

PROGRAMME AGRICULTURE –  
GESTION DES RESSOURCES NATURELLES  
« *Wula Nafaa* »

SUBSECTOR VERIFICATION

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# LIST OF PRODUCTS

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Name of product	Scientific name
Laalo mbep	<i>Sterculia setigera</i>
Baobab	<i>Adansonia digitata</i>
Fonio	<i>Digitaria exilis</i>
Bisap	<i>Hibiscus sabdariffa</i>
Cashew	<i>Anacardium occidentale</i>
Moringa	<i>Moringa olifera</i>
Palm oil	<i>Elaeis guineensis</i>
Banana	<i>Musa acuminata</i>
Bamboo	<i>Oxytenanthera abyssinica</i>
Madd	<i>Saba senegalensis</i>
Tamarind	<i>Tamarindus indica</i>
Jujube	<i>Zizyphus mauritiana</i>
Wen	<i>Pterocarpus erinaceus</i>
Sesame	<i>Sesamum indicum</i>
Netetou	<i>Parkia biglobosa</i>
Karité	<i>Butyrospermum parkii</i>

# 1 INITIAL CRITERIA

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From a list of 49 products we used a matrix with 19 factors to determine a short list of products in the Tambacounda region that presented the highest opportunities for program intervention; these criteria were a mix of biological, social and economic.

Nature of Product	Economic Factors	Geographic factors	Market factors	Social factors	Biological factors	Other
Perishability	Weight and value.	Surface area under production	Market level (local, regional, national, international)	Cultural importance	Biological sustainability	Product targeted by other organizations
Quality of production	Need for initial investment	Specificity to the region	Market potential	Producer ethnic group	Positive environmental benefits	Political constraints
Quantity of production,	Potential for value added	Access to market	Length of subsector	Producer gender		

Using these criteria, and pulling from extensive secondary research,<sup>1</sup> the program elaborated a short list of products to target in the Tambacounda region. This list included approximately twenty 23 products which include: laalo mbep, baobab, fonio, bisap, cashew, moringa, palm oil, ecotourism, banana, bamboo, madd, honey, charcoal, tamarind, jujube, hay, wen, netetou, sesame, gardening, karité, dankh and gum arabic.

Of these 23, fifteen subsectors were analyzed by Astou Sene to gather more precise socio-economic information, particularly in regards in-subsector revenue distribution. As a result of this report the program has effectively discarded two of the 23 subsectors, notably dankh and gum Arabic, leaving 21 subsectors on the latest short list.

Since then the program has uncovered additional information on production figures, that has allow us to imagine a more detailed verification of the products outlined in this report. While the program has planned to carry out several more subsector analyses of various subsectors in the near future (notably Banana, Charcoal and Eco-tourism), a verification of these subsectors was considered necessary as we look to target new subsectors and start up the program in the Kolda region.

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<sup>1</sup> « Synthèse de la documentation sur les Filières Forestières, Fauniques et Agricoles Pertinent pour le Wula Nafaa.»

# 2 IMPACT ON PRODUCERS

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## 2.1 Emphasis on Local Producer Groups

Following the precepts of “Nature, Wealth and Power” it is critical that local producers find a benefit from their natural resources (and stress-relieving non-traditional agricultural resources) to provide increased incentive to local producers as opposed to outside producers. For in the absence of private ownership, increased benefits by stronger outsider owned “harvesting” enterprises risks rendering natural resource management unsustainable, as these outsiders are not involved in the daily management of these resources, are not bound by local social structures, and do not view the harvested resources as part of their heritage or social responsibility. Thus, there is thus little incentive for them to invest in sustainable harvesting technologies.

## 2.2 Number of Local Producer Enterprises Engaged in the Subsector

Given the priority placed on local producer groups, a critical factor would be the number of local producer enterprises dependant on a specific subsector. Obviously if the program can touch a greater number of producer through one intervention then obviously the greater the impact is perceived. Subsectors like laalo mbep, fonio, cashews and baobab involve a large number of producers, even if in the case of fonio, little income is currently earned. Information on producer numbers is scarce, but where information is not available it has been estimated (see Annex 2).

## 2.3 Potential to Increase Local Producers’ Income

However, number of enterprises while an important criteria, also needs to be considered in conjunction with the size of the impact. In this the case impact can be seen as the potential to increase local producer incomes. If the economic impact is larger with one product than the other then certainly this should make of greater interest to the program. But measuring this impact is not always straightforward, because it includes not only the current level of impact that this product makes on lives of producer families but also the potential to increase over time. The possibilities for incomes to increase can be determined by several factors 1) whether their supply and demand can increase and 2) whether subsector efficiency can be improved to decrease the number of intermediaries and increase revenues, and 3) whether new levels of value added can be found to increase incomes. For example madd (*Saba senegalensis*) is a relatively important product in terms of producer revenue (see Annex 1) however, a) it is unlikely that supply can be increased at least in the short term, b) producers currently garner a good percentage of the subsector revenue due to its perishability and c) there are limited options for local level value added. Thus though madd currently has a notable impact on producer revenues it has little potential to increase, without a

subsequent increase of price at the consumer level. On the other hand, fonio which has previously had a limited level of commercialization and largely been consumed by the household, is benefiting from a stimulated national demand, and as supply can easily increase, and there are healthy opportunities for local level transformation, and increased subsector efficiency then fonio has a greater potential to increase producer incomes than Madd even though current revenues are lower.

Thus in our first matrix we compare the potential to increase incomes with the number of local producer enterprises. As these factors are considered of greatest importance to program objectives they have been weighted by three.

**Matrix 1: Comparison of the Potential for Increase in Local Producer Revenues and the Number of Local Producer Enterprises Working with NRM or NTA Products in Tambacounda or Kolda.**

Number of local producer enterprises engaged in subsector. →

		Few	Medium	Many
↑ Potential to increase local producer	High	<ul style="list-style-type: none"> <li>▪ Ecotourism</li> <li>▪ Banana</li> <li>▪ Moringa</li> <li>▪ Charcoal</li> </ul>		<ul style="list-style-type: none"> <li>▪ Laalo Mbep</li> <li>▪ Baobab</li> <li>▪ Cashews</li> </ul>
	Medium	<ul style="list-style-type: none"> <li>▪ Wen/Dimb</li> <li>▪ Bamboo</li> </ul>	<ul style="list-style-type: none"> <li>▪ Honey</li> <li>▪ Tamarind</li> <li>▪ Hay</li> <li>▪ Palm oil</li> </ul>	<ul style="list-style-type: none"> <li>▪ Fonio</li> <li>▪ Bisap</li> </ul>
	Low	<ul style="list-style-type: none"> <li>▪ Karité</li> </ul>	<ul style="list-style-type: none"> <li>▪ Netetou</li> <li>▪ Sesame</li> <li>▪ Gardening</li> </ul>	<ul style="list-style-type: none"> <li>▪ Jujube</li> <li>▪ Madd</li> </ul>

# 3 REGIONAL REVENUES AND ADVANTAGES

## 3.1 Regional Revenues

While it would be correct to assume that impact at the local producer level is critical for the NWP approach to succeed, it would be short sighted to ignore total regional impact, even if these impacts are highly localized or extend outside of the zone of intervention of the project. This criterion measures not only the revenue earned by local producers but also by outsiders. Outside revenues are more significant in the tourism, charcoal, bamboo, banana and, to a lesser extent, the laalo mbep subsectors. See annex 3 for details.

## 3.2 Competitive Advantage

An important point to be considered when reviewing a product potential is whether it has a competitive advantage (regionally or nationally). If a product has a largely national market (jujube, madd, sesame) then high concentration of products in region of intervention is counted. If the product largely has an international market (sesame, ecotourism) then the Senegal's competitive advantage is considered. If both markets are present (laalo mbep) then both criteria are factored.

These factors are important in the choice of a product but of slightly less importance than the number of enterprise touched and the potential to increase producer revenues. Thus they are weighted by two.

**Matrix 2: Comparison of the Regional Revenues and the Competitive Advantage Working with NRM or NTA Products in Tambacounda or Kolda.**

		Competitive advantage →		
		Low	Medium	High
Regional Income ↑	High	<ul style="list-style-type: none"> <li>Sesame</li> </ul>	<ul style="list-style-type: none"> <li>Banana</li> <li>Cashew</li> <li>Ecotourism/Hunting</li> </ul>	<ul style="list-style-type: none"> <li>Laalo mbep</li> <li>Charcoal</li> </ul>
	Medium		<ul style="list-style-type: none"> <li>Baobab</li> <li>Bisap</li> <li>Palm oil</li> <li>Honey</li> </ul>	<ul style="list-style-type: none"> <li>Fonio</li> <li>Wen/Dimb</li> </ul>
	Low	<ul style="list-style-type: none"> <li>Hay</li> <li>Gardening</li> </ul>	<ul style="list-style-type: none"> <li>Moringa</li> <li>Jujube</li> <li>Tamarind</li> <li>Netetou</li> <li>Karité</li> </ul>	<ul style="list-style-type: none"> <li>Madd</li> <li>Bamboo</li> </ul>



# 4 PARTNER POTENTIAL AND COMPETITION

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## 4.1 Private Sector Potential

A critical factor for intervention is the presence or potential for collaboration with private sector partners. It is the approach of WN to develop strong private sector partners. This is critical for three reasons: 1) Private sector partners provide an immediate market for the product, often bypassing less efficient intermediaries; 2) These partners have typically carried out market surveys and are well informed about their respective market potential; and 3) Private sector partners provide the highest potential for BDS providers with subsectors where BDS provision is limited.

The partnerships with Gaia Enterprise, Baobab Fruit Company and SETEXPHARM have been essential element in the choice of several subsectors: Fonio (organic), Baobab (whole), and Laalo mbep. See annex 6 for details

## 4.2 Other Donor Intervention

As stated by Frank Lusby in *Promotion of Commercially Viable Solutions to Subsector and Business Constraints* (2004) coordination of subsector interventions in regards SME development needs to be well coordinated. If the members of the subsector are being treated with two different set of BDS/SME approaches then this can sometimes lead to confusion. For example if a partner provides direct support to actors, in regards: financing materials, subsidizing trainings and serving as direct market intermediary, while another development organization tries to follow the more sustainable facilitation methods: reducing financial inputs, demanding participation to training and facilitating market access, this confusion can create very real problems. In this overlap can lead to inefficiency. Thus subsectors that have not been currently targeted by other donors provide for a greater efficiency of intervention and thereby increase product potential: such a bisap, moringa, baobab and laalo mbep. See annex 6 for details.

These factors are important in the choice of a product but of slightly less importance than the number of enterprise touched and the potential to increase producer revenues. Like regional incomes and competitive advantage, they are weighted by two.

**Matrix 3: Comparison of the Potential for Private Sector Partners and Donor Intervention with Tambacounda or Kolda NRM or NTA Products**

	High market intervention by donors	→	Lack of market intervention by other donors
Potential for Private sector partners	<ul style="list-style-type: none"> <li>▪ Honey</li> </ul>	<ul style="list-style-type: none"> <li>▪ Bamboo</li> <li>▪ Banana</li> </ul>	<ul style="list-style-type: none"> <li>▪ Unprocessed Baobab</li> <li>▪ Organic Fonio</li> <li>▪ Moringa</li> <li>▪ Laalo Mbep</li> </ul>
Evidence of private sector partners	<ul style="list-style-type: none"> <li>▪ Sesame</li> <li>▪ Fonio for national market</li> <li>▪ Karité</li> <li>▪ Charcoal</li> <li>▪ Cashews</li> </ul>	<ul style="list-style-type: none"> <li>▪ Netetou</li> <li>▪ Baobab powder</li> <li>▪ Ecotourism</li> <li>▪ Wen/Dimb</li> </ul>	<ul style="list-style-type: none"> <li>▪ Oil Palm</li> <li>▪ Organic bisap</li> </ul>
Low potential for Private sector partners	<ul style="list-style-type: none"> <li>▪ Gardening</li> </ul>	<ul style="list-style-type: none"> <li>▪ Bisap for national market.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Jujube</li> <li>▪ Madd</li> <li>▪ Tamarind</li> <li>▪ Hay</li> </ul>

# 5 EQUITY AND ENVIRONMENTAL SUSTAINABILITY

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## 5.1 Environmental Sustainability

In dealing with agricultural and natural resource enterprises biological sustainability is always a critical factor. This is not always the case with non biological enterprises. But if natural/agricultural enterprises are to continue to be viable on a long term basis then the sustainability of their resource base is critical.

Not only that but it is evident that natural resources have other values other than direct economic value, indirect externalities such as microclimate, nutrient cycling, flood control etc. Any choice to exploit natural products needs to balance the equation defined by the potential economic value of these resources and the indirect costs of using them.

Of course different levels of harvesting and regeneration have an impact on levels of environmental sustainability.

For simplicities sake we have correlated with biological sustainability by the level of use.

- ◆ Agricultural products have relatively high rates of regeneration levels and if production is carried out in an intensive and profitable manner, can relieve pressure on natural resources, and are typically highly sustainable. This includes standard crops such as sesame and fonio, and tree crops like cashews, but also other non-exploitative products such as non-hunting ecotourism.
- ◆ Non-timber forest products have a relatively high level of sustainability, however some commercial uses can active reduce the lifetime of species (through tapping or extensive pruning). Even less damaging uses such as fruit harvesting can involve the loss of seedstock and perhaps reduced opportunities for regeneration. While NTFP sustainability can vary, we will consider them as being uniform.
- ◆ Direct timber and hunting products carry with them the lowest levels of biological sustainability, as the product is felled or killed, there needs to be considerable attention given to regeneration capacity (and management plan elaborated) before any intervention can be carried. The two exceptions to this category are: madd and banana. Madd is included in this category because its harvest is often destructive and deprives the small chimpanzee populations in the region of a critical food-stock. Banana is considered to have low biological sustainability because of its impact on deforestation and riverbank erosion.

## 5.2 Equity

Since WN primary target groups are local producers, some level of equity is important. Equity is a relative concept not easily measure. Here it is measured as the percentage of revenues received by producers in relation to other actors (see Annex 8). In the cases where this has not been measured, estimations have been made.

On another level it is also important to note that a comparison of economic growth of countries using Gini coefficients shows correlation between growth and equity. On a micro level, global demand for products, even those that can only be produced in one place is fickle. Sustained growth comes from emerging domestic demand which in turn comes from increased incomes of the lower quintiles. Equity is a growth accelerator or lubricant. In the absence of equity you can have globalization, but growth is limited by the absence of domestic demand, a phenomena which requires equity.

While equity and environmental sustainability are importance to the program, they are of lower importance than the other factors above and are thus left unweighted.

**Matrix 4 Comparison of Equity and Biological Sustainability of Tambacounda and Kolda NRM or NTA proydacts**

		Biological Sustainability		
		Low <i>Forest product</i>	Medium <i>NTFP</i>	High <i>NTAP</i>
Equity	High 60%+	<ul style="list-style-type: none"> <li>▪ Bamboo</li> <li>▪ Madd</li> </ul>	<ul style="list-style-type: none"> <li>▪ Tamarind</li> </ul>	<ul style="list-style-type: none"> <li>▪ Bisap</li> </ul>
	Medium 30%-59%		<ul style="list-style-type: none"> <li>▪ Laalo mbep</li> <li>▪ Jujube</li> <li>▪ Baobab</li> <li>▪ Palm oil</li> <li>▪ Netetou</li> </ul>	<ul style="list-style-type: none"> <li>▪ Cashew</li> <li>▪ Sesame</li> <li>▪ Gardening</li> <li>▪ Moringa</li> <li>▪ Hay</li> </ul>
	Low 0-29%	<ul style="list-style-type: none"> <li>▪ Banana</li> <li>▪ Hunting</li> <li>▪ Charcoal</li> <li>▪ Wen/Dimb</li> </ul>	<ul style="list-style-type: none"> <li>▪ Karite</li> </ul>	<ul style="list-style-type: none"> <li>▪ Ecotourism</li> <li>▪ Honey</li> <li>▪ Fonio</li> </ul>

# 6 FINAL TABLE

		Revenue matrix ( <i>weighted x3</i> )	Competitive advantage/ production matrix (x2)	Partner/ Donor matrix ( <i>weighted x2</i> )	Biological & equity matrix	Total <sup>2</sup>
1	Laalo mbep	18	12	12	4	46
2	Baobab	18	8	12	4	42
3	Fonio	15	10	12	4	41
4	Bisap	15	8	10	6	39
4	Cashew	18	10	6	5	39
6	Moringa	12	6	12	5	35
7	Palm oil	12	8	10	4	34
7	Ecotourism	12	10	8	4	34
7	Banana	12	10	10	2	34
10	Bamboo	9	10	10	4	33
11	Honey	12	8	8	4	32
12	Charcoal	12	12	6	2	32
13	Madd	12	8	8	4	32
14	Tamarind	12	6	8	5	31
15	Jujube	12	6	8	4	30
16	Hay	12	4	8	5	29
16	Wen	9	10	8	2	29
18	Sesame	9	8	6	5	28
19	Netetou	9	6	8	4	27
20	Gardening	9	4	4	5	22
21	Karité	6	6	6	3	21

<sup>2</sup> (3x4)+(3x2)+(3x2)+3 = 24, (4x4)+(4x2)+(4x2)+4 = 32, [Thus > 32 is green, 24-32 is yellow, and < 24 is red].

# 7 LIST OF PRODUCTS

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The program would like to target about 10- 13 subsectors of potential to the program. From our ranking we propose the following 13 subsectors as having the most potential, 10 of which have a “green rating.” Three “yellow ranked” products (honey, charcoal and madd) were also included in the list because of their importance in certain zones.

1	Laalo mbep	8	Ecotourism
2	Baobab	9	Banana
3	Fonio	10	Bamboo
4	Bisap	11	Honey
5	Cashew	12	Charcoal
6	Moringa	13	Madd
7	Palm oil		

# 8 PRODUCTS BY FOCUS

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It goes without saying that each of these 13 products/subsectors has its respective constraints and opportunities. Thus interventions will vary according to the realities of each subsector.

Certain subsectors will demand both a field level and market level intervention, following the principles outlined in the Community Benefits Strategy: organization of producer groups, promotion of contractual relations with private sector partners, training of producer groups on processing, grading and quality control.

Certain subsectors, such as moringa and exotic bamboo, are currently undeveloped (new) products and more speculative in nature – these subsectors demand an intervention at both field and market level but require a more light handed approach.

Other subsectors such as charcoal, banana and to a certain extent ecotourism (in regards hunting), demand a more policy orientated approach, with less of a field level intervention.<sup>3</sup>

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<sup>3</sup> Of course this is not to say that there will ultimately be no field level intervention with these products but that currently our competitive advantages

# 9 PRODUCTS BY ZONE

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While it could be said that 13 subsectors could be said to be wide range of products, given the fact that the program works in a wide range of ecologic areas with a different competitive advantages, this diversity is unavoidable.

As we can see below, the products correspond well with our priorities, and each zone has a number of productive subsectors of interest.

Each zone will target three productive primary subsectors and two secondary subsectors (that have more of a speculative potential), allowing for a balance between flexibility and maximum impact.

Gardening will serve as a point of leverage for a diverse array of activities, notably moringa, exotic bamboo, and baobab root production, but will not be a targeted subsector itself.

## 9.1 Subsectors by Zone

	Koussanar	Bala	Kedougou & Dialacoto	Velingara/ Pata	Sedhiou/ Kolda
Primary Subsectors	Laalo mbep	Laalo mbep	Ecotourism <sup>4</sup>	Laalo mbep	Palm oil
	Baobab	Baobab	Bamboo/Laalo	Baobab	Honey
	Fonio /Bisap <sup>5</sup>	Bisap	Fonio	Fonio	Fonio/ Cashew
Secondary Subsectors	Ecotourism	Honey	Honey/Madd	Bamboo/Madd	Baobab
	Moringa	Moringa	Moringa	Moringa	Moringa
Point of leverage	Gardening	Gardening	Gardening	Gardening	Gardening

As mentioned certain highly politicized subsectors will demand a different approach, which involves more of an initial focus on policy interventions, and the reduction of legal or economic barriers.

## 9.2 Non-zone Subsectors

	Policy level
Primary Subsectors	Charcoal
	Ecotourism (hunting)
	Banana

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<sup>4</sup> Not hunting ecotourism – but cultural or non-destructive eco-tourism.

<sup>5</sup> Within the zone certain parts of the zone will favor one activity and certain others another activity.



# 10 CALENDAR

Given the seasonality of most of these activities, it is important that zone activities are also well balanced in terms of time, so that interventions can be well coordinated and allow for maximum efficiency. As can be noted below, it is rare that the program will be working on more than two products at the same time:

Koussanar	Oct-Dec	Jan-Mar	April June	July- Sept
Laalo mbep	xxxxxxxxxx		xxxxxxxxxx	
Baobab		Xxxxxxxxxxx	xxxxx	
Bisap	Xxxx		xx	Xxxxxxxxxxx
Fonio	Xxxx		xx	Xxxxxxxxxxx
Moringa				
Ecotourism	xxxxxxxxxx	Xxxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx
Gardening	xxx	Xxxxxxxxxxx		

Bala	Oct-Dec	Jan-Mar	April June	July- Sept
Laalo mbep	xxxxxxxxxx		xxxxxxxxxx	
Baobab		Xxxxxxxxxxx	xxxxx	
Bisap	xxxx		xx	xxxxxxxxxx
Moringa				
Honey		xxxx	xxxxxxxxxx	
Gardening	xxx	Xxxxxxxxxxx	xxxxx	

Kedougou	Oct-Dec	Jan-Mar	April June	July- Sept
Honey		Xxxxxxxxxxx	xxxxxxxxxx	
Fonio	Xxxx		xx	xxxxxxxxxx
Ecotourism	xxxxxxxxxx	Xxxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx
Bamboo	xxxx	xxxxxxxxxx	xxxxx	
Moringa				
Madd			xxxxxxxxxx	
Gardening	xxx	Xxxxxxxxxxx	Xxxxx	

Sedhiou/Tanaf	Oct-Dec	Jan-Mar	April June	July- Sept
Palm oil		xxxx	xxxxxxxxxx	xxx
Honey			xxxxxxxxxx	
Fonio	Xxxx		xx	xxxxxxxxxx
Cashew		xxxxxx	xxxxxx	
Moringa				
Baoabab		Xxxxxxxxxxx	xxxxxx	
Gardening	xxx	Xxxxxxxxxxx	Xxxx	

Velingara/ Pata	Oct-Dec	Jan-Mar	April June	July- Sept
Laalo mbep	Xxxxxxxxxx		xxxxxxxxxx	
Baobab		Xxxxxxxxxx	Xxxx	
Fonio	Xxxx		xx	xxxxxxxxxx
Madd			xxxxxxxxxx	
Bamboo	Xxxx	Xxxxxxxxxx	xxxxxxxxxxxx	
Moringa				
Gardening	xxx	Xxxxxxxxxx	xxxxx	

# 11 PRODUCT SPECIFICITIES

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## Unprocessed Baobab

Private sector Partner	Yes, Baobab Fruit Company
Partner potential BDS provider	Yes
Potential for increased price/volume.	Yes (Price – by increased access to export market)
Other NGO intervention	No
Possible support activities	Possible PDSE support
Key opportunities	Key product, regional advantage, easy storage, healthy export market, advantageous price.
Key constraints	Little transformation
Additional information needs	<ul style="list-style-type: none"> <li>▪ Development of local Baobab conventions, to insure regeneration.</li> <li>▪ No need to carry out market survey.</li> </ul>

## Processed Baobab

Private sector Partner	Possible (Maison Consommer Senegalaise/ Vivrière etc)
Partner potential BDS providers	Limited (emerging enterprises)
Potential for increased price/volume.	Yes (Price – by value added)
Other NGO intervention	Some (PROMER)
Possible support activities	Possible PDSE support
Key opportunities	Value added with a key product, promising market, low weight high value.
Key constraints	Set up costs, market development.
Additional information needs	<ul style="list-style-type: none"> <li>▪ Development of local Baobab conventions.</li> <li>▪ Market survey of national market.</li> </ul>

## Laalo Mbep Export

Private sector Partner	Yes, SETEXPHARM
Partner potential BDS provider	Yes
Potential for increased price/volume.	Yes (Price, by increased market efficiency, quality control)
Other NGO intervention	Some biological interventions, little economic interventions.
Possible support activities	N/A
Key opportunities	Well developed market, high competitive advantage internationally.
Key constraints	Complex subsector, damaging harvesting techniques.
Additional information needs	<ul style="list-style-type: none"> <li>▪ Development of local mbep conventions.</li> <li>▪ No need to carry out market survey.</li> </ul>

### Bamboo

Private sector Partner	Not yet (though active DO support)
Partner potential BDS provider	Yes
Potential for increased price/ volume.	Yes (Price, by increased market efficiency; and perhaps, volume through regeneration)
Other NGO intervention	Some (ISRA, PFDK?)
Possible support activities	African Bamboo Association
Key opportunities	Healthy local market, with potential for value added at producer level.
Key constraints	Biologically sensitive, restrictive use practices.
Additional information needs	<ul style="list-style-type: none"> <li>▪ Development of local bamboo conventions.</li> <li>▪ Need to carry out market survey for local bamboo</li> <li>▪ Need to carry out feasibility and environmental impact study for exotic species.</li> </ul>

### Fonio Organic

Private sector Partner	Gaia Enterprise
Partner potential BDS provider	Yes
Potential for increased price/ volume.	Yes (Price, by direct access to export market and branding; also volume )
Other NGO intervention	Considerable: GADEC, PROMER, ENDA
Possible support activities	Orange Bleue
Key opportunities	Market Research carried out in France, added value, organic product, high regional competitive advantage
Key constraints	High demand in capacity building skills (organic production)
Additional information needs	<ul style="list-style-type: none"> <li>▪ No need to carry out market survey, to be carried out by Gaia.</li> </ul>

### Fonio for National Market

Private sector Partner	Possible (Maison Consommer Senegalais/ Vivriere etc)
Partner potential BDS provider	Limited (emerging enterprises)
Potential for increased price/ volume.	Yes (Volume)
Other NGO intervention	GADEC, ENDA (several actors most focused on transformation issues, not production or marketing)
Possible support activities	N/A
Key opportunities	Market potential in Senegal.
Key constraints	Need for organized production, market stimulation and transformation technologies.
Additional information needs	<ul style="list-style-type: none"> <li>▪ Market study needed</li> </ul>

### Organic Bisap

Private sector Partner	Potential (SETEXPHARM)
Partner potential BDS provider	Yes, if partnership succeeds
Potential for increased price/volume.	Yes (Volume, and perhaps price with either improve post harvest techniques and/or branding)
Other NGO intervention	No
Possible support activities	Possible AMAP subsector analysis.
Key opportunities	Healthy world market
Key constraints	High demand in capacity building skills (organic production), low local production, limited regional competitive advantage, poor post harvest processing techniques
Additional information needs	<ul style="list-style-type: none"> <li>▪ No need to carry out market survey in the event of partnership.</li> </ul>

### Moringa

Private sector Partner	Yes (Moringa Energie)
Partner potential BDS provider	Yes
Potential for increased price/volume.	Yes (Volume) <sup>6</sup>
Other NGO intervention	Church World Service (put largely with leaf)
Possible support activities	Possible PDSE intervention.
Key opportunities	Healthy world market for oil and flocculant, enterprise has a contract with Optima
Key constraints	Limited local knowledge of market, need for new production technologies.
Additional information needs	<ul style="list-style-type: none"> <li>▪ No need to carry out market survey.</li> </ul>

### Honey and Beeswax

Private sector Partner	Potential (SETEXPHARM, Gaia Entreprise, Filfilii)
Partner potential BDS provider	Yes, if partnership succeeds
Potential for increased price/volume.	Yes (Volume, and price perhaps through increased market access)
Other NGO intervention	Yes (PFAEK, PROMER), mostly on production issues
Possible support activities	N/A
Key opportunities	Production organized in certain areas and demand expressed for good quality honey and beeswax by certain enterprises.
Key constraints	Poor market organized
Additional information needs	<ul style="list-style-type: none"> <li>▪ Possible market study needed.</li> <li>▪ Investigation of organic production</li> </ul>

<sup>6</sup> This is a new product so discussion of increases in price or volume is somewhat artificial. Any production will bring about an increase – however as a new crop it could also fail to develop.

### Oil Palm

Private sector Partner	Potential (SETEXPHARM etc)
Partner potential BDS provider	Possible, if partnership succeeds
Potential for increased price/volume.	Yes (price perhaps through increased market access)
Other NGO intervention	Currently limited
Possible support activities	N/A
Key opportunities	High production, healthy demand.
Key constraints	Aging production source and need for improved harvesting technologies
Additional information needs	<ul style="list-style-type: none"> <li>▪ Development of local palm conventions.</li> <li>▪ Market survey needs will depend on partner.</li> <li>▪ Research of proper harvesting technologies</li> </ul>

### Cashew

Private sector Partner	Partner: Not yet – but likely.
Partner potential BDS provider	Possible
Potential for increased price/volume.	Yes (Volume, and perhaps a very modest increase in price through increase collection organization and possible transformation).
Other NGO intervention	Significant, PFAEK, PROMER, most production or transformation interventions.
Possible support activities	PDSE.
Key opportunities	Considerable research carried out on subsector.
Key constraints	Considerable competition on world and national market, for both processed and unprocessed nuts. Indian intermediaries well organized.
Additional information needs	<ul style="list-style-type: none"> <li>▪ Market survey needs will depend on partner.</li> </ul>

### Ecotourism (non-exploitative)

Private sector Partner	Gaia Entreprise and possibly others
Partner potential BDS provider	Possible
Potential for increased price/volume.	If equity issues can be addressed this will lead to increased revenues.
Other NGO intervention	Peace Corps
Possible support activities	Gaia Enterprise.
Key opportunities	High potential for income with high environmental sustainability.
Key constraints	Equity is the primary difficult, how do local producers benefit.
Additional information needs	<ul style="list-style-type: none"> <li>▪ Market study.</li> </ul>

### Madd

Private sector Partner	Limited. Possibly federation of local bana-banas, possibly Maria Distribution.
Partner potential BDS provider	Limited
Potential for increased price/ volume.	Modest
Other NGO intervention	None
Possible support activities	N/A
Key opportunities	Wide section of population in targeted zones touched. High local demand
Key constraints	Sustainability is in question, and processing potential while possible will be modest to low, thus limited private sector development.
Additional information needs	<ul style="list-style-type: none"> <li>▪ Environmental impact survey, both in regards harvesting techniques and impact on chimpanzee communities.</li> <li>▪ Market study.</li> <li>▪ Organization of bana-bana federation.</li> </ul>

### Hunting

Private sector Partner	No
Partner potential BDS provider	Possible
Potential for increased price/ volume.	If equity issues can be addressed this will lead to increased revenues.
Other NGO intervention	None
Possible support activities	N/A
Key opportunities	Relatively hire source of revenue in the Tambacounda region.
Key constraints	<ul style="list-style-type: none"> <li>▪ Unclear hunting stock numbers, poor inventory techniques.</li> <li>▪ Equity issues equally important.</li> </ul>
Additional information needs	<ul style="list-style-type: none"> <li>▪ Policy level intervention necessary.</li> <li>▪ Marketing and inventory technologies.</li> <li>▪ Inventory critical.</li> </ul>

### Charcoal

Private sector Partner	No
Partner potential BDS provider	Limited
Potential for increased price/ volume.	If equity and marketing issues can be addressed this will lead to increased revenues.
Other NGO intervention	PROGEDE
Possible support activities	N/A
Key opportunities	Large subsector
Key constraints	Highly politicized, and considerable long term intervention already by PROGEDE
Additional information needs	<ul style="list-style-type: none"> <li>▪ Policy level intervention necessary.</li> <li>▪ Market study critical if targeted.</li> <li>▪ Environmental study necessary.</li> </ul>

### Banana

Private sector Partner	Diana Technologie
Partner potential BDS provider	Possible, if partnership succeeds
Potential for increased price/ volume.	Value added, quality control
Other NGO intervention	Some: DynaEntreprise and FODDE
Possible support activities	Follow up from DynaEntreprise
Key opportunities	Very large subsector with considerable potential for facilitation of BDS services
Key constraints	<ul style="list-style-type: none"> <li>▪ Equity issues, producers are typically outsiders.</li> <li>▪ Producers are also sharecroppers</li> <li>▪ Environmental issues need to be reviewed.</li> </ul>
Additional information needs	<ul style="list-style-type: none"> <li>▪ Policy level intervention necessary.</li> <li>▪ Market study critical if targeted.</li> <li>▪ Environmental study necessary.</li> </ul>



# ANNEX 1: INITIAL MATRIX

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Products in Tambacounda					
Laalo Mbep	13.5	Medicinal Plants	9.5	Dimb fruit	7
Honey	12	Dank	9.5	Wen leaves	6.5
Wen	11.5	Jujubier	8.5	Palm wood	6.5
Baobab	11.5	Oil palm	8.5	Nere powder	6.5
Bamboo	11	Ecotourism	8	Leung fruit	6
Bamboo Crinting	11	Hay	8	Taba	6
Dimb wood	11	Gum Arabic	8	Palm leaves	5.5
Tamarind	11	Sesame	8	Palm furniture	5.5
Gowe (incense)	11	Butter (Diw u noor)	8	Neou	5.5
Karite	10.5	Santan (insense)	8	Jaxatu (bitter eggplant)	5.5
Netetou	10.5	Moringa	7.5	Tomatoes	5.5
Bisap	10	Charcoal	7.5	Hunting	5
Fonio	10	Tool	7.5	Mango	5
Baobab leaves	9.5	Hot Pepper	7	Palm fruit	4.5
Madd	9.5	Okra	7	Palm wine	3.5

"Grille d'analyse" Wula Nafaa, 2003

# ANNEX 2: NUMBER OF PRODUCERS

## Percentage of Population in Targeted zones That Are Involved in NTA or NR Enterprises

Product	Percentage of population engaged
Baobab fruit	40 %
Karaya gum	35%
Hay	27%
Wood	18.5 %
Gardening	18.5 %
Honey	9 %
Charcoal	6 %
Tourism	3 %
Traditional medicines	3 %
Tamarind	1 %
Crinting/ Bamboo	.5 %
Jujube	.5 %

« Analyse des questionnaires de Ménages Dans la Région de Tambacounda. Document 1 : Sources et niveau de Revenus » Malcolm Marks, Wula Nafaa, 2004

## Breakdown of NR Enterprises in Kolda and Tambacounda by Product

Product	Number of producers	Percentage
Madd	159	27.75 %
Baobab fruit	138	24.08 %
Jujube	79	13.79 %
Tamarind	56	9.77 %
Laalo mbep	55	9.60 %
Honey	50	8.73 %
Dankh	49	8.55 %
Nete	40	6.98 %
Karite	28	4.89 %
Gum arabic	11	1.92 %
Tool	5	0.87 %
Taba	1	0.17 %
Soon	1	0.17 %
Leung	1	0.17 %

« Calcul des Estimateurs des Principaux Résultats des Enquêtes sur la Valorisation des Produits Forestiers non Ligneux dans les Régions de Tamba et de Kolda. » A. Dieng, IUCN, 2001

# ANNEX 3: INDIVIDUAL PRODUCER REVENUES

Products	Annual gross revenue	Annual gross revenue average
Madd	15,000-100,000	57,500
Laalo mbep	50,000- 100,000	75,000
Shea Butter	25,000	25,000
Tamarind	50- 100,000	75,000
Nététou	25,000 -50,000	37,750
Baobab	20,0000-100,000	60,000
Jujube	25,000-50,000	37,500
Dankh	15,000- 20,000	17,500

« Ressources Sauvages de la Région de Tambacounda: un Diagnostic Participatif. » IUCN, 1999.

Products	Annual gross revenue	
Wen	21,000	
Madd	62,500	
Bamboo Crinting	23,125	
Bamboo branches	30,625	
Miel (Kenyan hive)	14,250	
Laalo mbepp	Dry season	113,750
	Rainy Season	96 250
Bissap	15,650	
Shea butter	8,500	
Tamarind	22,850	
Nététou	18,700	
Hay/Straw	78,250	
Fonio	16,000	
Sesame	8000	
Baobab	31,750	
Jujube	43,300	

« Analyse Financière des Filières des Produits naturels et Agricoles dans le Sénégal Oriental. » Astou Sene, 2004.

Products	Annual gross revenue
Moringa	300,000 CFA <sup>7</sup>
Banana	400,000 CFA <sup>8</sup>
Hunting/Ecotourism	150,000 CFA <sup>9</sup>

Sources : divers

Products	Annual gross revenue
Honey	19,000 CFA
Wood	77,500 CFA
Baobab Fruit	106,800 CFA
Charcoal	81,500 CFA
Crinting/ Bambou	75,000 CFA
Forestry products	116,160 CFA
Tourist guide	295,750 CFA
Jujube	0 CFA
Milk	30,000 CFA
Lalo Mbep	72,750 CFA
Gardening	21,625 CFA
Birding	29,000 CFA
Hay	45,500 CFA
Fishing	36,500 CFA
Traditional medicines	125,833 CFA
Orchards	117,750 CFA
Tamarind	7,500 CFA
Fonio	5,000 CFA
Sesame	25,000 CFA

« Analyse des questionnaires de Ménages Dans la Région de Tambacounda. Document 1 : Sources et niveau de Revenus » Malcolm Marks, Wula Nafaa, 2004

<sup>7</sup> Potential for a 1 hectare field after 3 years, without costs considered...

<sup>8</sup> This information is from a DynaEnterprise informant.

<sup>9</sup> This is an average figure for a salary of a guide. See «Rapport sur l'évaluation des Zones Amodiées» page 37.

Products	Tambacounda average revenue	Kolda average revenue	Average
Lalo Mbep	98,556	0	98,556.00
Honey	11,896	130,250	71,073.00
Baobab Fruit	43,119	98,517	70,818.00
Nete	4219	127,249	65,734.00
Tamarind	13,801	88,604	51,202.50
Madd	21,411	54,292	37,851.50
Gum Arabic	39,990	23,883	31,936.50
Dankh	11,097	32,614	21,855.50
Palm Oil	19,220	19,220	19,220.00
Karité	17,009	-	17,009.00
Jujube	8309	9528	8,918.50

« Calcul des Estimateurs des Principaux Résultats des Enquêtes sur la Valorisation des Produits Forestiers non Ligneux dans les Régions de Tamba et de Kolda. » A. Dieng, IUCN, 2001

## Individual Incomes Plus Potential/ Summary

Products	Range of incomes	Average figure for revenue	Potential to increase supply	Potential to increase demand	Potential market growth	Potential to increase Subsector efficiency (if at zero or less)	Potential to increase incomes by value added	Level of income vs Potential to increase income
Tourist guide	150,000 - 295,750 CFA	222,875	Good (1)	Modest (0)	Fair (1)	Modest	Fair	High income fair potential
Laalo mbep	98557 + 72775 +210000	127,111	Good (1)	Good (1)	Good (2)	Modest	Good	High income good potential
Charcoal	81,500 CFA	81,500	None (-2)	Good (1)	Limited (-1)	Modest	Modest	High income modest potential
Baobab	60,000 + 37,500 + 106,800 + 70,818	68,780	Modest (0)	Good (1)	Fair (1)	Modest	Fair	High income fair potential
Moringa	0- 300,000 CFA		Good (1)	Good (1)	Good (2)	-	Modest	Good income potential
Banana	400,000 CFA		Good (1)	Good (1)	Good (2)	Low	Modest	High income with modest potential
Hay/Straw	45,500 - 78,250	61,625	Good (1)	Modest (0)	Fair (1)	Low	Limited	Medium income, fair potential
Madd	57500+ 62500+ 37851	52,617	Low (-1)	Modest (0)	Limited (-1)	Low	Poor	Medium income low potential
Wenn	21,000 -77,500 CFA	49,250	Limited (-1)	Good (0)	Limited (-1)	High	Modest	Medium income modest potential
Bambou crinting	23,125+ 75,000 CFA	49,062	Modest (0)	Good (1)	Fair (1)	Fair	Limited	Medium income with modest potential
Tamarind	7,500 + 75,000 + 51,202	44,567	Modest (0)	Modest (0)	Modest (0)	Low	Low	Medium income low potential
Honey	14,250 + 19,000 + 71,073	34,774	Good (1)	Good (1)	Good (2)	Modest	Good	Medium income with good potential
Bamboo branches	30,625	30,625	Modest (0)	Modest (0)	Modest (0)	Modest	Low	Low income low potential

Products	Range of incomes	Average figure for revenue	Potential to increase supply	Potential to increase demand	Potential market growth	Potential to increase Subsector efficiency (if at zero or less)	Potential to increase incomes by value added	Level of income vs Potential to increase income
Jujube	37,500 + 43,300 + 8913	29,988	Modest (0)	Limited (-1)	Limited (-1)	Modest	Modest	Low income low potential
Nététou	37,750 + 18,750 + 65,734	29,411	Modest (0)	Modest (0)	Modest (0)	High	Fair	Low income fair potential
Gardening	21,625 CFA	21,625	Modest (0)	Limited (-1)	Limited (-1)	Limited	Low	Low income low potential
Shea butter	25,000 + 8,500 + 17,009	16,836	Limited (-1)	Good (1)	Limited (-1)	High	Modest	Low income with modest potential
Fonio	16,000 + 5000	10,500	Excellent (2)	Good (1)	Excellent (3)	Modest	Excellent	Low income with excellent potential
Bisap	15,650	15,650	Good (1)	Good (1)	Good (2)	Limited	Good	Low income with good potential
Sesame	8000 + 12,500 + 37,500	19,333	Modest (0)	Modest (0)	Modest (0)	Limited	Low	Low income with low potential

### Potential for Producer Price Increases

Madd, Dakhar and Bisap. Production would currently seem to favor producers. However, prices don't seem to have much flexibility unless consumer prices rise.

Laalo Mbep, Baobab and Sidem. Production is currently of slightly less interest to producers, but there is some flexibility for producer price increases.

While Honey, Karite, Netetou, Fonio and Wen are currently of less interest to producers, there would seem to be some real possibilities for price expansion at the producer level.

« Analyse Financière des Filières des Produits naturels et Agricoles dans le Sénégal Oriental. » Astou Sene, 2004.

# ANNEX 4: REGIONAL INCOMES

## Regional Economic Overview of Revenue of Non Timber Products

TAMBA	Harvest Kg	Quantity consumed	Quantity Sold KG/l	Average Price FCFA/Kg	Income FCFA	Percentage of Regional NTFP revenue
Mbepp	1,017,500	29,751	987,749	575	567,955,409	79.02
Karite	54,206	25,597	28,609	843	24,117,153	3.36
Madd	120,350	28,350	92,000	55	5,060,000	0.70
Miel & derives	67,113	24,092	43,021	713	30,674,083	4.27
Nete	33,126	8174	24,952	134	3,343,575	0.47
Pain de singe	531,160	84,132	447,028	121	54,090,421	7.53
Racines & écorce	807	108	699	250	174,850	0.02
Jujube	9656	1207	8449	79	667,471	0.09
Tamarin	38,500	3738	34,762	214	7,439,097	1.03
Tool	47,054	6722	40,332	20	806,640	0.11
Dankh	118,152	10,079	108,073	62	6,700,506	0.93
Gomme arabique	19,091	0	19,091	555	10,595,505	1.47
Taba	94,108	9411	84,697	15	3,133,796	0.44
Igname	35,008	10,809	24,199	150	3,629,862	0.50
Soon	2958	269	2689	55	147,900	0.02
Leung	5378	1076	4302	60	258,144	0.04
TOTAL		243,515	1,950,652		718794412	

KOLDA	Harvest Kg	Quantity consumed	Quantity Sold KG/l	Average Price FCFA/Kg	Income FCFA	Percentage of Regional NTFP revenue
Mbepp	6254	1563	4691	600	2,814,600	0.60
Huile de palme	314,587	31,459	283,128	710	201,020,880	42.6
Madd	402,367	80,473	321,894	65	20,923,110	4.44
Miel & derives	367,723	132,380	235,343	585	137,675,655	29.2
Nete	194,388	48,597	145,791	145	21,139,695	4.5
Pain de singe	365,400	58,464	306,936	135	41,436,360	8.78
Tamarin	187,200	18,720	168,480	215	36,223,200	7.68
Tool	13,734	6722	11811	25	295,275	0.06
Dankh	42,012	3782	38,230	96	3,670,080	0.78
Gomme arabique	720	100	620	520	322,400	0.07
Taba	94,108	9411	84,697	20	1,693,940	0.40
Solom	32,311	8078	24,233	60	1,453,980	0.31
Igname	17,208	5333	11,875	234	2,778,750	0.59
Soon	2958	2692	2692	55	148,060	0.03



KOLDA	Harvest Kg	Quantity consumed	Quantity Sold KG/l	Average Price FCFA/Kg	Income FCFA	Percentage of Regional NTFP revenue
Leung	1511	249	1262	60	75,720	0.02
TOTAL		655882			471,671,705	

« Calcul des Estimateurs des Principaux Résultats des Enquêtes sur la Valorisation des Produits Forestiers non Ligneux dans les Régions de Tamba et de Kolda. » A. Dieng, IUCN, 2001

### Tourism<sup>10</sup>

Tourism	Production	Receipts	Estimated revenue	Year
Tamba	15,175 nights <sup>11</sup>	70,000 per night	1,062,250,000 CFA	2003
Kolda	3000 nights	70,000 per night <sup>12</sup>	210,000,000 CFA	2003

### Charcoal<sup>13</sup>

Tamba	Production	Price	Actual revenue	Year
Charcoal	394,300 Sacs	1500	591,450,000	2003
Community Charcoal	10,500 Sacs	1500	15750000	2003

### Bamboo

Tamba/Kolda	Production	Price	Estimated revenue	Year
Bamboo	35,000 <sup>14</sup>	1500 <sup>15</sup>	52,500,000	2003

### Wen<sup>16</sup>

Tamba	Production	Price	Estimated revenue	Year
Wen	(70x12)x300 <sup>17</sup>	1500 <sup>18</sup>	378,000,000.00	2003

<sup>10</sup> Figures from the department of tourism

<sup>11</sup> It should be noted that not all of this is not hunting related. Hunting accounted for 1053 tourists in 2002-2003, with a generous estimate of 5 nights per guest this would account for only about a third of the tourism revenues.

<sup>12</sup> Estimation by department of tourism of amount spent per day

<sup>13</sup> Statistics from IREF Tamba

<sup>14</sup> Quota for crinting panels.

<sup>15</sup> This is for boards only, not value added by furniture making.

<sup>16</sup> Using estimates from figures calculated by Emilien Dubiez.

<sup>17</sup> This is only for Tambacounda town, 300 woodworkers in Tambacounda, using about 70 boards per month. Income could be considerably greater – if other value added is included, and activities in Kolda.

<sup>18</sup> This is for boards only, not value added by furniture making.

## Agricultural Revenue<sup>19</sup>

Tamba	Production	Price	Potential revenue <sup>20</sup>	Year
Sesame	785 t	100 CFA/ kg	78,500,000 CFA	2002
Bisap	5t	350 CFA/kg	1, 750,000 CFA	2003
Fonio	250 t	200	50, 000,000 CFA	2003
Banana <sup>21</sup>	10,240 t	155	1, 587, 200,000 CFA	2001

Kolda	Production		Potential revenue <sup>22</sup>	Year
Sesame	10,037 t	100 CFA/ Kg	1,003,700,000 CFA	2003
Bisap	N/A	N/A	N/A	N/A
Fonio	998,3 t	200	199, 665,000 CFA	2003
Cashews	4,000 t	300 CFA	1, 200, 000,000 CFA	1999
Banana	5,400 t	150 CFA	816, 000,000 CFA	2001

## Total Regional Incomes in Tambacounda and Kolda

Products	Income /CFA	Percentage
Banana	2,403,200,000.00	35.953
Charcoal	1,500,009,000.00	22.441
Hunting/ Tourism	1,272,250,000.00	19.033
Cashew	1,200,000,000.00	17.952
Sesame	1,082,200,000.00	16.190
Mbep	570,770,009.00	8.539
Wen	378,000,000.00	5.655
Fonio	249,665,000.00	3.735
Palm oil	201,020,880.00	3.007
Honey	168,349,738.00	2.519
Baobab fruit	95,526,781.00	1.429
Bamboo	52,500,000.00	0.785
Tamarind	43,662,297.00	0.653
Madd	25,983,110.00	0.389
Community charcoal	25,728,000.00	0.385
Nete	24,483,270.00	0.366

<sup>19</sup> DRDR statistics, except Banana

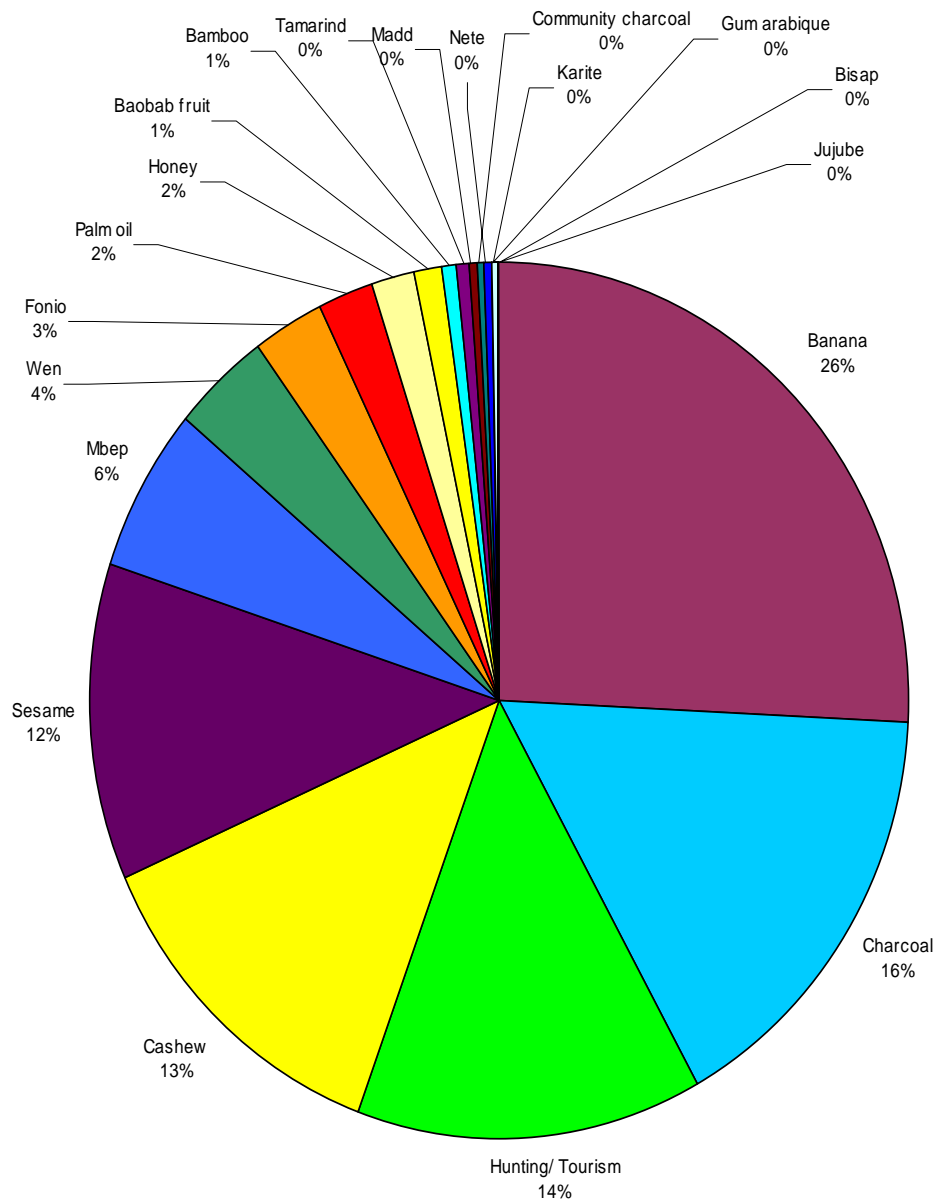
<sup>20</sup> Most of the bisap and fonio was consumed locally, thus for fonio and bisap these are potential revenues.

<sup>21</sup> Estimation using figures from <http://www.banane-senegal.com/introduction.html>

<sup>22</sup> Most of the bisap and fonio is consumed, this figure is potential not actual.

Products	Income /CFA	Percentage
Karité	24,117,153.00	0.361
Jujube	19,750,000.00	0.295
Gum arabic	10,917,905.00	0.163
Bisap	1,750,000.00	0.026
	9,349,883,143.00	

### Regional Income in Tamba and Kolda Regions for Various Products



# ANNEX 5: AVAILABILITY OF PRIVATE SECTOR PARTNERS

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Strong private sector partners have been found for

- ◆ Unhusked Baobab Fruits (for export, with Baobab Fruit Company)
- ◆ Organic Fonio (for export, with Gaia Enterprise)
- ◆ Laalo Mbep (for export, with SETEXPHARM)
- ◆ Moringa seeds (for export, with Moringa Energie)
- ◆ Honey (for export or local use, Filfil or SETEXPHARM)
- ◆ Banana (for local use, with Diama Technologie).

There is also potential with private sector partners in regards:

- ◆ Bamboo (for local use)
- ◆ Netetou (for local use)
- ◆ Organic bisap (for export)
- ◆ Baobab powder (local use)
- ◆ Fonio (local use)

It is imagined given higher values and requests from buyers, that there is partner potential with:

- ◆ Oil palm (export or local use, through SETEXPHARM)
- ◆ Bois d'oeuvre (export or local use)
- ◆ Karité (export or local use, through Phytopharma and Maison du Karité)
- ◆ Ecotourism (through Gaia Entreprise)
- ◆ And perhaps Charcoal (local use)

Lower value products or products with less regional competitive advantage typical have lower potential for private sector partnerships

- ◆ Hay
- ◆ Jujube
- ◆ Gardening
- ◆ Madd
- ◆ Tamarind

# ANNEX 6: INTERVENTION OF NON-PRIVATE SECTOR PARTNERS

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Product	Development Organization	Activity
Karité	PROMER/ ITA/ CFC	PROMER has served as market intermediary and tried to sell the karité, and the price appears to be highly subsidized. Up to this point there appears to be little active relation between processors in Dakar and producers in Kedougou. There is intervention through ProKarité (CFC) to work in quality control issues.
Charcoal	PROGEDE	PROGEDE's primary focus is the charcoal subsector. They have largely focused on product and management issues, but they also carry out marketing activities.
Sesame	CRS/GADEC	CRS has carried out a large sesame extension campaign, working with subcontractors GADEC and others.
Gardening	ANCAR/GADEC/ PROGEDE/FODDE/ World Vision	There has been much work carried out in Gardening in the Tambacounda region, much of it is highly subsidized and there is typically little market emphasis.
Cashews	PFAEK/PROMER	Cashews have also received considerable support largely on production and transformation technologies
Fonio	ENDA GRAF/ GADDEC	ENDA has largely given out fonio mills and worked on transformation technologies
Netetou	PROMER	In Kolda PROMER has worked with producer groups on transformation technologies.
Honey	PROGEDE/PROMER/ PSPI	PROGEDE has given out free Kenyan hives to producers in the Tambacounda and Kolda regions; this has undermined
Banana	Dyna and FODDE	Dyna has worked with the larger banana producers on organization, production and post harvest technologies. FODDE works with small holder banana producers.
Bamboo	PFAEK	PFAEK has carried out some initial research on sustainable bamboo harvesting technologies.

# ANNEX 7: REVENUE DISTRIBUTION WITH VARIOUS PRODUCTS

Product	Producer	%	Intermediary buyer	%	Wholesaler	%	Retailer	%	Total
Bouy	92.00	51.40	16.00	8.94	29.00	16.20	42.00	23.46	179.00
Lalo mbepp	321.00	50.47	101.00	15.88	11.00	1.73	203.00	31.92	636.00
Madd	1250.00	89.80	85.00	6.11	26.00	1.87	31.00	2.23	1392.00
Dakhar	285.00	60.77	17.00	3.62	34.00	7.25	133.00	28.36	469.00
Karité	285.00	27.80	565.00	55.12	14.00	1.37	161.00	15.71	1025.00
Sidem	87.00	45.31	13.00	6.77	30.00	15.63	62.00	32.29	192.00
Nététou	220.00	32.45	38.00	5.60	130.00	19.17	290.00	42.77	678.00
Miel	479.00	23.84	94.00	4.68	476.00	23.69	960.00	47.78	2009.00
Fonio	107.00	21.23	128.00	25.40	81.00	16.07	188.00	37.30	504.00
Bissap	326.00	60.15	49.00	9.04	43.00	7.93	124.00	22.88	542.00
Bambou	21.00	77.78	6.00	22.22	Nd		Nd		27.00
Crinting	771.00	65.95	398.00	34.05	Nd		Nd		1169.00
Wen	5000	6.25%	Nd	Nd	10,000	12.5%	65,000	81.25%	80,000

« Analyse Financière des Filières des Produits naturels et Agricoles dans le Sénégal Oriental. » Astou Sene, 2004.

Charcoal	Local population typically receives little charcoal revenue, even when they are producer (which is rare)
Ecotourism	Local population typically receives little of tourist revenues

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