

Exploring gender and forest, tree and agroforestry value chains

Evidence and lessons from a systematic review

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Key points

- This systematic review of literature on gender and value chains of forest, tree and agroforestry (FTA) products examined gender differences and inequalities in FTA value chains, factors that influence these differences, and interventions to foster greater gender equity.
- There is limited information available on gender in FTA value chains, and a strong bias in the literature towards African countries.
- Gender differences in participation mainly owe to social-cultural factors, including gendered access rights, and to the physical nature of value chain activities.
- Cultural norms and overlapping customary and formal regulatory arrangements often position men in more favorable positions than women in FTA value chains.
- Interventions in FTA value chains largely focus on enhancing women's participation and benefits, but rarely consider the relationships between men and women.
- Raising awareness of gender biases, relations and potential trade-offs among those involved in value chains and those supporting inclusive value chain development should accompany technological innovations, and should occur across multiple stages of the value chain.

Introduction

Forest, tree and agroforestry (FTA)¹ products refer to commodities sourced from a continuum of wild and managed forests, fallows and farms, and individual trees. The many products sourced from these ecosystems are critical to the livelihoods of approximately 1.4 billion impoverished people in the world (IFAD 2014). FTA products are particularly important for marginalized groups, such as women, whose limited access to land,

credit and other assets hamper their ability to pursue alternate livelihood opportunities.

The global market for FTA products, estimated at USD50 billion (World Bank 2004), may provide rural dwellers with incentives to protect trees and forests rather than resorting to deforestation, forest degradation and loss of biodiversity. This is important amid current climate trends, which are increasing the vulnerability of households and ecosystems.

The critical link between gender² and forest-based livelihoods is gaining recognition. The realization that much of the informal trade in common raw and processed FTA products is undertaken by women has led to widespread promotion of these products, particularly by agencies interested in enhancing gender equity

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1 FTA value chains concern the activities involved in bringing a forest, tree or agroforestry product from the tree or forest through processing and production, to delivery to final consumers and their ultimate disposal; including activities such as production and/or harvesting, cleaning, transport, design, processing, packaging, marketing, distribution and support services, at the local and/or global level.

2 Gender refers to the socially constructed differences between women and men. It is about how society gives meaning to differences in femininity and masculinity, how these differences are experienced, reconstructed and negotiated by people living in different communities.

and women's empowerment. Yet, despite the increased interest in FTA value chains over the last two decades, there has been little consolidation of the data examining gender issues in relation to these chains.

To address this knowledge gap, a systematic review of literature on gender and FTA value chains was conducted, with a focus on three questions:

1. Where do gender differences exist within FTA value chains and what do they consist of?
2. What factors influence these gender differences?
3. What kind of FTA value chain interventions have been made to promote gender equity and how can future interventions be more gender equitable?

Methodology

A multidimensional conceptual framework was used to guide the systematic review (Figure 1). The sustainable livelihoods approach (Chambers and Conway 1991) was combined with value chain analysis (Kaplinsky and

Morris 2000) using a gendered lens (Colfer 2014). Search terms were identified based on the research questions, which were drawn from the conceptual framework. The terms were then grouped based on synonyms, alternative spellings and abbreviations of the central concepts (gender, value chains, forests, trees, agroforestry and sustainable livelihoods).

The publications retrieved in this way were then assessed for quality and relevance to the research questions, leading to 185 publications being retained. The title and abstract or executive summary of each document was screened to identify publications directly linked to the research questions. If gender and value chains or any of their synonyms or abbreviations were not mentioned or the methods were not explicitly detailed, the publication was excluded. This resulted in 126 publications³ which were read in full and coded according to the types of gender differences; where these differences were located along the chain; the type of FTA chain; factors explaining differences; the types of interventions; the geographic origin of the chain; and outcomes or impacts.

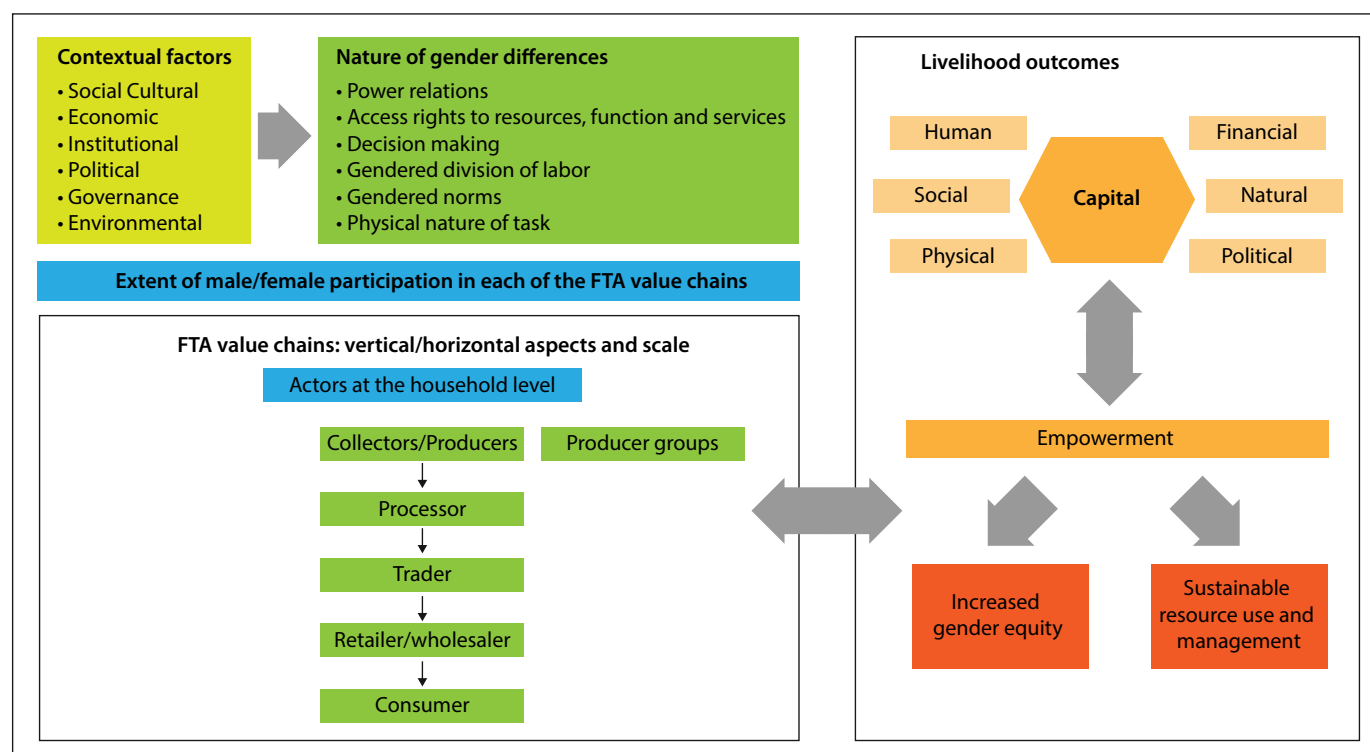


Figure 1. Conceptual framework underpinning the literature review

Source: Ingram V, Haverhals M, Petersen S, Elias M, Basnett BS and Phosiso S. 2016. Gender and forest, tree and agroforestry value chains: Evidence from the literature. In Colfer CJP, Basnett BS and Elias M, eds. *Gender and Forests: Climate change, tenure, value chains, and emerging issues*. London: Earthscan, Centre for International Forestry Research. 221-242.

³ The majority (56%) of the documents included were peer-reviewed journal articles, 17% were (evaluation) reports, 13% were case studies and working papers, 10% were book chapters, and the rest (4%) were academic theses and policy briefs. A limitation of the review is that only English publications were included, which is likely to have influenced the representation of different continents. The publications present a snapshot of gender and FTA value chains rather than a dynamic picture, as few studies described changes over time.

The conceptual framework that underpins the literature review combines the sustainable livelihoods approach with value chain analysis. Using the sustainable livelihoods approach implies that livelihood and sustainability outcomes are analysed for the actors involved in the chain, based on an analysis of context and an identification of interventions and resulting outcomes. The framework also highlights the role of governance arrangements and institutions, acknowledging that multiple governance structures (customary authorities, statutory government, projects, etc.) may set their own 'rules of the game', and that hybrid arrangements (chain platforms and networks) can emerge in FTA chains. Putting value chain analysis at the core implies an analysis of the activities and actors along the value chains (harvesters, processors, traders, retailers, consumers). Such a gendered value chain analysis allows the nature of gender differences embedded in the chains to be seen.

The studies reviewed were mostly (55%) descriptive in nature, 16% were conceptual and 29% described interventions in FTA value chains. The studies covered a wide range of FTA products and chains, all originating in developing countries. Two-thirds (65%) were based in Africa, 21% in Asia and 14% in Latin America. Most studies covering global chains did not address all the stages and locations of the chains. Nearly one third of the studies described chain interventions.

Results

Where are gender differences concentrated within FTA value chains and what do they consist of?

Throughout the literature, little information was found on male/female participation in FTA value chains. Where quantified, **the male to female participation ratio ranged widely** from zero to 100%. Information on the rates of participation was specifically **lacking for processor** (all locations) **and trader** (in Latin America and Asia) **stages in chains**. A bias in the literature was found towards African countries as, of the 40 cases that mentioned specific male/female participation, 25 were based in Africa.

The review exposed that, in general, **female dominance is recorded at the harvester, processor and trader stages**. However, there were strong **differences depending on geographic region and product**. At the harvester stage, female dominance only holds in Africa. An overall trend is that **women are mostly confined to small-scale retail trade, and that men run larger FTA businesses**.

What factors influence these gender differences?

The influence of each factor varies depending on the product, geographic region and cultural setting. However, some broad trends were observed. The nature of gendered differences in participation in FTA chains can largely be ascribed to **social and cultural factors that influence how chains are governed**. These determine gender-differentiated access to, and ownership (tenure) of land, forests, trees, farms, FTA products, labor, technology, credit, information and FTA markets. **Women often have fewer or less favorable access rights** to FTA species than men, and if they have such rights, these are often not well defined or enforced.

Differences due to the nature of the product and activity were also found, with men involved notably when physically demanding collecting and primary processing activities were required—although women also perform very physically demanding work. The time taken to conduct these activities in distant locations, such as when long forage distances or extended periods away from home are required, were also strong determinants of men's participation over women's.

Gendered power relations mainly at the household level, but also within enterprises, were shown to result in differentiated benefits for women and men. **Governance, political and institutional factors** were characterized by overlapping customary and formal regulatory arrangements, often resulting in the under-representation of women in forest management and value chain organizations and associations. **Economic factors** such as global economic integration and reforms due to economic crises affect international markets for FTA products and local demand for these products. This in turn affects women's involvement in such value chains, as FTA products which generate lower average revenues are found to be more often controlled by women, whereas men control higher revenue generating products.

Resource degradation was also shown to cause drops in the quality and quantity of certain FTA resources. Women were in some cases more vulnerable than men to this degradation because of their dependence on natural resources and lack of participation in decision making within institutions concerned with access to FTA resources and/or markets.

The systematic review reveals that women's and men's participation in FTA value chains is shaped by **other factors of social differentiation** such as education, marital status, age and ethnicity. Education was found to be a minor

factor influencing benefits from, and participation in, the collector, producer and small-scale trader nodes of FTA value chains. Yet, it may become more important when moving downstream (towards the consumption end of the value chain).

Gendered outcomes of participation in FTA value chains

Generally, men and women gain **different levels of revenues and profits** in FTA value chains and spend their FTA-related incomes differently, with strong regional differences occurring. Generally, but not always, **men sell a higher proportion of FTA products** (both processed and unprocessed) than women and thus have higher FTA-based incomes. The income potential of FTA products greatly depends on how, where and what value is added at the source by managing wild resources or domesticating FTA products in cultivation systems, and/or further along the value chain through processing and marketing.

Besides gender, contributions to household income are influenced by variables such as age, ethnicity, household composition, the sex of the household head, marital status, class and caste, all of which may have varying degrees of influence. Socioeconomic status is also a factor, cutting across gender that influences dependence and engagement in a value chain.

Globally, the unprocessed forest products collected by **men and women contribute almost equally to household income**, although there are strong regional differences. In contrast **men bring home a considerably higher share of income from processed FTA products (61%) than women (25%)** (Sunderland et al. 2014).

How incomes from FTA products are spent is influenced by the persons involved in the value chain and the nature of the household. Studies from different regions commonly indicate that when **women are involved in selling FTA products, they gain greater control over the income generated**. Many researchers have noted that, in general, **increases in women's incomes have greater impacts on food, health and education** expenditures and therefore on overall household well-being than increases in men's incomes. Moreover, because the harvesting of many forest products in which women specialize tends to coincide with periods in which there are few income-earning alternatives, **women's participation in these chains helps households to cover important expenses** (e.g. school fees) during seasonal financial shortfalls, and can generate capital to start up new activities.

The environmental sustainability of a FTA chain can have links to gendered tenure and access right regimes. Trees may be managed and harvested as part of 'the bush' or common property. Common property management may

not be a problem at times of plenty but may result in severe degradation when resources are shared between more people if clear rules concerning access are not enforced. Strategies to manage forests sustainably can be difficult for women when they have limited decision-making authority over management rules and little or no rights to trees.

Where the land/resource base is not limiting, opportunities may exist for extensive management. For example, in conservation areas or in buffer zones around protected areas, some FTA species can be managed to provide income for local people with relatively little impact. However, the initial response to **increased demand for FTA products is often more intensive harvesting, leading to overexploitation of the species**.

In situations where the land/resource base is limiting and the competition among harvesters is too high, intensification (of management, cultivation) may be the only option for increasing the quantity of production. **Intensified management can give better quality products and more control over the timing of production**. So, as demand/prices increase, so do the rewards for intensified management. Limited evidence from some regions shows that **devolving tenure and management authority to local communities and households, under certain conditions, can improve forest conditions**. **Women's participation in decision making in community-based forestry groups** can significantly **improve forest regeneration and reduce the incidence of illegal harvesting** and other unsanctioned activities. Women's presence in forest user groups enhances the capacity to **manage and resolve conflicts** around forest use and management. Some authors have argued that this is because women have higher levels of **social capital** than men, and bear the responsibility for feeding families, which results in greater interactions with forest resources and an interest in conserving them.

An objective of many FTA value chain projects was to **encourage biodiversity conservation**, as extraction of FTA species from natural forests can have an impact on local ecology and biodiversity at a landscape scale. However, as mentioned above, FTA product development through **improved markets**, improved infrastructure and higher product demand and/or prices **can create a strong incentive to increase extraction** through more intensive harvesting (harvesting more per unit area), more extensive harvesting (harvesting from a larger area) or intensified management (in the forest or through domestication and cultivation). Depending on the production system employed, the **result can be more, or less compatible with biodiversity conservation**. No mention of if and how gender influences FTA product development was made in the literature.

What kind of FTA value chain interventions have been made and how can they be made more gender equitable?

Most interventions⁴ reviewed were implemented at the **harvester and/or processor stage**. Although some claimed to target gender relations specifically, in practice they **tended to focus only on women**, rather than on the social relations between men and women involved in the value chains. Other interventions clearly set out as an aim to improve the position of women. These too targeted women separately from their relations to men.

Overall, the interventions sought to increase female participation at multiple stages of the value chain as well as benefits stemming from this participation. The literature indicated that the **most successful interventions were those that combined horizontal and vertical upgrading**. Upgrading is where stakeholders adopt more rewarding positions in the chain or make products that are higher value and/or that can provide better returns. Horizontal upgrading refers to working with groups of the same type of actors (e.g. women's groups, cooperatives, mixed gender groups), while vertical upgrading refers to the stakeholder moving up the value chain or taking on an additional role in the chain. **Most (84%) interventions resulted in process upgrading** – achieving a more efficient transformation of inputs into outputs by reorganizing productive activities, **followed by product upgrading (41%)**, where interventions supported new or more sophisticated products with increased unit value. In most cases, product upgrading resulted in improvements in product quality. Lastly, 28% of interventions focused on **functional upgrading**, where new functions were created or old ones abandoned to increase the skill content of activities.

Recommendations for making FTA interventions more equitable

The surveyed literature and its implications point to the importance of:

1. Carefully selecting beneficiaries and intervention partners, and developing the gender mainstreaming capacities of implementing agencies.
2. Considering both technical and social-cultural dimensions when developing interventions, along with

⁴ An intervention is defined as an activity or initiative conducted by an organization that supports value chain actors but that is not directly involved in earning profits from the FTA product's trade (i.e. donors, development organizations, government agencies, NGOs or CSOs). Value chain interventions are distinguished from more general programs aimed at stimulating economic growth, developing the private sector, and/or increasing commercialization. They may feed into any of these broader activities, but are essentially focused on improving or forging vertical linkages along value chains between actors (in production, processing and trade functions).

the recognition that changing established practices (e.g. improving women's literacy levels) may require longer timescales.

3. Combining gender-responsive technological innovations with market-oriented activities to transform women's participation in specific chain activities, for example by freeing time.
4. Considering the negative social-cultural repercussions that can result from an increase in women's benefits in value chains (such as women ultimately being excluded from certain roles in those chains).
5. Combining both vertical and horizontal upgrading to achieve better results.
6. Adopting a multi-pronged approach involving a combination of activities to improve women's position in FTA chains and foster their empowerment.
7. Supporting both men and women to enable them to self-determine their own upgrading initiatives.
8. Fostering, with the support from local leaders and external actors, collective action and groups that are often critical for achieving the desired gender equity outcomes.
9. Promoting pilots and demonstrations, such as of female leadership in FTA chain activities, that can support change.

Recommendations for future research

Limitations in the literature and in the value chain interventions reviewed include:

- An absence of gender-disaggregated data on male and female activities in the downstream stages of FTA value chains.
- A bias towards studies based in Africa with limited studies available in other parts of the developing world.
- A lack of baseline situations, making comparison of before and after an intervention tenuous.
- A short time frame, with few studies examining changes in gender relations over a longer time scale.
- The focus on women rather than gender.
- A bias on FTA value chains in which women are already largely involved.

More attention is needed by researchers and practitioners on:

- The ways men and women interact in FTA value chains (vs. an exclusive focus on women, and on women as a homogeneous vs. differentiated group) and the social norms that structure those interactions.
- The impact of single sex interventions: if women are supported what are the impacts on men and what are the longer-term changes in societal and market dynamics?

- The long-term impacts of interventions on gender relations, participation and benefits from FTA value chains. These need to be monitored and evaluated, but could also be anticipated (i.e. using participatory intervention logics).
- Investigating how men's and women's decision making may differentially affect product and resource sustainability, and how interventions affect their roles and benefits in chains.
- Developing pragmatic, easy to use indicators to set pre-intervention baselines and measure impacts from FTA value chain interventions on gender, livelihoods and resource sustainability. These should include both economic and sociocultural metrics.

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