AFRICAN FOREST FORUM
a platform for stakeholders in African forestry

Food and Agriculture Organization
of the United Nations

Value Chain Analysis of Non-Timber Forest Products of the Great Green Wall

(Burkina Faso, Mali, Niger, Nigeria, Senegal, Chad)

24 November 2021

Study Background

- FAO is preparing a GCF co-financed GGW multi country project to scale-up successful climate actions for the implementation of the GGW Initiative.

- Specifically, AFF was engaged in
  - Identifying **key NTFP value chains that are more equitable, resilient and reduce emissions**, and that can constitute an **incentive for smallholder producers to engage in restoration** of agro-silvo-pastotral landscapes;

  - Identifying and proposing **actions the project can carry to upgrade the value chains** in each of the countries and **how to engage relevant private sector** members of the value chain to ensure an equitable sharing of the benefits from the upgrading.

Aim of Study

Conduct value chain analysis of priority non-timber forest products (NTFPs) for small producers in the Great Green Wall intervention zones of Burkina Faso, Senegal, Mali, Niger, Nigeria, and Chad

Status of NTFP in the target countries

NTFPs play an important role in rural population resilience strategy, particularly on climate change/alternative subsistence and income sources

Evident contribution to the subsistence rural economy (15-25% of average annual income in households along side other traditional production systems) (this study)

Contribution to the national economy, but not always sufficiently captured at the level of national accounts (only data of exported products collected from customs)

Women are among the main players in NTFP value chains valorization

Policies, institutional and legal frameworks

➔ NTFPs are well taken into account in national policies

➔ Frameworks in respective countries need to improve in certain points e.g.:

- Establishment of proper National statistics on NTFPs
- Establishment of proper regulatory frameworks for processing?
- Integration into national revenue systems?

	Burkina	Mali	Niger	Nigeria	Senegal	Chad
Institutional framework						
Institutional linking in the Ministry in charge	✓ 5	✓ 5	✓ 5	✓ 5	✓ 5	✓ 5
Sup Direction or Service apart for NTFP management	✓ 5	! 4	! 4	✗ 3	! 4	✓ 5
Existence d'un Plan National de Développement /Stratégie Nationale des PFNL	✓ 5	✓ 5	! 4	✗ 3	! 4	✓ 5
Legal framework						
Modalities of resources access (text exis)	✓ 5	✓ 5	✓ 5	✓ 5	✓ 5	✓ 5
Sustainability management framework (special status for vulnerable NTFP)	✓ 5	✓ 5	✓ 5	✓ 5	✓ 5	✓ 5
Taxation framework for the development of NTFP exists	! 4	! 4	! 4	! 4	! 4	! 4
Norms and national technical standard fo NTFP	✓ 5	✗ 3	✗ 3	! 4	! 4	✗ 3
National statistics collection system on NTFP	! 4	! 4	✗ 3	✗ 3	! 4	✗ 3

✓ Good
! Fair
✗ Poor

Number of Actors Interviewed per country

Countries	Categories of actors					% Women
	Producers	Processors	Traders	Exporters	Total	
Burkina	28	36	28	8	100	61.5
Mali	85	51	39	5	180	45.9
Niger	33	5	34	0	72	50
Nigeria	76	43	39	18	176	7.9
Senegal	53	41	45	5	144	92
Chad	128	39	108	0	275	61
Total	343	228	235	41	847	53.4

Summary of Value Chain in Selected Countries







Summary of Value Chain in Selected Countries

Country	Value Chain
Burkina Faso	• **Nere Fruit Powder** (*Parkia biglobosa*)
	• **Balanites oil** (*Balanites aegyptiaca*)
	• **Honey**
Mali	• **Baobab fruit powder** (*Adansonia digitata*)
	• **Neem Oil** (*Azadirachata indica*)
	• **Bauhinia powder** (*Bauhinia rufescens*)
Niger	• **Baobab leaf powder** (*Adansonia digitata*)
	• **Balanites oil** (*Balanites aegyptiaca*)
	• **Honey**

Balanite fruit

Baobab fruit powder

Summary of Value Chain in Selected Countries

Pays	chaine de valeur
Nigeria	Baobab fruit powder (*Adansonia digitata*)
	Neem oil (*Azadirachata indica*)
	Balanites oil (*Balanites aegyptiaca*)
Senegal	Baobab fruit powder (*Adansonia digitata*)
	Balanites oil (*Balanites aegyptiaca*)
	Jujube fruit powder (*Ziziphus mauritiana*)
Chad	Balanite oil (*Balanites aegyptiaca*)
	Jujube fruit powder (*Ziziphus mauritiana*)
	Dates Fruit (*Phoenix dactylifera*)

Fruit jujubier

Fruit dattier

Organization of actors

Production

- Legally registered operators (man-dominated, few but control largely the sector)
- Large informal sector (women-dominated)
- 95% of production comes from the natural environment

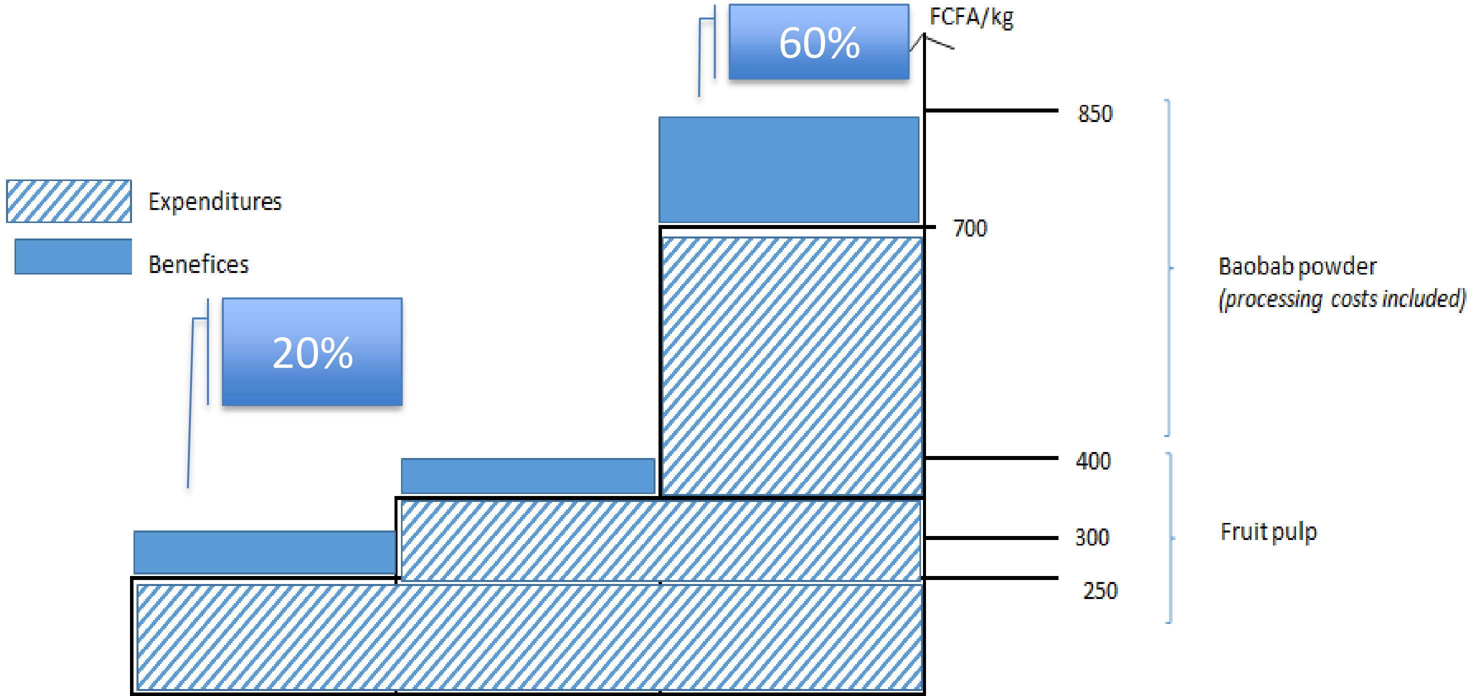
Processing

- Artisanal methods, dominated by individual women
- Emergence of SMEs, artisanal and semi-industrial,
- Emergence of some private "social" companies (i.e., Sahara Sahel Foods in Niger)
- Weak business relationships between players along the chain

Organization of actors

Commercialization

- Most traders operating in the informal sector.
- Producers earn only 15-20% of the total benefit generated at the end of value chain



	Producer	Intermediate	wholesaler
Expenditure	250 FCFA/kg	350FCFA/kg	700 FC/kg
Recipe	300 FCFA/kg	400FCFA/kg	850 FC/kg
Benefice	50 FCFA/kg	50FCFA/kg	150 FC/kg
% of the benefice	20%	20%	60%

Trends in market for the selected NTFP value chain

	Baobab powder (leaves)	Baobab powder (fruit)	Balanites oil (seed)	Neem oil	Powder of Jujube fruit	Powder of Bauhinia fruit	Powder of Nere fruit	Datte palm fruit	Honey
Robustness of the market	↑ 40	↑ 45	↓ 20	↓ 15	↗ 35	↘ 25	↗ 35	↑ 45	↑ 40
Level of efficiency/satisfaction of market in term of Demand	↗ 35	↗ 35	↘ 25	↓ 20	↑ 40	↗ 35	↑ 40	↑ 45	↗ 35
Level of efficiency/satisfaction of market in term of Supply	→ 30	→ 30	↑ 40	→ 30	↗ 35	↑ 40	↑ 40	↑ 40	→ 30
Level of efficiency/satisfaction of market in term of Pricing	→ 30	↗ 35	↘ 25	↘ 25	↗ 35	↗ 35	↗ 35	↗ 35	↗ 35
Level of efficiency/satisfaction of market in term of Finance	↘ 25	↘ 25	↓ 20	↓ 20	↘ 25	↘ 25	↘ 25	↗ 35	↗ 35
Level of efficiency/satisfaction of market in term of Information	↘ 25	↗ 35	↘ 25	↓ 20	↘ 25	↘ 25	↘ 25	→ 30	↗ 35
Level of efficiency/satisfaction of market in term of Transport and	↘ 25	↘ 25	↘ 25	↘ 25	↘ 25	↘ 25	↘ 25	↓ 15	↘ 25

For all NTFPs considerable efforts need to be directed at efficiency in terms of procuring finance for chain operations, provision of market information, lowering associated transport and processing costs, and eventually securing competitive market prices.

Sources of NTFPs

Products	Burkina Faso		Mali		Niger		Nigeria		Average	
	Wild	Plantation	Wild	Plantation	Wild	Plantation	Wild	Plantation	Wild	Plantation
Adansonia digitata (Baobab)			98%	2%	100%	0%	90%	10%	96%	4%
Azadirachata indica (Neem)			96%	4%			86%	14%	91%	9%
Balanites aegyptiaca	100%	0%			75%	25%	88%	12%	88%	12%
Piliostigma reticulatum			100%	0%					100%	0%
Dates (*Phoenix dactylifera*) ;										
Parkia biglobosa (Néré)	50%	50%							50%	50%
Ziziphus mauritiana (Jujube)										
Honey	67%	33%			88%	12%			77%	23%
Overall	72%	28%	98%	2%	88%	12%	88%	12%	**84%**	**16%**

84% of production from the wild

NTFPs value chains Profitability

For some of the products, the profitability is only observed at certain threshold market prices/production rates

Value addition on Baobab products value chain (US$/kg)

		Production cost	Selling price	Profit margin	Profit margin (%)
Trader (Fruit powder)	Mali	4.32	9.00	4.68	52.0
	Senegal	2.00	2.20	0.20	9.1
Mean/Average		3.31	5.60	2.30	41.1
Producer (Leaf)	Niger	0.86	0.92	0.06	6.5
	Nigeria	0.50	1.40	0.90	64.3
Mean/Average		0.68	1.16	0.48	41.4
Processor (Leaf to powder)	Niger	1.35	3.00	1.65	55.0
	Nigeria	1.40	4.20	2.80	66.7
Mean/Average		1.53	3.6	2.07	57.5
Trader (Leaf powder)	Niger	1.42	2.08	0.67	32.2

NTFPs value chains Profitability

For some of the products, the profitability is only observed at certain threshold market prices/production rates

Value addition on Baobab products value chain (US$/kg)

		Production cost	Selling price	Profit margin	Profit margin (%)
Producer (Fruit)	Mali	0.50	0.60	0.10	16.7
	Senegal	0.50	0.95	0.45	47.4
Mean/Average		0.50	0.77	0.27	35.1
Processor (Fruit to powder)	Mali	1.51	4.00	2.95	73.8
	Senegal	3.64	7.00	3.36	48.0
Mean/Average		2.58	5.50	2.92	53.1

Proposed NTFP value chain improvement strategy

Value chain improvement strategy

Objective

- Increase the added value generated by farmers' organizations from sustainable harvesting and marketing of raw products through the development of private partnership (DPP) with SMEs (professionally improved) for the production in quality and quantity of processed products

Elements of strategy

- Supporting the organization of community based micro-enterprises by grouping farmer organizations around structured entities.
- Engaging financial partners through the state
- Program setting-up villager nurseries and planting of targeted NTFP
- Taking into account small and medium-sized enterprises (SMEs) (processing, quality packaging, standard, equipments)

Value chain improvement strategy

Direct / final benefits

- ❑ Farmers' organizations of producers in the target areas of the GMV landscape, (1,000 organizations, 15,000,000 direct beneficiaries including at least 50% women)
- ❑ Small and medium-sized interprises (SMEs) specializes in processing agri-food products (about 50)

Institutional partners (Co-financing)

- ❑ Countries Ministries in charge of the environment and forests.
- ❑ GGW
- ❑ Decentralized collectivities

Implementing Partners

- ❑ GGW
- ❑ FAO

Technical partners

- ❑ National Research Institutes

Value chain improvement Constraints

- ❖ Weak structuring and organization of producers
- ❖ Rudimentary storage system
- ❖ Challenges of resource regeneration
- ❖ Rudimentary processing equipments
- ❖ Product quality/packaging
- ❖ Market not developed and not structured and organised

Capacity building needs along the value chain

- ❑Farm establishment methods
- ❑Collection methods and techniques
- ❑Use of accessories and protective equipment
- ❑Processing technologies
- ❑Storage methods and harvesting
- ❑Formation of associations and cooperatives
- ❑Distribution, management and protection of resource base
- ❑Policy, regulatory consideration and institutional frameworks

Key Recommendations

- Ensure good governance in natural resources management:
  - domestication of the species,
  - rational fruit collection,
- Promote formal relationships amongst actors to strengthen the links
- Providing equipment for collection, processing and storage;

Key Recommendations

- Development of market information systems
- Enabling environment that facilitate market access
- More research on improvement of value chain from harvest to selling of products

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Thanks for your attention

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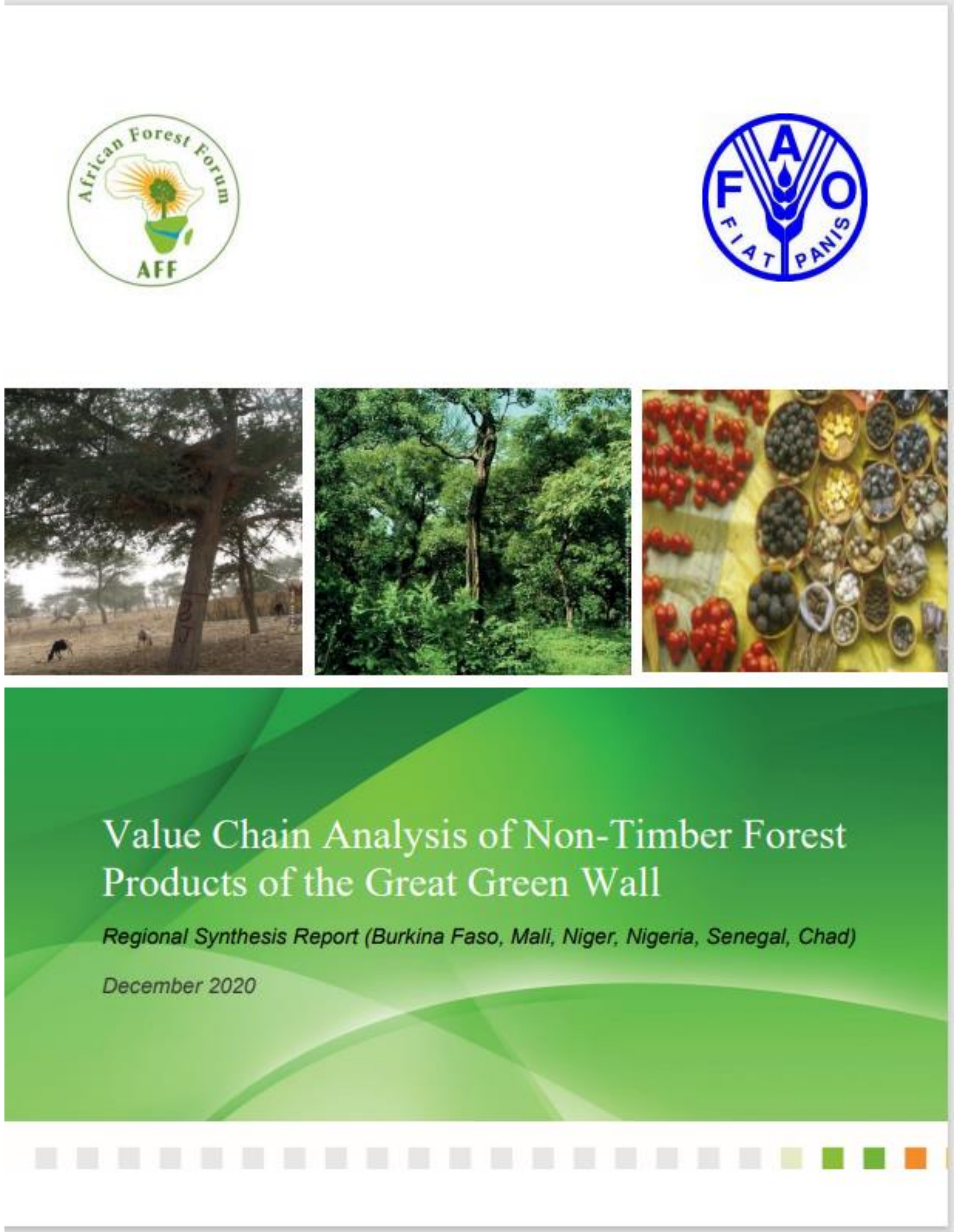

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Some questions to consider for discussion

- Do you have any comment / contribution on the results presented (priority species, production, processing, trade – opportunities/challenges, etc.);

- Climate finance is available but difficult to access: Major difficulties in mobilizing funding for NTFP value chain development (climate fund) include the challenge to demonstrate the climate rationale (is the problem due to climate and are the project interventions relevant climate actions – adaptation/mitigation) – **Do you have any experience / suggestion on how this can be done (or has been done elsewhere);**

- **Any other aspect you wish to discuss**