



Linking agro biodiversity value chains, climate adaptation and nutrition: empowering the poor to manage risk



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Plan of presentation

Introduction

Project sites

Project objectives

Project partners

Activities undertaken and results to reach project objectives

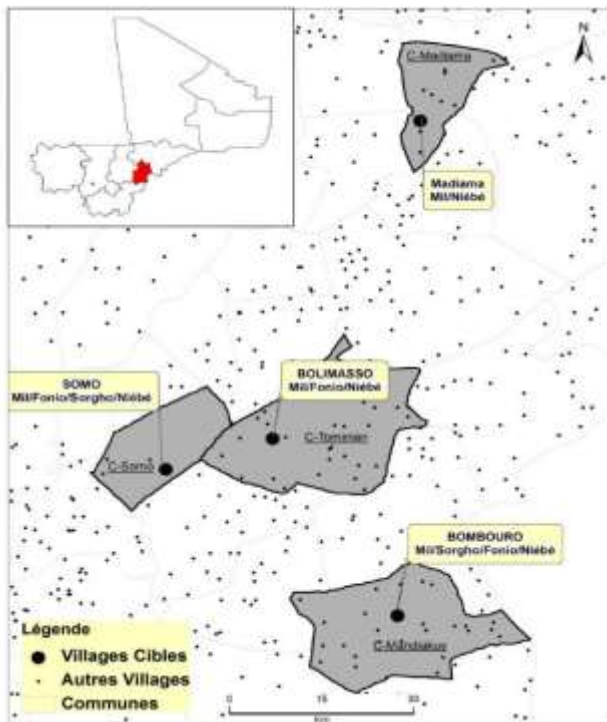
Proposition of Program of activities for 2016

Introduction



Located in the heart of West Africa Mali extends between the 10^e and 25^e degree of latitude North the 4^e degree of longitude East and the 12^e degree of longitude West on 1,241,231km²; with an estimated population of 16.047226 million 2015; almost 80% living in rural area. Sahelian climate, temperatures (21 to more than 45°C with a huge variability of rainfall, recurrent dry seasons since 1968. Climate change effects negatively affects natural resources agriculture production. Cereal (pearl millet, sorghum, corn, fonio and rice) in 2014 was estimated to 5 736 092 t with 4 085 t of certified seeds. So, the informal seed system provide at least 90% of seed used.

Project sites and crops in Mali



Somo /San/ Segou
*Tomato, Jaxatu, Échalote /
 Onion, fonio, and bambaragroundnut*

**Bolimasso /Tominian
 /Segou**
*Tomato, Okra, and Peper, fonio,
 and bambaragroundnut*

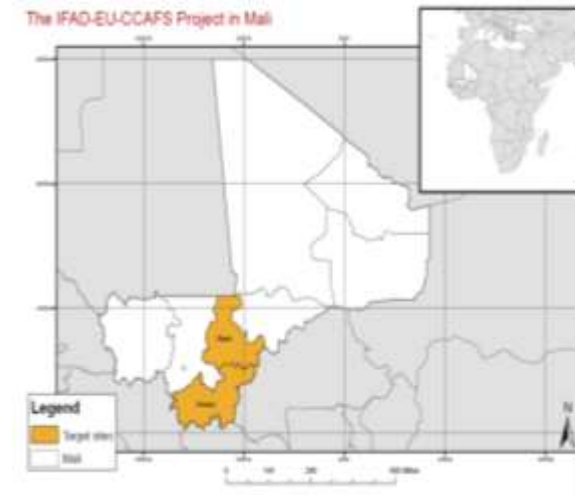
**Bombokoro/Tominian
 /Segou**
*Tomato, Okra, Jaxatu, Peper, fonio,
 and bambaragroundnut*

***Siramana/Sikasso**
*Tomato, Jaxatu, Okra, fonio,
 and bambaragroundnut*

***Finkoloni /Koutiala /Sikasso**
Tomato, Jaxatu, Peper, Okra Fonio, and Bambaragroundnut

N’Goutjina /Koutiala /Sikasso
Tomato, Jaxatu, Peper and OkraFonio, and bambaragroundnut

*=new sites in the same zones as the CGIAR Project ABD Dry land Systems



Key information on project sites

Table 3. Target communities of the IFAD-EU NUS Project in Mali.

Region	Cercle	Commune	Village	Ethnicity	Pop	% Female	#HH
Sikasso	Sikasso	Fama	Siramana	<i>Senufo</i>	2127	52.1	302
	Koutiala	N'Goutjina	Finkoloni	<i>Miniaka</i>	1980	51.7	279
	Koutiala	N'Goutjina	N'Goutjina	<i>Miniaka</i>	3372	50.7	437
	Koutiala	Sincina	Kaniko*	<i>Miniaka</i>	2210	51.6	284
Ségou	Tominian	Mandiakuy	Boumboro	<i>Dafing</i>	312	51.9	46
	Tominian	Bolimasso	Bolimasso	<i>Bobo</i>	478	46.4	104
	San	Somo	Somo	<i>Bobo</i>	2520	50.6	535
	San	Somo	Boutenisso*	<i>Bobo</i>	908	50.8	199

* Control communities where only surveying will be performed

Partners in Mali

Public and private organisations

IER / URG and Programs

Extension office: DNA/DRA Segou and Sikasso

/Agriculture Sectors

National Seed Service

/ Segou

NGO ASEM /San

NGO CAAD /Koutiala

Farmers Organizations

« WA SENWE » Bolimasso



«GNOUBOUARISSI » Somo



« Sabugnuma » Boumboro



«Agrogniétasso » Siramana



«Coopérative des producteurs de coton et de vivriers »
Finkoloni and N'Goutjina



Project Goal

- **The goal of the Programme is to strengthen the capacities of women and men farmers and other value-chain actors - including rural communities - to manage risks associated with climate change, poor nutrition status and economic disempowerment.**

Project Objectives

Four main objectives:

- Strengthen capacities of indigenous and local women and men farmers and development practitioners to assess, document, monitor, conserve and manage stress-tolerant varieties of traditional crops for their effective deployment in value chains and resilient livelihood strategies
- Strengthen CBOs, mechanisms and processes managed by local communities (including indigenous people) to share with peers and partners (including researchers) best practices for the sustainable conservation and use of agrobiodiversity

Project Objectives continued

- Strengthen capacities of NARS to deal with climate risks within a holistic value-chain approach and promote scaling up of successful approaches through collaborative linkages with local communities, and major national and international agendas. Part of the capacity-building process will be to promote an enabling environment for NARS
- Enhance the scientific understanding of the role played by agricultural biodiversity in resilient and nutrition sensitive production and food systems and advocate a policy change for their sustainable use.

Implemented activities and Results

Stakeholders' conference meeting in Sotuba / Bamako Date: 15- 16 June 2015

- **Strategy:** Participating and involving many stakeholders (farmers organizations representatives women and men, research and university institutions, government programmes, private sectors, independent researchers, media, international institutions, IFAD Mali representative, University of Abomey Calavi / Cotonou Benin, etc.

Followed by a technical meeting including Bioversity International and IER.



Implemented activities continued

Baseline survey

Focus group discussions and household survey achieved in 8 villages, 4 in Sikasso region (Siramana, Finkoloni, N’Goutjina and Kaniko as village check) and 4 in Segou region (Somo, Bolimasso, Boumboro and Boutenisso as village check).

In total 410 households have been surveyed.

Surveys cover several aspects commented below:

Physical environnement and anual cycle in communities

Anual calendar and changes occurred during the ten last years

100% of producers in all sites recognize 3 seasons in the year: rainy season, dry cold season and dry hot season and recognize existence of individual women plots.

Off season activities are: mining, cleaning house, vegetable production, building house / mason Nery etc.

Implemented activities continued

Water source: rivers, small rivers, small lakes etc. forage and wells are sources of pure water in different villages

Changes occurred on soils and lands

100% community members surveyed recognize agricultural land degradation through observing soil in relation with plant growth, less weeds on soil /land, erosion of certain plant species, development of *Striga*

Implemented actions as solutions: making compost, use of organic and chemical fertilizers, animal parking, practices of fallows in case of land availability, fight against soil erosion using control ridges, lines of rocks, plant hurdles etc.

Implemented activities continued

Climatic shocks and major events occurred in communities

Drought, flood, and others disasters like insects attacks

Implemented actions as solutions: planting trees, protection and building houses, jungle fire management, fight against forest destruction, through national forest laws and rules for natural resource protection, use of early maturing varieties compared to late ones; local best practices like seed bulk of different varieties, planting across topo sequences using late maturing varieties in lowland and early ones in upland etc.

Changes in basic infrastructures and socio-economics

Improved basic infrastructures and socio-economics in 100% of communities in the past ten and thirty years. Accessibility of villages through built good roads, rural routes. Basic socio-economics services (health centers, schools, alphabetization centers, processing agriculture and forest products equipment).

Implemented activities continued

Robustesse and realability of crops vary according regions

Segou region, reliable crops are pearl millet, sorghum, peanut, fonio followed by cowpea and Bambara groundnut while in Sikasso region, cotton, corn, pearl millet followed by sorghum and peanut.

Beside these crops are produced on small areas vegetables, cabbage, tomato, okra, onion, eggplant / jaxatu in both regions.

Institutions and human capacities are numerous

In each village site several institutions related to agriculture, education, human health are acting.

Implemented activities continued

Communities vulnerability

Main community source of subsistence are dry cereals, legume and vegetables (sorghum, millet, corn, fonio, peanut, cowpea, Bambara groundnut, onion /ehalot, okra, egg plant /jaxatu, tomato). Principal threat and danger of communities are: drought, flood, disease, insects, weeds whose negative effects are medium or significant on crops.

The main resources available in communities to minimize risks of these dangers on vulnerable means of subsistence are : source of water, rural migration, mars aménagement, use of adapted varieties, implementation of activities to generate revenue, phytosanitary treatment.

Crops per site and use Sikasso Region

Sites	Crops	Use
Siramana	<i>Tomato, Jaxatu and Okra</i>	Condiments, cash produced mainly by women. Social role while death, wedding ceremonies etc.
	<i>Fonio and Bambara groundnut</i>	Cash crop, food during famine. Abandoned before but production restart with project activities. High nutrition value
N'Goutjina	<i>Tomato, Jaxatu, Peper and Okra</i>	Same as Siramana
	<i>Fonio and Bambara groundnut</i>	Same as Siramana
Finkoloni	<i>Tomato, Jaxatu, Peper and Okra</i>	Same as Siramana
	<i>Fonio and Bambara groundnut</i>	Same as Siramana. Except Bambara groundnut is grown with good social value

Crops per site and use Sikasso Region

Sites	Crops	Use
Somo	<i>Tomato, Jaxatu and Okra</i>	Condiments, cash produced mainly by women. Social role while death, wedding ceremonies etc.
	<i>Fonio and Bambara groundnut</i>	Cash crop, food during famine. High nutrition value used in diabetic nutrition Precooked, Djouka, Clean washed, etc.) sold locally and exported.
Bolimasso	<i>Tomato, Okra, and Peper</i>	Same as Somo
	<i>Fonio and Bambara groundnut</i>	Same as Somo
Boumboro	<i>Tomato, Jaxatu, and Échalote /Onion</i>	Same as Somo
	<i>Fonio and Bambara groundnut</i>	Same as Somo

Existing farmer organizations and new created by the project

Sites	Number existing farmer organizations	New created /project
Siramana	9	Biodiversity Register Bureau
Finkoloni	9	Biodiversity Register Bureau
N'Goutjina	12	Biodiversity Register Bureau
Somo	6	Biodiversity Register Bureau
Bolimasso	6	Biodiversity Register Bureau
Boumboro	6	Biodiversity Register Bureau

During the training sessions, farmers explain ideas to establish collaboration network among the different villages sites.

Amount fonio and bambaragroundnut seed produced

Species	Number of varieties	Area ha	Production MT	Amount certified MT
1. Sikasso Region in 3 villages sites				
Fonio	2	0.75	0.165	-
Bambara g.	2	4.35	0.077	
2. Segou Region in 3 villages sites				
Fonio	8	1.94	0.40	
Bambara g.	11	1.2	0.88	
Total: fonio: 10 varieties; 2.69 ha; 0.957 MT				
Total: Bambara g.: 13 varieties; 5.55 ha; 0.957 MT				

Amount fonio and bambaraground nut grain produced

Species	Number of varieties	Area ha	Production MT
1. Sikasso Region in 3 villages sites			
Fonio	2	1.5	0.74
Bambara grou.	2	7.85	4.0
2. Segou Region in 3 villages sites			
Fonio	8	10.66	4.721
Bambara grou.	11	1.021	1.021
Total: fonio 10 varieties; 12.16ha; 4.721MT			

Documentation and monitoring biodiversity

Establishment of 3 biodiversity registers in each village

1. Cereals (Sorghum, Maize, Pearl millet, fonio)
2. Legumes (Cowpea, Peanut, Bambara groundnut, Sesame)
3. Vegetables (Tomato, Okra, Onion, Echalote, Jaxatu, Peper, etc.)

Species and varieties recorded in biodiversity registers

Village site	Species	Number of varieties recorded	Number of varieties threatened or disappeared /abandoned
Siramana	Fonio	1	1
Siramana	Bambara gr.	3	0
Siramana	Tomato	2	0
Siramana	Onion	1	0
Siramana	Ehalote	1	0
Siramana	Aubergine /Jaxatu	2	0
Siramana	Okra	2	0
Siramana	Peper	2	0
Siramana	Sorghum	8	0
Siramana	Pearl millet	2	1
Siramana	Maize	6	0
Siramana	Rice	6	0
Siramana	Cowpea	3	0
Siramana	Peanut	5	1
Siramana	Sesame	1	0

Species and varieties recorded in biodiversity registers continued

Village site	Species	Number of varieties recorded	Number of varieties threatened or disappeared /abandoned
Finkoloni	Fonio	1	0
Finkoloni	Bambara gr.	5	1
Finkoloni	Tomato	2	1
Finkoloni	Onion	1	0
Finkoloni	Ehalote	1	0
Finkoloni	Aubergine /Jaxatu	4	0
Finkoloni	Okra	2	0
Finkoloni	Peper	3	0
Finkoloni	Sorghum	8	4
Finkoloni	Pearl millet	4	1
Finkoloni	Maize	5	0
Finkoloni	Rice	4	0
Finkoloni	Cowpea	5	1
Finkoloni	Peanut	4	0
Finkoloni	Sesame	1	1

Species and varieties recorded in biodiversity registers continued

Village site	Species	Number of varieties recorded	Number of varieties threatened or disappeared /abandoned
N'Goutjina	Fonio	1	0
N'Goutjina	Bambara gr.	3	0
N'Goutjina	Tomato	3	0
N'Goutjina	Onion	1	0
N'Goutjina	Ehalote	2	0
N'Goutjina	Aubergine /Jaxatu	2	0
N'Goutjina	Okra	4	0
N'Goutjina	Peper	4	0
N'Goutjina	Sorghum	6	0
N'Goutjina	Pearl millet	2	1
N'Goutjina	Maize	3	1

Species and varieties recorded in biodiversity registers continued

Village site	Species	Number of varieties recorded	Number of varieties threatened or disappeared /abandoned
Somo	Fonio	2	0
Somo	Bambara gr.	3	0
Somo	Tomato	3	1
Somo	Onion	1	0
Somo	Ehalote	1	0
Somo	Aubergine /Jaxatu	2	0
Somo	Okra	2	0
Somo	Sorghum	14	0
Somo	Pearl millet	8	1
Somo	Maize	3	0
Somo	Cowpea	11	1

Species and varieties recorded in biodiversity registers continued

Village site	Species	Number of varieties recorded	Number of varieties threatened or disappeared /abandoned
Bolimasso	Fonio	4	0
Bolimasso	Bambara gr.	5	0
Bolimasso	Tomato	2	0
Bolimasso	Aubergine /Jaxatu	2	0
Bolimasso	Okra	4	0
Bolimasso	Peper	3	0
Bolimasso	Sorghum	5	0
Bolimasso	Pearl millet	5	0
Bolimasso	Maize	2	0
Bolimasso	Cowpea	5	0
Bolimasso	Sesame	2	0

Species and varieties recorded in biodiversity registers continued

Village site	Species	Number of varieties recorded	Number of varieties threatened or disappeared /abandoned
Boumboro	Fonio	3	0
Boumboro	Bambara gr.	5	0
Boumboro	Tomato	4	1
Boumboro	Aubergine /Jaxatu	2	0
Boumboro	Okra	4	1
Boumboro	Peper	1	0
Boumboro	Sorghum	10	6
Boumboro	Pearl millet	6	0
Boumboro	Maize	3	0
Boumboro	Cowpea	7	0
Boumboro	Sesame	1	0

Red list in different villages sites of focus species

Village Sites	Species	Red lists	Reasons
Siramana / Sikasso	Fonio	Finifing	Cotton production system
Finkoloni	Bambara gr.	Bougoua	Lateness, low yield
Finkoloni	Tomato	Mingoni	Lateness, stress sensitivity

Red list in different villages sites of focus species

Village Sites	Species	Red lists	Reasons
Somo /Segou	Fonio	Libè; Kamazona	Lateness to meet rainfall
Somo /Segou	Bambaragroundnut	Fitèrè; Lomatoumaz	Lateness to meet rainfall; low commercial value
Somo /Segou	Tomato	Tomatihiminerò	Lateness to meet rainfall; low commercial value
Somo /Segou	Jaxtu / Local aubergine / Egg plant	Koyobléma / Imbomouan	Lateness to meet rainfall; low commercial value
Bolimasso / Segou	Fonio	Petyirimè	Lateness
Bolimasso / Segou	Bambaragroundnut	Comabio	Lateness
Bolimasso / Segou	Okra	Djamadjan	Lateness
Boumboro / Segou	Okra	Torigan	Lateness to meet rainfall; low commercial value
Boumboro / Segou	Tomato	Tomatimissèni	Small fruit , very low market value
Boutenisso / Segou	Fonio	Wan	Lateness to meet rainfall; low commercial value
Boutenisso / Segou	Fonio	Piaarana	Lateness to meet rainfall; low commercial value
Boutenisso / Segou	Bambaragroundnut	Tioma moan	Lateness to meet rainfall; low commercial value
Boutenisso / Segou	Bambaragroundnut	Tiomabian	Lateness to meet rainfall; low commercial value

Seed and Gene banks visits

- URG, and community gene and seed banks Somo, Bolimasso, and Boumboro were visited (4 visits including 102 people with 42 women)



Training

Trainers

Tools

Specialist on innovative platforms IP and farmers networks establishment and management

Climate change assessment specialist

Agro-biodiversity management specialist

Production systems and cultivation practices / water availability specialists

Recepices an dnutrition

Holistic value chain approaches specialist

Seed technology specialist

Documentation and monitoring agrobiodiversity specialist

Training manuels

Equipment

Fund

Training of stakeholders

- Training of 14 resource farmers women on fonio, shallot, tomato processing.



- Duplication 6 for more than 300 people conferences of training by resources farmers and NGO in villages sites



Training on agrobiodiversity, land management, conservation, seed production, value chain

- 29 Participants (20 men and 9 women) duplicated by NGO in each village site for more than 300 people (reported)



Value Chain results

Main objective:

to study network organization, focused crops price establishment mechanism to identify strengths and weaknesses of their value chains on weekly market of villages sites of the project.

Two steps :

- A theoretical phase with presentations on network and value chain notions ;
- A practical phase with multi actors analysis of value chains of fonio, bambara groundnut, and vegetables.

Speakers of module : project team members

Participants: farmers (women and men) from the eight villages including controls.

Value Chain Results continued

- In Mali, producers of fonio, bambara groundnut and vegetables are women and men, young and adults whose principal activity is agriculture (cereal grow, vegetable production, fruit horticulture etc.).
- Areas of production of fonio vary from 0.20 ha to 3 ha per farmer and 10 square meters minimum to 1.50 ha maximum for bambara groundnut.
- Average yields are respectively 1200 kg for fonio and 500 kg for bambara groundnut.
- The different varieties of fonio and bambara groundnut are identified through grain color (white, red, or brown for fonio and black, white, or white for bambara groundnut).

Value Chain chain results

Results:

- Production use indicates a high level self consumption compared to commercialization part for the two focused crops. According villages members, the amount of self consumption varies in average from a 77% for fonio (with a minimum of 50% and a maximum of 95%);
- Fonio grain price at producers level varies from 0.16 € to 0.30 € per kg and 0.20 € to 0.50 € for bambara groundnut.
- Mostlikely, price fixation is made by buyers in small weekly markets and there is a lack of strong farmer organization to defend their interest. Grain collectors fix generally prices based on supply and demand of given product. Negotiation power of producers is very weak face of collectors.

Value Chain chain results continued

Results:

- In focused villages, processing fonio and bambara groundnut grains is mainly done by women (young and elders). The average amounts processed and commercialized per women during the season go from 60 kg to 80 kg per week.
- The processed products price varies from 0.6 € to 0.90 € per kg.
- Processing technologies are mainly traditional for bambara groundnut while modern for fonio but they are expensive for rural community poor women.

Value Chain results continued

Results:

- Receptions made from fonio are numerous handthoses from bambara groundnut : tô, couscous (fôyô), galettes, djouka, etc. On project sites washed dry fonio grains shelled price varies from 1€ to 1.15 €; precooked from 1.15€ to 1.230€ and in Bamako capital precooked kg fonio costs 1.50€.
- A tendency of increase of global demand of fonio and commercialized amount because of availability of processing machines and multiplication of small processing units (case of Farmer Union of Tominian Cercle UACT and FISINA in Somo) which pay the cost of shelling, cleaning, precooking and in certain cases packaging at a size of 1 kg per bag.

Value Chain results continued

Results:

- Transportation of products: bicycle, motorbicycle, wagons or cars for important amounts of products to big towns.
- For instance, the cost of a bag of 100 kg of fonio from Bolimasso to Tominian 5 km costs from 0.38€ to 0.76€ ; and 1.53€ from Tominian to Bamako 480 km.

Value Chain results continued

Results:

Vegetables situation: Vegetable production is possible all period of year with weak yields in rainy season and dry hot season. Optimal period of vegetable grow is from middle October to March.

- **Tomato** : its production is well spread in sites villages with very small plot of a size of 10 to 30 square meters). Yields is 1 kg per square meters 10 000 kg per hectare. The amount of tomato fruits commercialized is higher than self consumed amount. A basket of tomato fruits is sold at 1.53€ or 3.83€ based on basket size and fruit quality.
- Processed product: Dry tomato, conserved tomato and saumure.

Value Chain results continued

Results:

Vegetables situation:

Shallot :

- Shallot areas put in value per individual vary from 10 square meter to 400 square meters ; average yield is around 100 kg for 50 square meters, around 20 000kg /ha.
- Production distribution shows a dominance of self consumption (60%) compared to sale (40%) in almost all villages sites except Kaniko where self consumption represents only 20% of production.
- a strong believe is hat onion production is forbidden in Siramana according to which shallot cultivation on their soil give rise to permanent none stop rains and then populations decided not to grow Shallot and abandoned it.

Value Chain results continued

Results:

Vegetables situation:

Shallot :

- Prices per kg vary from 0.15€ during production season (February, March, and April) to reach 2.30€ in between rainy season and beginning cool season where seedneeds and demands are important.
- Processed products of onion are dry onion / Djabadjalan, grilledonion / Djabadjirané, and powderonion / Djabadjiranémougou all used as condiments.
- Grilled shallot cost between 0.46€ and 0.76€/kg. In abundance period, the amounts of processed shallot in average vary from 5 to 20 kg per month. Detail sale of fresh shallot is by heaps of 0.038€ and 0.076€. Grilled or dried shallot are sold in the same conditions per measure.

Value Chain results continued

Results:

Situation Vegetables

Okra

- Okra varieties are different according to fruit size, fruit length, color, viscosity, etc ; examples Guandian (long fruit okra), N'Toriguan (short and big size). This last one is well appreciated because of viscosity and capacity to be processed.
- Based on producers interviews on vegetable self consumption is more important compared to sale and loss is low.
- Areas grown vary from 10 square meter to 1 ha.

Training Needs

Value Chain Workshop

Results:

Situation Vegetables :(suite)

- *Okra* : processing is mainly done by women. Processed products are dry okra or powder okra. During rainy season the amount of processed per woman and per week can reach 17 kg.
- In villages sites, okra is generally sold in detail in heap of 4 to 10 fresh fruits for 0.38 € or 0.76 € depending on periods of year. Powder is sold per normal spoon content at 0.38€ or 0.76 €.

Training Needs

Value Chain Workshop

Results:

Situation Vegetables :(suite)

- ***Constraints of focused crops***
- Fonio constraints are numerous : harvest constraint, freshening, shelling, loss prior and after harvest, weak position of producers for production price negotiation, bad organization networks, etc.
- Bambara groundnut constraints are mainly, women difficulty to access land, weeds, tiresome of harvest, grains conservation problems.
- Vegetables main constraints are: animal rambling, parasites attacks, water access for irrigation, selling and stock age of fresh fruit to avoid quick deterioration.

Training Needs

Value Chain Workshop

Results:

Situation Vegetables :(suite)

- ***Constraints of focused crops***
- Processing vegetables is principally made by women at villages level.
- Available techniques permit to reduce loss of okra and shallot production; but high for tomato where processing techniques are not well handled by many women.

Training Needs

Value Chain Workshop

Results:

- Value chain approach involves close partnership among different actors of supply chain in order to respond to needs of consumers and increase the total value of the product.
- It allows deciders to get reliable information on value chains functioning to their actions.

State of polycies and regulations

- Orientation Agriculture Law;
- Ratification of Convention of Biological Diversity and FAO International Treaty on PGRFA
- 2010. New harmonized seed laws, regulations and standards of ECOWAS;
- Official catalogue for released varieties in process of revision to take in account local varieties;
- Signature of Cartagena and Nagoya Protocol in process of ratification;
- Mali country member of OAPI.

Time Frame on outputs Year 2

Activity	Ja	Fe	Ma	Ap	Ma	Ju	Jul	Au	Se	Oc	No	De
OUTPUT 1 Improved crops, methods, approaches and tools for coping with climate change	X	X	X	X	X	X	X	X	X	X	X	X
<i>Activity 1.2. Participatory assessment of seed varieties using diversity field fora and seed fairs in target sites involving all actions mainly weather data collection, crop field data etc.and strengthening conservation and use.</i>					X	X	X	X	X	X	X	X
<i>Activity 1.3 Production of seeds of identified best tolerant varieties of crops in target sites by women and men of target sites</i>					X	X	X	X	X	X	X	X
OUTPUT 2: Strengthened market access for stress-tolerant and nutritious crops												
<i>Activity 2.1. Survey on production levels of cultivated traditional crops and varieties in target sites with stress on those contributing on food availability in any climate change condition.</i>					X	X			X	X		
<i>Activity 2.2. Conduct a complementary survey on levels of demand for nutritious crops/products of stress-tolerant crops in local markets linked to target sites and other surrounding communities.</i>					X	X			X	X		

Time Frame on outputs Year 2 cont.

Output 3: Enhanced capacities of farmers and other value chain actors in conserving and using agrobiodiversity sustainably	Ja	Fe	Ma	Ap	Ma	Ju	Jul	Au	Se	Oc	No	De
<i>Activity 3.1. Establishment of innovative platforms IP and identification of farmers networks (monitoring their functioning)</i>						X	X	X	X	X	X	X
<i>Activity 3.2. Training of IP and farmers' networks (including indigenous ones including women and men on climate change patterns, effect and risks; management of agro-biodiversity; practices and production systems improving water availability to plants etc. (Field practices)</i>					X	X	X	X	X	X	X	X
<i>Activity 3.3. Training of practitioners/ researchers in NARS by the Programme on holistic value chain approaches continuity</i>									X	X	X	
<i>Activity 3.4. Training of countries partners and others projects' teams on agrobiodiversity documentation and monitoring tools (monitoring activities)</i>				X	X	X	X	X	X			

Time Frame on outputs Year 2 cont.

Output 4: Proof of evidence of role of agrobiodiversity in nutrition, income and adaptation to climate change provided along with recommendations for supportive policies for its enhanced use	Ja	Fe	Ma	Ap	Ma	Ju	Ju l	Au	Se	O c	No	D e
<i>Activity 4.1. Publication of scientific article and manuals on proof of evidence of the role of agrobiodiversity</i>						X	X	X	X	X	X	X
<i>Activity 4.2. Establishment of policy options promoting greater use of local diversity at national and international level.</i>								X	X	X	X	X
<i>Activity 4.3. Establishment of networks promoting linkages between local producers and national and international agendas dealing with adaptation to climate change.</i>						X	X	X	X	X	X	X



Thank You For Your attention

