working group on transport, finalized a study of the costs of trade along the Dakar-Bamako corridor. The report was widely distributed during the Kayes Corridor Conference. The main contribution of this analysis is its generation of a detailed cost build-up from port to destination and the subsequent opportunity to use this hard data to explore means to reduce transport costs.
5. Road block reduction. Recognizing the paucity of quantitative information on the actual costs and time losses that road blocks and harassment impose specifically on grain traders and transporters (road harassment studies are focused on containerized trade at the moment), PCE established a partnership with the regional project, USAID/E-ATP and the Dakar Chamber of Commerce to collect data on road harassment and cost of transport of cereals traded within the Dakar-Bamako road corridor.
6. As part of the on-going *Ceregal* campaign to promote greater consumption of locally-grown cereals, twelve fine restaurants of Dakar and Saly partnered with USAID/PCE to explore ways of opening hotels and restaurants as market outlets for cereals producers and processors. An audience of approximately 250 guests including the American Ambassador, business leaders, decision makers, opinion leaders and communication professionals gathered to taste innovative recipes using maize, rice, millet and fonio at the Radison Blu in May 2011.
7. Following the selection and experimentation of 6 new maize varieties in partnership with ITA, ISRA and a private operator, TROPICASEM, in the North of Senegal, ITA and PCE convened an

exhibition and degustation day with approximately 100 guests ranging from consumer organizations to potential investors and media people.

8. PCE produced a brochure to showcase the findings of a survey on perception and consumption of cereals in the region of Dakar and its suburbs.

FY 2012 Objectives

Product promotion: In FY2012, USAID/PCE will put a priority in ensuring the local markets are aware of the availability of differentiated high quality cereals such as the Sahel aromatic rice produced in the SRV, quality yellow maize including new hybrid types, upland Nerica, well graded millet and low tannin sorghum. USAID/PCE will support communication events and focus groups on market centers and field visits by leading buyers. Collaboration with the maize industrial buyers and the *Société de Promotion et de Commercialisation du Riz Sénégalais* will program local industry purchases and help local producers set seasonal targets. Through these efforts, PCE will continue to look for an appropriate local entity to assume ownership of the *Cérégal* campaign name.

Quality standards: USAID/PCE's will intensify the training of farmers in the application of farm gate quality testing and traceability, in the context of value chain contracts between consolidators and farmer groups. The objective will be to have detailed quality testing and documentation procedures included in the contracts for the 2012 rain season for maize and irrigated rice program, and the systems to trace compliance on a farm by farm basis. In the case of irrigated rice, USAID/PCE will partner with the *Société de Promotion et de Commercialisation du Riz Sénégalais* and the programs involved in the sector such as JICA and AFD, to develop and implement a generally accepted *Code of practice* setting quality standards for milled rice and monitoring processes and templates adapted to the context of mid- and small-scale millers.

Large-scale storage: USAID/PCE will capitalize on the completed rehabilitation of the Sodefitec grain silo (1000MT), to mobilize industrialists and consolidators to identify and lock-in warehousing arrangements for local maize at existing facilities. For example, it may be possible to negotiate storage with warehouse operators that serve cereals importers. In the case of irrigated rice USAID/PCE will engage the Spanish Cooperation to pilot third party stock piling based on recently constructed 1,500 ton paddy rice warehouses. In each case USAID/PCE will work with consolidators and buyers to establish a *Code of best storage practices* which would be accepted by banks willing to enter into inventory financing programs. Potential private ventures to invest in grains storage will be pursued by the USAID/PCE infrastructure and Access to capital activities.

Transport: PCE will continue its relationship with the Dakar Chamber of Commerce to collect data and provide training to drivers and traders of local cereals as part of the broader effort to inform stakeholders on the costs and delays associated with roadside stops. Furthermore, in partnership with the consolidators involved in maize, millet, and rice, PCE will assist in collecting similar data from on transport road harassment along the identified routes of trade and transport within Senegal and to inform and coach drivers and traders for their better awareness of regulations and duties, identify key competitiveness issues related to transport.

Table 5 – Market Access and Trade Planned Activities and Expected Results

Activities and tasks	Expected Results
<p>1. Aromatic and Nerica Rice promotion efforts: Market development activities (consumer auctions, focus groups) carried out in collaboration with regional (for Nerica) and Dakar wholesale distributors involved in rice import and distribution.</p>	<ul style="list-style-type: none"> - Commercial promotion activities and specific brands are developed for local aromatic rice varieties - Assessment and communication about the commercial potential for NERICA varieties vs. import varieties - Commercial outreach programs are developed for NERICA within Senegal’s regions.
<p>2. Maize commercialization promotion: Collaboration with newly created Cadre de Concertation Maïs to improve market integration of industrial end buyers through field visits, joint procurement planning sessions with consolidators, production monitoring, pricing, logistics network planning and development.</p>	<ul style="list-style-type: none"> - Industrial buyers develop a procurement plan for locally purchased maize
<p>3. Social marketing events for local cereals</p>	<ul style="list-style-type: none"> - Increased motivation of consumers to make more room for local food items in their daily consumption bundles. - Promotion and transfer of the CEREGAL brand to private actors. - CEREGAL becomes a sound generic label of quality trusted by consumers and appropriated by agro-food entrepreneurs
<p>4. Rice milling quality code of practice: Mid-scale rice mills, involved in contractual programs with urban wholesalers, and small-scale millers operating in the Rosso, Richard Toll and Ross Bethio clusters, are supported by PCE to develop and implement internal production and quality management practices.</p>	<ul style="list-style-type: none"> - A code of practice covering standard production management and quality monitoring is developed and adopted by mid-scale millers. - Mid-scale rice mills implement production planning and monitoring tools. - Mid-scale rice mills implement quality-monitoring tools as part of the order-fulfillment process of ongoing contracts. - Introduction of milling standard to small-scale millers operating in the Rosso, Richard Toll and Ross Bethio clusters.
<p>5. Paddy rice inter-season stockpiling: Rice value chain actors (wholesaler buyers, millers, consolidators, farmer organizations) develop inventory consolidation, management and collateral financing methods enabling the stockpiling of paddy rice to ensure continuous supply.</p>	<ul style="list-style-type: none"> - A Code for best storage practices is developed by consolidators, millers and distributors to be acceptable under inventory financing programs. - A pilot paddy inventory-financing program is developed for 5,000 tons of paddy rice and implemented by PCE partner networks.
<p>6. Maize third party storage program:</p>	<ul style="list-style-type: none"> - Development of joint storage and logistics options and assorted investment plans among consolidators and industrial buyers.
<p>7. Collection of road control harassment data. Collaboration with Chamber of Commerce and</p>	<ul style="list-style-type: none"> - Consolidators of cereals have access to accurate data on road control harassment

Activities and tasks	Expected Results
cereals consolidators to assess frequency, duration and cost of highway control points.	- Data on road stops for cereals traders/transporters consolidated and transferred to ECOWAS, WATH and E-ATP.
8. Awareness events and training of drivers and traders.	- A group of 25 actors (drivers, traders) are coached each quarter to create better awareness and best practices adoption regarding the transport of traded cereals

2.6. Policy reform

Context

In June 2004, the Government of Senegal promulgated a general law of orientation of the agriculture, forestry and pastoral sectors known as LOASP (Loi d’Orientation Agro-Sylvo-Pastorale). The document elaborated through a long process of consultation with stakeholders spells out 52 major policy commitments covering 9 thematic domains. The thematic domains are: 1) formal recognition of agricultural professions, 2) land reform, 3) value chains-markets-inter-professions, 4) national agricultural development program, 5) national livestock development plan, 6) forestry action plan, 7) capacity-building, 8) rural financing, and 9) stakeholders consultation platforms. Each thematic domain is under the responsibility of an officially nominated working group comprised of member institutions.

Despite the well-thought organizational structure, its effective operationalization has been extremely slow. Since 2004, application decrees signed address only 8 of the 52 commitments. Recently, the Government expressed willingness to move forward with the LOASP implementation and made an official request to USAID for support. In the same dynamic, an Inter-ministerial Council was held in July 2011 to discuss the National Agriculture Investment Plan (PNIA) based on a version prepared with PCE assistance in 2010. Both initiatives (LOASP and PNIA) need big push from Government and development partners to move forward but the mobilization of public authorities is likely to be constrained by the circumstances of presidential elections scheduled for February-March 2012. On the other hand, sound agricultural policy reform decisions are not possible without reliable data and information for continuous monitoring and evaluation of progress. Mobilization of stakeholders is also a key ingredient to success, which underscores the importance of dialogue spaces and strategic communication.

PCE Strategy

Implementation of the LOASP and the PNIA involves multiple government Ministries. While providing assistance to the broader processes for achieving these goals, PCE will focus primarily on selected aspects of agricultural policy reform and communication that are directly linked to the development and competitiveness of core FTF value chains. Emphasis will be on facilitating policy dialogues and debates on selected topical issues, promoting platforms of regular consultations within and across stakeholder groups and supporting efforts to improve the overall operating environment. Whenever possible, we will also work to influence the agenda and attendance of strategic gatherings initiated by public authorities or other partners on issues relevant to our activity domains. To optimize the utilization of resources in a context of budget restrictions, particular attention is brought to ensuring that each key training event or stakeholders gathering serve multiple purposes drawn from the overall activity agenda.

FY 2011 Results

1. A revised version of the PNIA investment program was produced and published by the Government with USAID/PCE support and distributed to partners in October 2010;
2. Technical assistance provided to Accelerated Growth Strategy Permanent Secretariat served to analyze and initiate dialogue of the issues and options for improved organization of the maize and horticulture value chains. The collaboration also supported significant upgrading of its Web site both

in terms of design and contents, including improving access to information about initiatives and activities in the agriculture/agro-industry “cluster”;

3. A study of the fertilizer market structure, conduct and performance was completed with an emphasis on the effects of the government subsidy and consultations have started as part of a process to formulate policy or administrative measures to improve access, use and quality.
4. With logistical support, methodological innovations including GPS-based measurement of plots and technical training provided to DAPS (Direction de l'Analyse, de la Prévision et des Statistiques), the annual agriculture survey generates more reliable data with a sample that increased from 3 600 to 6 300 household across the country and the introduction of new themes such as food security, nutrition, and nonagricultural sources of income;
5. The Agricultural survey results for the last growing season (2010) were widely shared during a 1-day seminar (July 13), attended by all categories of stakeholders representing about sixty institutions with broad media coverage.
6. A team of 4 Senegalese professionals including 2 from DAPS, 1 from UCAD (University of Dakar) and 1 from the National Service of Meteorology participated in a 4-week training program at Michigan State University on developing and applying methods for estimating crop area and production forecasting using free satellite imagery.

FY 2012 Objectives

1. Putting back to work the LOASP thematic working groups to formulate application decrees focused on selected domains.
2. Finalization and publishing of the first Agricultural Report highlighting the LOASP implementation status;
3. Support DAPS to finalize testing and validation of crop area estimates derived from free satellite images.
4. Support DAPS on its mandate to collect data aimed at monitoring key variables that contribute to the PNIA objectives through annual surveys and to refine the model of crop acreage estimation and production forecast using satellite images and weather data;
5. Develop institutional capacity of DAPS to efficiently organize and manage its internal data collection and analysis system;
6. Organize discussions around the fertilizer study conclusions and support implementation of an action plan;
7. Identify major policy and institutional constraints to the development of core FTF value chains;
8. Promote organizational development and restructuring of rice and maize producer groups in connection with USAID forward;
9. Create spaces for policy dialogue, business partnerships, information sharing and cross-learning;
10. Raise information level and awareness of influential media and stakeholders about agricultural policy issues relevant to LOASP, PNIA and FTF.
11. Increase the overall visibility of PCE and its interventions at national and regional levels.

Table 6 – Policy Reform Planned Activities and Expected Results

Activities and tasks	Expected Results
AGRICULTURAL POLICY SUPPORT	
Support to the LOASP process for increased agricultural competitiveness. <ul style="list-style-type: none"> - Elaboration of LOASP applications texts by 7 thematic groups - Restitution and validation workshops - Elaboration and edition of the first LOASP annual agricultural report 	The LOASP launched since 2004 is unlocked and its operationalization process is carried forward through selected thematic working groups
Support to DAPS on agricultural data collection and analysis <ul style="list-style-type: none"> - Direct financial support to the annual agriculture survey - MSU technical assistance on satellite image applications - Institutional capacitation of DAPS to manage the agricultural survey and data analysis system 	The time-saving methodological improvements brought by USAID/PCE are consolidated and DAPS acquires increased capacity to produce more reliable statistics and to manage the annual survey system.
Fertilizer study report sharing and action plan follow-up <ul style="list-style-type: none"> - National restitution workshop of the fertilizer study - Meeting of the Fertilizer Reflexion Committee - Support to implementing the Action Plan expected from the Reflexion Committee on Fertilizer and soil fertility 	Policy reform initiatives are taken with respect to subsidies and market regulation constraints facing private operators
Support to the organization and structuring process of core PCE value chains <ul style="list-style-type: none"> - Rice inter-profession - maize producers networks - “Tables-Filières” for millet/sorghum in collaboration with PAFA and CLUSA) 	Consultation platforms are created to facilitate dialogue, learning and strategic collaboration among actors within each value chain, which lays the ground for the progressive emergence of solid professional organizations.
Participatory analysis of policy and regulation constraints in the rice and maize value chains (Ateliers-bilans)	Guidelines for more business-friendly environment and increased private investment are identified with clear policy recommendations
Thematic stakeholder forums on PNIA <ul style="list-style-type: none"> - 1 national forum in Dakar with institutional actors - 1 regional forum in the north with rice actors - 1 grouped forum for the other zones with maize actors 	The operational methods and objectives of PNIA are understood by all actors including professional organizations, private operators and support services so that intervention constraints are well understood and opportunities captured in the rice and maize value chains. These forums will also contribute to reinforcing dialogue platforms within and across stakeholder groups.
STRATEGIC COMMUNICATION	
Production of user-friendly economic information packages to feed in media training and audio-visual debates.	Better informed communication professionals with increased capacity to lead agro-food thematic discussions of interest for a large population.
Construction of good working relationship with influential communication enterprises.	Improved mediatization of our activities through mutual familiarization between PCE and selected press group leaders.
Organization of dialogue spaces on market access for primary producers and processors of local cereals	Win-win partnerships are consolidated between the two categories of actors, meaning more secure access to inputs for processors and to output markets for primary producers.

2.7. Institutional and Human Capacity Building

Context

USAID/PCE interventions are centered on promoting sustainable growth in the agro-food sector based on a Value Chain development approach. This implies the need to generate a critical mass of professionals equipped with the skills required to become efficient entrepreneurs in an increasingly complex and globalizing market. Informal methods of doing business tend to become less and less compatible with the evolution of the operating environment. Target groups are primary producers groups in targeted sectors and intervention zones, private business enterprises involved in processing primary products, agro-food support agencies, training institutions and information and communication enterprises. We also include public support institutions that are critical components of the operating environment. Their missions cover a large array of functions such as professional training, research, extension, policy formulation, program implementation and overall business facilitation.

Focus is put on the following domains where capacity gaps are proven to be critical:

1. Capacity to understand and apply the Value Chain approach by a critical mass of agro-food actors at various levels.
2. Capacity of primary producers to get organised as business operators equipped with the fundamentals of associative governance and cooperative entrepreneurship;
3. Capacity of small agro-food entrepreneurs to efficiently manage their activities and integrate market chains;
4. Capacity of supported actors to develop sustainability strategies and promote autonomous progress;
5. Capacity of Government to create and maintain a good operating environment for all agro-food market operators.

Practical challenges to face are numerous and include the following:

1. The heterogeneity of agro-food stakeholders spanning from grassroots producers to senior policy officers and experts;
2. The large spectrum of needs even within each category of actors;
3. The rapidly changing environment that may accelerate obsolescence of acquired skills
4. The very different literacy levels of training target groups within producers organizations;
5. The high turn-over of technical staff in professional organisations, ministerial departments and training institutions;
6. The intervention domains cutting across several Ministerial departments implying multiple official interlocutors;
7. The non-evident character of strategic capacity development needs that may not be perfectly translated by expressed demand;
8. The need to efficiently manage partners' expectations and promote ownership of intervention programs;
9. The low female presence in some target groups such as community leaders, primary producers in core value chains, faculty members of training institutions etc., which makes it difficult to achieve targets in terms of gender balance;
10. The fact that those who mostly need capacity development are often not proactive to seek it, which makes difficult the application of cost-sharing principles;

USAID/PCE Strategy

1. Interventions remain demand-driven but also needs-based; bearing in mind that explicit demand may not reflect strategic capacity gaps that would require a rather pro-active approach.
2. The assessment of needs is a continuous process where PCE field staff and thematic specialists are put to contribution.
3. Core strategic capacities and cross-cutting needs are taken care of by the capacity-building team while thematic specialists take lead on specific training demands with our support.
4. The diversity of target groups and needs requires partnership with various actors on the offer side based on their existing or potential capacity to meet identified needs, bearing in mind that reinforcing the capacity of training institutions to satisfy demand is not ruled out in our interventions.
5. Duration of each training session will be limited to avoid being dissuasive for some categories of people who cannot afford long absences from their jobs or homes.
6. Because having to travel long distances can be dissuasive mainly for women, the training activities will be decentralised and delivered onsite whenever possible.
7. Local change actors are considered as strategic targets whose capacitation to take visible initiatives with tangible returns in the short run will produce emulation and generate large scale interest.
8. Concerning applied research, we will continue putting emphasis on connecting value chain partners to training institutions so that their needs for analyzing practical issues are addressed through research papers of selected finishing students sponsored by PCE for short term internships. Training institutions targeted are mainly ENEA, ENSA and ISFAR.

FY 2011 Results

1. Until the end of August 2011, 18 training sessions of 3 to 10 days each have been organized around 9 themes. These include a) Contractualization and business partnership development in the rice and maize value chains, b) Hygiene and quality in the meat sector, c) Best practices in the rain-fed rice production, d) Best practices for animal fattening with focus on women, e) Practical methods and tool for participatory diagnosis of agricultural production systems by field extension agents, f) PCE value chain development approach and related business opportunities for financial institutions, g) Basic computer applications for technicians of key agricultural support agencies, h) Collection and analysis of agricultural statistics. The total number of participants is 380 including 110 Women. At least two other training workshops are scheduled for September, which will bring up these numbers for FY2011. Trainees represent various groups of value chain stakeholders including primary producers, processors, public support services, local community organizations, financial institutions, NGOs and development projects.
2. The series of practical training and active exchange sessions on contractualization resulted in an impressive development of business partnership relations between value chain actors through the signature of formal contracts. This has been instrumental to boosting credit because contracts used as information tools and collateral reduce the risk facing financial institutions that have historically been reluctant to intervene in the agri-food sector.
3. Implementation of the comprehensive capacity-building program designed for technical agencies within the Ministry of Agriculture was launched under the coordination of BFPA, its Training Office. The work plan proposed for FY11 was fully delivered in accordance with the manual of procedures that defined all the operational procedures, the steering organs and the monitoring system mainly concerned with ensuring effective impact. Implementation of a similar program also started with ANCAR, the national agency for agricultural and rural extension that has a particular status. Both

programs contribute to the effective operationalization of LOASP and PNIA capacity-building components.

4. A new graduate training program at ENSA on Value Chain Development and Agro-food Entrepreneurship started in March 2011 with a first cohort of 14 students including 4 women. This 4-semester Master's Degree Program is implemented in collaboration with Michigan State University as strategic partner. For the first two semesters, 5 experts from the USA were mobilized for the co-delivery of selected modules with ENSA in-house trainers as part of a process of preparing ENSA to take over all curriculum and instruction responsibilities.
5. About 50 technical reports have been finalized including 2 agribusiness curricula design (for ENSA and ISFAR), 1 institutional capacity assessment (ENSA), 6 participants training guides, 5 trainers manuals, 16 applied research papers of sponsored finishing students, 10 training program implementation reports, 1 midterm program evaluation (ENSA), and 8 applied research methodology notes.

FY 2012 Objectives

Planned activities like previous ones are generally aimed at reinforcing human and institutional capacities required for sustainable growth of the agro-food sector, which implies creating endogenous conditions for value chain actors to take advantage of business development opportunities. This requires a sound policy environment and effective communication amongst stakeholders, illustrating the needed synergy with PCE program components working on those aspects. For FY2012, what we aim to achieve can be summarised as follows:

1. Continue human and institutional capacity development programs for three Departments of the Ministry of Agriculture ((DAPS, DA, DHORT) and for ANCAR.
2. Complete the graduate training of 14 students enrolled in the 4-semester Master's degree program on Value chain development and agro-food entrepreneurship at ENSA in collaboration with Michigan State University;
3. Sponsor 8 finishing students from ENEA and ENSA for 5-month applied research projects on practical value chain development issues identified by PCE partners in collaboration with our thematic specialists;
4. Deliver about 18 technical training sessions on 10 different themes for various groups across rice, maize and seed value chains with a target number of around 450 participants.

Table 7 – Institutional and Human Capacity Building Planned Activities and Expected Results

Activities and tasks	Expected Results
CAPACITY DEVELOPMENT FOR GOVERNMENT AND PUBLIC SUPPORT AGENCIES	
<p>Continued implementation of the Ministry of Agriculture capacity-building programme for DAPS, DA, DHORT based on the 2010 needs assessment study</p> <ul style="list-style-type: none"> - 4 training modules of 5 days each on various themes 	<p>The Ministry of Agriculture’s Training Office, BFPA, takes full ownership of the program and makes sure that it is effectively impactful as pledged by the Steering Committee and instructed by the Minister in the letter 01941 dated 12 August 2011.</p>
<p>Continued implementation of the ANCAR capacity-building program based on the 2010 needs assessment study.</p> <ul style="list-style-type: none"> - 2 training modules of two weeks each 	<p>As a specialized training and advisory agency, ANCAR will be endowed with the endogenous capacity required to become technically efficient in providing business development services to a wide range of agro-food value actors across the country.</p>
CAPACITY DEVELOPMENT FOR EDUCATION & TRAINING INSTITUTIONS	
<p>Support to the Agri-business Graduate training Program of ENSA.</p> <ul style="list-style-type: none"> - Mobilization of external training experts (MSU) - Tuition fees and scholarships 	<p>The first fourteen students enrolled in the Value Chain Development and Agribusiness Entrepreneurship training program complete their Masters’ Degree and find adequate placements</p>
<p>Sponsoring of selected applied research projects of finishing students from Ensa, Isfar and Enea to address particular study needs identified by PCE partners.</p> <ul style="list-style-type: none"> - Sponsoring of 8 students from ENEA and ENSA - 3 onsite grouped restitution seminars for the 3 value chains covered 	<p>Better preparation of future professionals through linking the academic world of agricultural students with the field realities of agriculture</p>
CAPACITY DEVELOPMENT FOR PRIVATE AGRI-FOOD VALUE CHAIN ACTORS	
<p>Training of Nerica producer Networks on Organisational development and associative governance.</p>	<p>More professional leadership of Nerica producer networks as critical actors in accessing both input and output markets</p>
<p>Training of maize producer Networks on Organisational development and associative governance</p>	<p>More professional leadership of maize producer networks as critical actors in accessing both input and output markets</p>
<p>Training of Primary Producers Organisations on Cooperative entrepreneurship and Management of Development Programs</p>	<p>Increased capacity of producer groups to go beyond social representation and become not only market actors and reliable development agents that will prepare the ground for USAID forward</p>
<p>Training of small-scale agro-food business entrepreneurs on product marketing strategies</p>	<p>Greater capacity of entrepreneurs to efficiently integrate agro-food market chains and sell output</p>
<p>Training/information of Financial Partners on the Value Chain Approach and related business opportunities by PCE in-house resource persons</p>	<p>In addition to a shared understanding of the Value Chain approach as a condition for a sound partnership, the training will provide opportunity to inform and convince financial institutions about potential business and risk reduction opportunities to capture.</p>

Activities and tasks	Expected Results
Value chain forums for improved contractualization practices (1 for rice and 1 for maize)	These forums will contribute not only to the continuous learning for improvement of contractualization practices but also to consolidating the spirit of stakeholder dialogue platforms.
SEED SECTOR CAPACITY DEVELOPMENT	
Technical training of field seed specialists (2 modules of 5 days for 2 groups of 25 participants each)	Critical mass of competent field technicians capable of ensuring seed quality throughout the production and handing process.
Management training for sustainable seed production and marketing enterprises (in collaboration with the Value Chain team)	Seed producers involved in PCE value chain development interventions are capacitated to emerge as business entrepreneurs.

3. CROSS-CUTTING THEMES

3.1. Climate Change Adaptation

USAID/PCE addresses climate change through a range of adaptation-related activities that respond to the risks associated with changes in rainfall patterns (timing, quantity, intensity) or temperature that could undermine overall agriculture productivity. Project interventions touch on four broad themes : farm-level efforts to improve resiliency; improved access to quality and certified seeds; rain-indexed crop insurance; and awareness raising of agriculture technicians and planners of the risks and strategies associated with adapting to a changing climate. These activities are scoped to boost availability of cereals to rural households and to ensure a stable supply for urban and animal feed markets.

Table 8 – Climate Change Activities in FY12

Activities and tasks	Expected Results
FARM-LEVEL INTERVENTIONS TO IMPROVE RESILIENCY	
<ul style="list-style-type: none"> - Field agents working with cereal consolidators will help farmers coordinate timing of sowing and cultivation of cereals. 	<ul style="list-style-type: none"> - In maize, approximately 6,000 farmers in the 2011 season and 10,000 farmers in 2012 season assisted; - In rice, 5,000 farmers in 2011 season and an estimated 15,000 in the 2012 seasons assisted - Integration of production timing guidelines with ongoing training and extension messages.
<ul style="list-style-type: none"> - Farmer network rainfall monitoring. Field agents working with cereal consolidators will help farmers coordinate to capture rainfall information. 	<ul style="list-style-type: none"> - Commercial networks in maize and rice will complement the basic farm data collection by village level rainfall reports.
<ul style="list-style-type: none"> - Training of farmers in soil and water conservation and management. Can we add just a bit more on the themes/content? 	<ul style="list-style-type: none"> - Approximately 25,000 farmers in the SFZ where rainfed production prevails will benefit from outreach on soil and water conservation methods and technologies.
<ul style="list-style-type: none"> - Teaching techniques to millet and sorghum farmers for the control of <i>striga hermonthica</i>, a widespread and aggressive invasive species that tolerates broad ranges in temperature. 	<ul style="list-style-type: none"> - Approximately 1700 farmers trained in striga control techniques.
<ul style="list-style-type: none"> - Promotion of Nerica upland varieties of rice in the Southern Forest Zone. 	<ul style="list-style-type: none"> - Reduced reliance on sophisticated flood irrigation and paddy management - Significant growth in total rice output in the southern forest zone to meet household and regional town demand.
INCREASED AVAILABILITY OF CLIMATE-ADAPTED VARIETIES OF CERTIFIED SEEDS	
<ul style="list-style-type: none"> - Assistance to ISRA and DISEM to improve capacity to meet market demand with certified, climate-adapted (drought and temperature resistance) cereal seed varieties. 	<ul style="list-style-type: none"> ✓ A rehabilitated and well-managed seed conditioning center in Richard Toll ✓ Construction of a seed testing/certification lab in the south (Kolda or Tambacounda) ✓ Expanded access to foundation seed from ISRA research stations in Niore and Fanaye (can we provide some kind of quantitative outcome, or perhaps a percentage increase or something like that?) ✓ DISEM designs and implements training of its

Activities and tasks	Expected Results
	lab personnel, seed growers and seed certification freelance agents on the standards for field management, seed storage and treatment, lab analysis protocols and other factors that affect certification and quality. - 1,800 tons of certified, climate-adapted (drought and temperature resistance) cereal seed varieties produced by public and private sectors to increased availability of climate-adapted varieties of certified seeds
- Assistance to registered seed growers to ensure availability of certified, climate-resistant cereal seeds	✓ For each of the three cereals, seed associations develop multi-year production plans that are aligned with market demand and negotiate foundation seed purchase contracts with ISRA
- Support to development of structured and well-funded Nerica variety seed producer networks in the Southern Forest Zone.	✓ In FY12, USAID/PCE's 2011 season program will have produced 200T of certified NERICA on 200 farms disseminated throughout the SFZ. In 2012 season USAID/PCE intends to support seed producer's members of REPROSENER to triple this volume to 600T.
- Seed storage investments	✓ Identification of public storage arrangements accessible to the members of REPROSENER as well as a monitoring of seed production achieved and forecast for the upcoming years.
RAIN-INDEXED CROP INSURANCE PROGRAM	
- Development and deployment of a rain-indexed crop insurance program suited to low-income farmers and their financial institutions, in collaboration with CNAAS, PlaNet Guarantee and CIRAD	✓ Pilot insurance program rolled out in the Nioro department for the 2012 season ✓ Development of rainfall indices on a scientific basis to estimate insurance price ✓ Strengthened capacity to collect and disseminate rainfall data for insurance purposes ✓ Training of participating farmers on agriculture insurance and climate risks ✓ Issuance of at least 3000 insurance policies
CAPACITY BUILDING ON CLIMATE CHANGE ADAPTATION ISSUES	
- Training for field agents and managers of ANCAR, the National Agricultural and Rural Advisory Agency on climate change risks and adaptation strategies - Integration of climate adaptation for agriculture issues into training and information sessions with project partners in the private sector (consolidators, industrials, financial institutions)	✓ 75 ANCAR agents trained ✓ Private sector investors in cereals understand climate-related risks to their investments and possible adaptation strategies

3.2. Gender

USAID/PCE's primary gender concern is to expand opportunities for women-owned businesses and for cooperative organizations that assist women to benefit from project actions in FTF priority value chains. This implies ensuring women are reaping the benefits from project investments, notably as participants in structured farmer networks for commercialization, as well as through actions that improve women's access to seasonal credit, small business loans, and other forms of financing, such as equipment leasing. Finally, women are a target for dialogue on constraints to investment and growth in cereals value chains through the project's policy reform component. Overall, women represent 33% of USAID/PCE estimated beneficiaries in FY12.

PCE interventions with two women's rice farmer organizations in the Senegal River Valley typify project efforts to boost women's opportunities and incomes in agriculture. USAID/PCE is partnering with the Femmes Productrices de Ross Bethio and with FEPRODES to establish structured networks of women farmers for purposes of improving rice quality to meet urban consumer preferences which includes notably an effort to diversify into aromatic varieties that can compete with imports. These same women farmer groups are engaged in the effort to expand availability of certified seed. PCE is also exploring with FEPRODES the potential to take on large-scale storage of certified seeds and even paddy rice.

FEPRODES is also a partner of USAID Senegal for a special Development Guarantee for Women. Through its micro-finance arm, MEC-FEPRODES, a \$1 million DCA is now in place with the potential to reach many of its 13,500 female members and thereby ease the economic inclusion of women in agricultural value chains. A training program in financial management and entrepreneurship will be combined with advisory services specifically for FEPRODES women members in order to allow them to take full advantage of the DCA and other investment and credit opportunities. Specific support will be provided in terms of financial advice to enable FEPRODES to produce and sell certified seed. PCE will also work as a broker to help MEC FEPRODES obtain a bank loan to better respond to the financial needs of its members.

At the policy level, USAID/PCE will be working with the Ministry of Agriculture to organize stakeholder forums on the PNIA (National Agriculture Investment Plan). PCE intends to ensure that the fora are organized to look specifically at the constraints and opportunities for women in agriculture, particularly issues of access to land and credit.

Finally, USAID/PCE is working through its applied research activities to analyze impacts of value chain development on households. One of six graduate students at ENEA is receiving project sponsorship to assess household impacts of rain-fed Nerica rice introduction in the region of Kolda. The emphasis is on gender dimensions mainly because traditional rice farming in the area has been a subsistence activity dominated by women while Nerica is expected to provide new opportunities for linking with markets.

3.2. Science, Technology and Innovation (STI)

The primary contribution of USAID/PCE to the cross-cutting issue of STI is its work through development of commercially-viable and competitive cereals value chains to rapidly introduce improved farming techniques and post-harvest handling technologies as well as improved seed varieties. The project's approach of working through structured farmer networks supported by market-oriented consolidation groups has proven to be a strong vector for the rapid dissemination and expansion of these techniques and seed varieties.

Project interventions in FY 12 in support of science and technology introduction for FTF value chains include:

- Broad expansion of newly developed aromatic Sahel rice varieties (S177, S328, S329) from Africa Rice with more than 15,000 farmers in the Senegal River Valley
- Rapid testing and introduction to Senegalese farmers of the upland Nerica varieties across the South Forest Zone from Fatick to Kolda.
- Maize de-huskers and shellers to be implemented across the SFZ in the maize commercial program due to reach 6,000 farmers during the 2011 season
- Adapted seeding and other mechanized land preparation technologies for upland rice and maize.
- Introduction of approved hybrid maize varieties adapted to SFZ conditions and improved input formulations
- Testing of rice breaking and sorting machines in the SRV (installation of two demonstration units).
- Farmer network databases including geo-referencing and area mapping of farms using GPS technologies to improve precision of area estimates and provide field traceability.
- Introduction of improved quality control procedures in the field, upon harvest and at processing points: systematic sampling, analytical testing of humidity, traceability documentation techniques and simple statistical results analysis.
- Improved management techniques for the DISEM seed labs. Specifically, ensuring that lab personnel follow prescribed testing and documentation procedures in a move towards fully traceable seed supplies.

These activities are responsible for ensuring the following technology indicator targets in FY12:

- i. 20 new technologies or management practices made available for transfer
- ii. 29,330 farmers and others who have applied new technologies or management practices
- iii. 24,770 additional hectares under improved technologies or management practices

3.3. Communications

USAID/PCE has had considerable success over the past two years and this agriculture season looks set to generate major increases in maize and rice in particular. We expect credit and other forms of lending in agriculture to continue to grow with our support. In short, there are many examples of success to communicate and the project management recognizes that we are at a critical phase in the project when increased communications is essential. Well-packaged information on the results of USAID's investments needs to reach back to decision-makers in the United States, to decision-makers in Senegal, to technicians and private sector, and to civil society as a whole.

Our approach in FY12 is to produce a steady stream of communications products and events. The idea is to convert a general communications message into multiple media forms. For example, a media visit to "the field" leads to press coverage that is then combined with production of a small brochure or hand-out and/or a success story as well as a short video that can be posted on the internet. PCE intends to encourage our private sector partners and beneficiaries to take an active part in our communications as it is their story and perspective that is usually most compelling to audiences.

Specific communications activities in FY 12 include:

An updated project brochure. The goal is to produce a brochure in the form of a folder with multiple information sheets inside. Each information sheet will address a different dimension of the project, such as Capital Access, Value Chain Approach, Capacity Building, etc...Draft content has already been shared with USAID. The brochure is expected to be released by early November, in English and French.

Thematic fact sheets. In addition to the brochure fact sheets, PCE will develop thematic fact sheets that serve to delve into some detail on a technical issue, but written in a manner to reach a large audience.

The goal is to familiarize readers, mostly technicians, academics and investors, about various constraints to value chain growth and approaches that USAID is using to overcome those constraints. Examples include principles and practices of contractualization, or producer organization and outreach.

Success Stories. All year long, USAID/PCE will convert its results into success stories that relate the impact of USAID investments on project beneficiaries. At least six Success Stories will be generated, one every two months. These success stories, like thematic fact sheets, will be disseminated in both paper and electronic format.

Electronic newsletter. Given the large number of on-going project activities, PCE will initiate a project electronic newsletter that captures the same types of information that USAID receives every two weeks for the Feed the Future bi-weekly. It will be an opportunity to allow beneficiaries, partners, and our technical staff to communicate on our efforts and successes. The goal is to generate a newsletter each quarter.

Informational Films. Short films will be developed and disseminated broadly, including through YouTube, to capture the approaches and benefits from USAID's Feed the Future investments. Films will be in French and sub-titled in English to maximize the potential audience.

Media and VIP field visits. PCE will organize regular field visits for media representatives, USAID VIPs and leadership of various government agencies (notably for USAID/EG's steering committee members) to witness USAID activities and impacts on the ground and to hear directly from project partners and beneficiaries. We foresee 3-4 such visits during FY12.

3.5. Partnerships

The PCE team considers partnership and cost-sharing as essential to project sustainability and scale-up. While the project has considerable resources of its own, there are many other investors, both projects and private, involved in our key value chains. Through active partnering, we increase our probability of establishing a consistent approach to value chain development and we ensure, particularly with private sector, that the investments of today will be pursued and maintained.

The following table includes most of the partners that PCE will work with in FY 12 in some form of structured collaboration and, in some cases, through a cost-share arrangement. In most instances, the partnership takes the form of an MOU. In the case of private sector consolidators, PCE signs "Purchase Order" contracts that clearly state the investment made by each party. The table does not include obvious institutional partners such as the Ministry of Agriculture as such, but there are numerous instances of collaboration and cost-sharing government agencies and projects and these are captured in the table.

Table 9 – PCE Partnerships in FY12

PCE Partners	Area of collaboration
Société de Promotion de la Commercialisation du Riz Sénégalais (SPCRS)	Private company involving rice traders, millers and producers set up to promote and organize the marketing of locally produced rice on national markets – PCE will collaborate with SPCRS on cross-cutting issues such as rice storage and financing and support farmer groups deciding to contract with the company.
SODEFITEX, SEDAB, SOENA, RESOPP, Groupe Tool Baye, Tamedou et Fils	Cost share partnership to develop and support farmer networks in the maize value chain including contracted sourcing of maize.
CARITAS, ASSOLUCER, COOPAD, GIE FDL, GIE KISSAL PATIM, SYMBIOSE, YARAAMA	Cost share partnership to develop and support farmer networks for Nerica rice and Nerica seed production including organization of field demonstrations and training.
FEPRODES, CNT, Diagne et Frères, GICOPA, GIE Malal Yoro Gueye, GIE Naxadi Deret, ASPRODEB, Union FP Ross Bethio, GIE Ngora Fanaye	Cost share partnerships for irrigated rice in the SRV including (i) set-up of demonstration sites for production and post-harvest practices and quality management; (ii) creation of georeferenced databases of producers to ensure planning and monitoring; (iii) development of a quality standard; (iv) assistance for access to seasonal credit.
IFAD/PAFA	Introduction to project supported farmer groups of PCE developed millet/sorghum conservation farming, certified seeds and value chain contracting and marketing. Integration of millet/sorghum producer groups supported by PCE in the «tables-filières» process
AfDB/PAPIL	Introduction to project supported farmer groups of PCE developed maize value chain contracting and marketing and rain fed rice (NERICA) production
ANCAR	Support to farmer groups and field demonstrations/ training in millet, sorghum and NERICA rain fed rice.
USDA/ AFRICARE/ PRODIAKT	Commercial maize market linkages with supported producer groups
SAED	Technical assistance to small scale rice producer groups to introduce value chain contracting and financing mechanisms; post harvest quality assessment and monitoring .
JICA/PAPRIZ	Collaboration on the identification and introduction of rice milling technologies, milling standards and warehouse construction program.
Spanish Cooperation	Synergies with the Spanish Cooperation rice warehouse construction program for the introduction of warehouse receipt systems in the SRV.
AFD	Collaboration with the 3PRD project in the SRV to introduce a market driven quality standard to be managed by the SPCRS.
MCA	Information sharing concerning the development of market channels linking the SRV to the Dakar market: identifying potential infrastructure investments and linkage opportunities for MCA supported irrigation projects.
Agripro	Promotion of mechanized land preparation and cultivation – promotion of improved post harvest processing of maize and rice. (Demonstration sites)
USAID/ EATP	Conservation farming techniques for millet and sorghum, development of millet and sorghum grading technologies.

PCE Partners	Area of collaboration
CLUSA – Farmer to Farmer	<p>Technical training to organic cereal growers (sorghum).</p> <p>Integration of millet/sorghum producer groups supported by PCE in the «tables-filières » process</p>
PALPS (Programme d'Appui à la Lettre de Politique Sectorielle)	<ul style="list-style-type: none"> • Strengthening institutional and technical capacities of MFIs; • Development of new financial products in response to the agricultural and rural demand; • Strengthening Bank/MFIs linkage.
CGERS (Centre de Gestion et d'Economie Rurales)	<ul style="list-style-type: none"> • Improvement of accounting and financial information of players in the rice value chain
CNAAS (Compagnie Nationale d'Assurance Agricole du Sénégal) PlaNet Guarantee	<ul style="list-style-type: none"> • Agricultural Insurance
AP/SFD (l'Association Professionnelle des Systèmes Financiers Décentralisés du Sénégal)	<ul style="list-style-type: none"> • Financial training • Capacity building for MFIs
ROOT CAPITAL	<ul style="list-style-type: none"> • Developing financial services for agricultural value chains
ECOBANK, BRS, CNCAS, CBAO ECOBANK, BRS, CNCAS, CBAO MEC FEPRODES, MEC DELA, CMS, PAMECAS, U-IMCEC, ACEP	<ul style="list-style-type: none"> • Developing financial services for agricultural value chains
Locafrique	<ul style="list-style-type: none"> • Leasing

4. Environmental Mitigation and Monitoring (EMMP)

Many of the activities foreseen as part of the PCE, including studies, research, policy dialogue and reform, capacity building and institutional strengthening, all key to lasting impact in the food security/agriculture sector, were determined to be “**categorical exclusions,**” which by definition do not have an impact on the environment or on the local population. They can and are proceeding without further direct compliance measures.

However, in preparing the amendment to the SO 11 IEE, USAID issued a “**negative determination with conditions**” per 22CFR216.3(a)(2)(iii) for the following activities linked to the GFSR, and thus to the PCE scope of work under Task Order 5:

- Irrigation and support to increased efficiency in existing irrigated areas
- Support to improved rainfed agricultural practices
- The multiplication and distribution of seeds of staple food crops
- The increased use of organic and inorganic fertilizer
- Improving farm to market roads
- Construction of food storage warehouses and cold storage facilities
- Activities supporting the development of entrepreneurial capabilities and/or small to medium-scale enterprise developments for the private sector and farmer associations.

Furthermore, the amended IEE includes the following conditions for these activities:

- Although expansion **within the boundaries of the existing irrigated schemes** is allowable, no expansion on to new sites and in particular, on undeveloped wetlands, can be undertaken as this would change the determination to a positive one (22CFR216.2(d)(ii) and would therefore require carrying out an environmental assessment (EA).
- This determination specifically excludes seeds resulting from the genetic modification of living organisms (**GMOs**).
- Promoting and/or procuring **fertilizers** will be done in conjunction with the guidance available in the Africa Bureau Fertilizer Information Sheet.
- No funds may be expended on **pesticide procurement or use**, until after an amendment to this IEE is approved that addresses the pesticide procedures outlined under 22 CFR 216.3(b) and a PERSUAP is completed and approved by the Mission Environmental Officer (MEO) and the Africa Bureau Environmental Officer (BEO).
- **Construction activities** will be conducted following environmentally sound practices presented in USAID’s *Environmental Guidelines for Small-Scale Activities in Africa*, (Chapters 3 and 16). Prior to constructing facilities in which the total disturbed surface area exceeds 10,000 square feet, if any, the program will conduct a supplemental environmental review according to guidelines in the *Africa Bureau Environmental Procedures Training Manual* (Annex G). Construction may not begin until such a review is completed and approved by the REO.

Based on these determinations, in 2010, IRG prepared and submitted to USAID an Environmental Mitigation and Monitoring Plan as well as a Pesticide Evaluation Report and Safe User Action Plan (PERSUAP). USAID subsequently approved the EMMP and PERSUAP and the project team actively applies the measures identified in those documents. The following paragraphs discuss issues and actions as necessary for PCE in FY 2012.

SMALL-SCALE IRRIGATION

USAID/PCE does not engage in the development of irrigation schemes for small holder farmers. Rather, the project collaborates with smallholders and other farmers involved in public irrigations schemes in the Senegal River Valley that are monitored by SAED which has been mandated by the Government of Senegal to oversee the irrigation network's management and expansion according to environmental norms.

Action: Project sponsored trainings to irrigated rice producers are consistent with the irrigation guidelines set forth by SAED.

In FY 12 USAID/PCE will support ISRA in the installation of replacement irrigation equipment destined to its seed multiplication stations based at Fanaye and Niore to enable dry season multiplication cycles for rainfed cereal crops.

Action: Prior to concluding the associated agreements, USAID/PCE will require an assessment of the adequation of the proposed equipment with the fields' configuration to ensure proper drainage.

GENETICALLY MODIFIED ORGANISMS (GMOs)

USAID/PCE does not work with GMOs. The project works to improve farmer access to non-GMO certified seeds of productive varieties of cereals adapted to Senegal's climate. Specifically, the project supports Senegal's seed sector in the multiplication and distribution of improved rice, maize, millet and sorghum varieties that have been duly approved by the national research body ISRA, in accordance with the national seed legislation. Foundation seeds for in-country multiplication by seed producers may also be sourced from out of Senegal suppliers such as the AfricaRice network for NERICA seeds, which is now an accepted practice per the ECOWAS seed framework endorsed by Senegal. PCE's maize program involves the sourcing by farmer networks of maize hybrids imported through government certified import channels.

FERTILIZER

USAID/PCE supports value chain networks where lead consolidators provide fertilizer sourcing, distribution and financing services to a wide base of farmers. The network procurement plan, distribution to farmers and field application of fertilizer is performed according to the guidelines set by ISRA and conveyed by the extension agency ANCAR for the soil types found in the various ecological zones.

Action: Training documentation disseminated by value chain network agents through field days and demonstrations supports national fertilizer use guidelines.

Action: All fertilizer procured directly by USAID/PCE for use in field demonstration sites is selected in accordance with technical recommendations by ISRA and is submitted to prior approval by USAID.

SMALL-SCALE CONSTRUCTION

Possible small-scale construction activities of PCE are limited to seed laboratories and small-size warehouses. These facilities are expected to involve work on an area that is less than 10,000 square feet. The EMMP contains a checklist of measures that PCE will apply to any small-scale construction activity.

Action: When participating in the costs for small-scale construction, PCE will recruit a third party project monitoring consultant who will be responsible for the identification and oversight of environmental risk mitigation measures as required by USAID guidelines and defined in the EMMP.

PESTICIDES

Pesticide application recommendations to farmers included in PCE/USAID funded documentation will reflect the PERSUAP guidelines.

- Action:** Review and update as needed of existing and projected training tools (documents, posters, radio broadcast content, videos and slideshows) to incorporate the development of IPM skills such as good field sanitation and surveillance, use of certified seeds free of weeds, manual weeding, conservation farming, mulching, fertilizing, good water and soil management.
- Action:** Ensurance that any pesticides recommended in training programs and promoted through production programs will reflect the approved pesticide list established by PCE's PERSUAP.
- Action:** Development of a comprehensive training plan for pesticide safe use practices and IPM concepts and applications, in order to strengthen the capacity of its VC management team as well as cascading implementing partners (Private firms, NGO's, ANCAR, ISRA) and field agents, to ensure the dissemination of a consistent technical message.
- Action:** Ensuring training plan covers best practices in the safe usage of pesticides during storage of cereals as well as safe field application techniques and the use of adequate protection by farmers, in particular at demonstration sites supported by the project.

5. Monitoring and Evaluation (M&E)

USAID/PCE's M&E management framework and internal organization are described in the project's PMP. For FY 2012, the project seeks to ensure rigorous application of our M&E procedures and tools &E while at the same time ensuring that the data collected for monitoring purposes is used to inform planning and communications efforts. In that regard, PCE's M&E team will take the lead on organizing regular sessions with project technical staff and partners to review project results and progress and, as necessary, to help identify adjustments to activities, to targets and to methods of measuring results.

A particularly high priority for M&E in 2012 is to work closely with project partners who are investing in farmer networks in our three priority value chains. These partners, or consolidators, are receiving assistance to put in place spatialized data sets and related management tools to organize outreach and to track production and sales for participating farmer groups. This reflects a new approach for collecting data on field-level value chain results that began in FY 11. In this context, the M&E team will actively monitor the progress of partners/consolidators and provide them as needed with guidance and hands-on training.

These stakeholders will participate in identifying key information in the Networks-Data Base, reporting on them using appropriate instruments, evaluating progress, and recommending priorities for program interventions. These participatory processes serve project needs, meet reporting requirements, and build and strengthen: (1) consensus on useful data and indicators among stakeholders; (2) cost-effective data collection, management and use; (3) sustainable use of locally-appropriate technology; (4) capacity to manage and use key data and M&E methods; and (5) systematic feedback for data quality assurance.

FY 2012 Objectives

- To organize 2 participatory performance review sessions: (i) one at the end of the FY 2011 annual reporting scheduled at November 2011; (ii) one at the end of crop year scheduled at April 2012. In each session the objective is to discuss project results, successes and challenges and overall performance.
- To ensure operationality and active use of the project's Drop Box M&E system set up with VC partners;
- To conduct M&E Systems assessments to enhance the strategic partners management information system ;
- To ensure a rigorous evaluation of Value Chain targets and results;
- Perform Quarterly Data Quality Assessments on data collected through by Value Chain partners
- To ensure timely reporting to USAID
- Implement and develop a database system for monitoring results of value chain financing efforts with banks and microfinance institutions.

Table 10 – M&E Activity Calendar

Activities	Q1	Q2	Q3	Q4
STRENGTHEN THE MANAGEMENT INFORMATION SYSTEM OF PCE AND ITS VALUE CHAIN STRATEGIC PARTNERS				
- Organize a first internal M&E procedures and requirements review session	X			
- Conduct “audit” of VC consolidator/ partners’ farmer network management information systems	X			
- Backstopping and guidance to 29 strategic partners on VC Network Database/operational M&E system	X	X		
- Implement a system to assist banks/micro-finance institutions to collect information about VC financing clients	X			
- Identify the capacity building needs of PCE staff and strategic partners implementing farmer network tracking databases		X		
- Periodic M&E supervision and capacity building missions	X	X	X	X
- Participatory M&E sessions on project results and lessons	X		X	
EVALUATION OF PROJECT RESULTS				
- To elaborate an appropriated evaluation methodology with CB and the others Components		X		
- To evaluate the programs implemented through the methodology developed			X	X
- To support in participatory manner the PCE components specific evaluations			X	X
ENSURE DATA QUALITY AND ARCHIVING TO USAID				
- Regular follow-up the data collection through the Network Databases	X	X	X	X
- Ensure the data acquisition and the uploading of the data in PCE M&E system (Drop Box)	X	X	X	X
- Organize quarterly DQAs	X	X	X	X
- Systematic archiving of project documentation and of supporting data behind indicator calculations	X	X	X	X

5.1. Project indicators and targets

Table 11 on the following page presents the updated list of indicators from the recently approved PMP including targets for FY12, broken down by quarter. At the end of the table is a required additional indicator on Climate Change to capture the project's efforts to improve stakeholder and beneficiary resiliency and ability to adapt to climate change and variability.

Note that the target values in FY12 are often lower than the projected values in the PMP. This can be attributed primarily to the 40% budget cut for Fiscal Year 12. At this point in time, the project must operate with a smaller field team and field presence. Consolidator partners who are at the heart of the VC approach, are all learning their way with more sophisticated tools and work methods. When combining these two considerations, the project revised outreach targets downwards to focus on quality interventions. The targets remain ambitious just the same.

Table 11 – FY12 Indicator Targets

N°	Indicator Title	PMP Targets FY 12	Revised FY 12 Targets	Targets each Quarter			
				Q1	Q2	Q3	Q4
1	Gross margin per unit of land or animal of selected product						
	Irrigated Rice GM	629	430				
	Upland Rice GM	340	360				
	Maize GM	264	350				
	Millet GM	134	150				
2	Number of individuals who have received USG supported long-term agricultural sector productivity or food security training	0	14	14	14	14	14
	Male	0	10	10	10	10	10
	Female	0	4	4	4	4	4
3	Number of individuals who have received USG supported short-term agricultural sector productivity or food security training	56,600	47,395	45	20 100	100	27 150
	Male	42,450	35,555	35	15,075	75	20 370
	Female	14,150	11,840	10	5,025	25	6 780

N°	Indicator Title	PMP Targets FY 12	Revised FY 12 Targets	Targets each Quarter			
				Q1	Q2	Q3	Q4
4	Number of additional hectares under improved technologies or management practices as a result of USG assistance	24,770	22,000	0	4,000	12,000	6,000
	Rice (ha)	9,580	10,000		4,000		6,000
	Maize (ha)	12,190	10,000			10,000	
	Millet (ha)	3 000	2,000			2,000	
5	Number of farmers and others who have applied new technologies or management practices as a result of USG assistance	29,330	24,420	0	5,070	0	19,350
	Farmers	29,210	24,300		5,000		19,300
	Firms						
	Government agents						
	Others	120	120		70		50
6	Number of new technologies or management practices made available for transfer as a result of USG assistance	26	20		10		10
	Production (a)	18	14		7		7
	Processing (b)	4	3		2		1
	Production and processing (a+b)	22	17		9		8

N°	Indicator Title	PMP Targets FY 12	Revised FY 12 Targets	Targets each Quarter			
				Q1	Q2	Q3	Q4
	Other (c)	4	3		1		2
7	Number of new technologies or management practices under research as a result of USG assistance	20	8	8	8	8	8
	Production	8	2	2	2	2	2
	Processing	0	0	0	0	0	0
	Production and processing	0	0	0	0	0	0
	other	12	6	6	6	6	6
8	Number of rural households benefiting directly from USG interventions	56,600	47,000		20,000		27,000
9	Quantity of foundation seed produced	9	9	6		3	
10	Quantity of certified seeds produced by public and private sectors	1,800	1,300		1,000		300
11	Number of policies / regulations / administrative procedures analyzed (Stage 1 of 5)	11	24	3	6	12	3
12	Number of policies / regulations / administrative procedures drafted and presented for public/stakeholder consultation (Stage 2 of 5)	12	15		5	7	3

N°	Indicator Title	PMP Targets FY 12	Revised FY 12 Targets	Targets each Quarter			
				Q1	Q2	Q3	Q4
13	Number of policies / regulations / administrative procedures presented for legislation/decree (Stage 3 of 5)	10	12			8	4
14	Number of policies / regulations / administrative procedures prepared with USG assistance passed/approved (Stage 4 of 5)	11	12			8	4
15	Number of policies / regulations / administrative procedures passed for which implementation has begun (Stage 5 of 5)	9	2			1	1
16	Number of institutions/ organizations undertaking capacity/competency strengthening as a result of USG assistance	31	50	47	48	48	48
17	Number of private enterprises, producers organizations, water users associations, trade and business associations, and community-based organizations (CBOs) receiving USG assistance	1,000	1,000	500		500	
18	Number of members of producer organizations and community based organizations receiving USG assistance	56,000	47,000	20,000		27,000	
19	Number of private enterprises, producers organizations, trade and business associations and community-based organizations that applied new technologies or management practices as a result of USG assistance	800	800		400		400

N°	Indicator Title	PMP Targets FY 12	Revised FY 12 Targets	Targets each Quarter			
				Q1	Q2	Q3	Q4
20	Volume and Value of production processed and sold						
	Total volume (MT)	148,700	101,200		77,900		23,300
	Total Value (thousands USD)	38,562	30,800		24,000		6,800
	Millet						
	Volume (MT)	6,500	5,200		5,200		
	Value (thousands USD)	2,278	2,000		2,000		
	Maize						
	Volume (MT)	33,700	22,700		22,700		
	Value (thousands USD)	8,338	7,300		7,300		
	Rice						
	Volume (MT)	108,500	73,300		50,000		23,300
	Value (thousands USD)	27,946	21,500		14,700		6,800
21	Value of incremental sales (collected at farm- level) attributed to FTF implementation (USD)	14,030	12,780	0	10,380	0	2,400
	Millet						

N°	Indicator Title	PMP Targets FY 12	Revised FY 12 Targets	Targets each Quarter			
				Q1	Q2	Q3	Q4
	Volume (MT)	2,600	2,600		2,600		
	Value (thousands USD)	880	880		880		
	Maize						
	Volume (MT)	20,200	18,200		18,200		
	Value (thousands USD)	4,850	4,500		4,500		
	Rice						
	Volume (MT)	33,200	29,500		20,000		9,500
	Value (thousands USD)	8,300	7,400		5,000		2,400
22	Post harvest losses as a % of overall harvest	15%	15%		15%		15%
23	Value of Agricultural and Rural Loans (USD)	12,000,000	6,000,000	400,000	100,000	5,000,000	500,000
24	Number of MSMEs receiving USG assistance to access bank loans	3,000	4,000	25	175	3,500	300
25	Number of MSMEs receiving business development services from USG assisted sources	56,600	47,000	20,000		27,000	

N°	Indicator Title	PMP Targets FY 12	Revised FY 12 Targets	Targets each Quarter			
				Q1	Q2	Q3	Q4
26	Amount of private financing mobilized with DCA Guarantee (USD)	6,000,000	4,000,000	175 000	1,000,000	1,500,000	1,325,000
27	Number of trainings of IMF, bank personnel related to agricultural lending	14	10	2	3	3	2
28	Number of public-private partnerships formed as a result of FtF assistance	44	30		11		19
29	Value of new private sector investment in the agriculture sector or food chain leveraged by FTF implementation (USD)	1,330,000	1 450,000	100,000	350,000	475,000	525,000
30	Number of business-to-business partnerships developed	252	700		150		550
31	Number of jobs attributed to FTF implementation	12,000	7,500	1,000	2,500	1,500	2,500
32	Number of people with increased capacity to adapt to the impacts of climate variability and change as a result of USG assistance	0 (not foreseen as an indicator)	27,495	0	5,245	2,875	19,375