

Opportunities for enhancing poor women's socio-economic empowerment in the value chains of three African non-timber forest products (NTFPs)

S. SHACKLETON¹, F. PAUMGARTEN^{2,3}, H. KASSA², M. HUSSELMAN² and M. ZIDA²

¹*Department of Environmental Science, Rhodes University, Grahamstown, 6140, South Africa and Center for International Forestry Research, Bogor, Indonesia*

²*Center for International Forestry Research (CIFOR), P.O. Box 0113 BOCBD, Bogor 16000, Indonesia*

³*The School of Animal, Plant and Environmental Sciences, University of the Witwatersrand, Private Bag 3 Wits 2050, Johannesburg, South Africa*

Email: s.shackleton@ru.ac.za and fi.paumgarten@gmail.com

SUMMARY

The value chains of three internationally important dry forest NTFPs, namely gum arabic, gum olibanum (frankincense) and honey from Burkina Faso, Ethiopia and Zambia respectively, were assessed in terms of the roles played by women and the benefits they obtain from their involvement. Women perform a variety of functions at different stages in the value chains, but their roles tend to be poorly visible and inadequately acknowledged, largely because they are either operating in the informal sector, are part-time employees, or carry out their activities at home between family responsibilities. Where women's roles are more prominent, this is primarily due to gender orientated interventions by external agencies. Several constraints to fostering women's empowerment were identified, with some easier to overcome than others. Particularly difficult to address are gender based, social-cultural barriers. Suggestions for enhancing women's benefits include: greater recognition of informal markets, the opportunities and constraints associated with them, and their position relative to export markets; improved support for collective action where this can provide women with greater voice, negotiating power, and help with economies of scale; more targeted training that addresses areas identified by women as useful and important to them; time-saving technologies and support systems such as child care; and creating greater gender awareness amongst stakeholders.

Keywords: gender, NTFPs, honey, gum arabic, gum olibanum, value chains

Opportunités et contraintes pour renforcer la prise de puissance économique des femmes dans les chaînes de valeur de trois produits forestiers autres que le bois de forêt africaine sèche

S. SHACKLETON, F. PAUMGARTEN, H. KASSA, M. HUSSELMAN et M. ZIDA

Les chaînes de valeurs de trois NTFPs de forêt sèche internationalement importants, la gomme arabique, la gomme olibarum (encens) et le miel, en provenance respective du Burkina Faso, d'Ethiopie et de Zambie, ont été évaluées en termes des rôles joués par les femmes et des bénéfices qu'elles dérivent de leur participation. Les femmes occupent une variété de fonctions dans toutes les chaînes de valeur, mais leur rôle a tendance à n'être ni visible, ni reconnu, principalement du fait qu'elles s'activent dans le secteur informel, qu'elles sont employées à temps partiel ou qu'elles poursuivent leurs activités chez elles, d'épaule avec leurs responsabilités familiales. Une prééminence plus grande de leur rôle n'est principalement que le résultat d'une intervention d'agents extérieurs favorables à la prise de plus de pouvoir par les femmes. Plusieurs freins à l'encouragement du développement de la prise de pouvoir des femmes ont été identifiés, certains étant plus aisés à surmonter que d'autres. L'opposition particulièrement tenace est les barrières socio-culturelles basées sur le sexe. Des suggestions pour accroître les bénéfices des femmes comprennent une reconnaissance plus grande des marchés informels, la construction d'une initiative collective, une formation ciblée et efficace, des technologies permettant d'économiser du temps et des systèmes de soutien, ainsi que la création d'une prise de conscience du rôle des sexes chez les parties prenantes.

Oportunidades y restricciones para la mejora del empoderamiento económico de la mujer en las cadenas de valor de tres productos forestales no maderables (NTFPs) del bosque seco africano

S. SHACKLETON, F. PAUMGARTEN, H. KASSA, M. HUSSELMAN y M. ZIDA

Se evaluaron las cadenas de valor de tres NTFPs (siglas en inglés) de bosque seco con importancia internacional: la goma arábica, el olíbano (frankincense) y la miel de Burkina Faso, Etiopía y Zambia respectivamente, en términos del rol que ocupa la mujer y los beneficios que esta obtiene de su participación. La mujer realiza una variedad de funciones en todas las cadenas de valor, pero la apreciación y reconocimiento

tienden a ser escasas, principalmente porque operan en el sector de manera informal, están empleadas a tiempo parcial, o realizan su labor en casa junto con otras responsabilidades familiares. En los casos en que el rol de la mujer es más prominente, la causa principal ha sido la intervención con enfoque de género por parte de agencias externas. Se identificaron varios factores limitantes al fomento del empoderamiento de la mujer, siendo algunos más fáciles de superar que otros. Las barreras socio-culturales basadas en el género son particularmente difíciles de abordar. Algunas sugerencias para mejorar los beneficios para la mujer incluyen un mayor reconocimiento de los mercados informales, el desarrollo de iniciativas colectivas, la capacitación selectiva y relevante, tecnologías que ahorren tiempo y sistemas de apoyo, y la concienciación de género entre las partes interesadas.

INTRODUCTION

Setting the scene: Gender inequity and women's socio-economic empowerment

Over the last decade, the Millennium Development Goals (MDGs), in particular Goal 3 – “to promote gender equity and empower women”, have stimulated increased attention to poor women's socio-economic empowerment in a range of sectors from formal employment to outsourcing, small business, petty trading and informal, home-based income generating activities (Jones *et al.* 2008, Esplen and Brody 2007). While such development discourses recognise and promote women's empowerment as essential to combat poverty, especially as women are frequently amongst the most vulnerable in society (UNEP-WCMC 2009, Jones *et al.* 2008), these ideas do not necessarily find universal acceptance on the ground. Indeed, gender discrimination has been identified as the most widespread form of inequity globally and a key obstacle to development and poverty alleviation (DFID 2000). It is this, and the fact that, given the opportunity, women are most likely to invest in the ‘good’ of the household and contribute to the increased well-being and security of the family as a whole (Carr 2008, Schreckenber and Marshall 2006), that has created the current focus on women's empowerment. The World Bank's Gender Equality Action Plan for 2007–2010, for instance, recognises that “the global community must renew its attention to women's economic empowerment and increase investments in women” and that “women will benefit from their economic empowerment, but so too will men, children and society as a whole” (World Bank 2007–10:2). Jones *et al.* (2008) argue that a gender lens is vital in all aspects of development to achieve the pro-poor outcomes of the MDGs.

As encapsulated in the concept, women's socio-economic empowerment goes beyond purely economic gain to include aspects related to increased choice, recognition and voice, rights, justice, independent decision making and dignity (Esplen and Brody 2007, Schreckenber and Marshall 2006). This requires that analysis must not only assess women's access to and control over conventional economic resources, but must also “grapple with the complex realm of social norms, roles and responsibilities which dictate women's relationships to work and their sense of self-worth and well-being more broadly” (Esplen and Brody 2007: 1). Consideration

accordingly needs to be given to the way in which culture and tradition; religion; gendered norms, divisions of labour and power relations; labour availability; other work and family responsibilities; and physical differences between men and women determine what is viewed primarily as men's and women's work respectively (Carr 2008, Esplen and Brody 2007, Hecht 2007, Shillington 2002, Neumann and Hirsch 2000). Such factors may influence how this work is valued and the status it brings, the support that it may receive from government and other stakeholders, the conditions under which the work may be undertaken, and whether and how women's roles, benefits, rights and power could be promoted and extended (Esplen and Brody 2007). This broad understanding of the gendered dimensions of work and trade was crucial in guiding our analysis of poor rural and urban women's involvement in the commercial production of three dry forest non-timber forest products (NTFPs)¹.

Gender and NTFPs

Considering women's relationships with NTFPs, these products have historically and continue to form a significant part of their work and responsibility. The gathering of everyday NTFPs, particularly food, fuel and craft materials, has always fallen into the domain of women (Neumann and Hirsch 2000). Men, on the other hand, are often the primary harvesters of less frequently used products such as timber, building and fencing poles and honey that require hard physical labour, or of products that are procured deep in the forest (Clarke *et al.* 1996). Men are also responsible for hunting. Forest use has thus long had a strongly gendered dimension, which, in turn, may be reflected in and transferred through to the commercial trade in forest products.

Most informal trading in common raw and processed NTFPs is undertaken by women, but may include products traditionally collected by men (FAO undated a, Kalu and Rachael 2006, Shackleton and Shackleton 2004, Shillington 2002). It is this feature of NTFPs that has led to the widespread promotion of these products, particularly by agencies interested in sustainable development, as tools for enhancing gender equity and empowering and benefitting women (Shillington 2002, Neumann and Hirsch 2000). Neumann and Hirsch (2000: 31) discuss how there appears to be “a general interest amongst women in a variety of settings to become involved in commercial NTFP production and marketing”.

¹ NTFPs are biological products harvested from natural forests and human modified landscapes that are used for household consumption or trade in either a raw or processed form (Shackleton *et al.* 2011).

Brown and Lapuyade (2001) show how economic crisis in Cameroon pushed women into becoming increasingly dependent on NTFPs for cash, and Schreckenber and Marshall (2006) mention how NTFP based activities are frequently the only source of cash income available to women in isolated rural communities. Lemenih *et al.* (2003) report that gums and resins collected and sold by women during the dry season contributes up to a third of cash income of Somali pastoralists in southeastern Ethiopia, while Shackleton *et al.* (2008) argue how poor, often elderly and uneducated women in South Africa turn to trading NTFPs as growing economic hardship and the impacts of HIV/Aids on the productive generation renders them increasingly vulnerable.

However, while women are key actors in local rural and urban markets, they are seldom major players in the more high value trade which tends to be dominated by men (Neumann and Hirsch 2000). Other than a few exceptions – e.g. Shea butter, which is one of the few commodities from dry forests under the control of women (Elia and Carney 2007) – women's involvement is often supplementary and complementary to other income and activities (i.e. they may be thought of as 'generalists'). On the other hand, men tend to engage in NTFP activities if these products can provide a primary or substantial source of income (i.e. they are more 'specialist'); woodcarving, for instance, is a typical example (Shillington 2002). In many NTFP value chains both men and women may be involved, either independently at different stages or together for certain functions (Schreckenber and Marshall 2006), but in many such cases women may be subordinate to men or may carry out activities that have limited visibility. Promotion of trade in traditional NTFPs may therefore not always be of benefit to women (Schreckenber and Marshall 2006, Hasalkar and Jadhav 2004, Neumann and Hirsch 2000). For example, Hasalkar and Jadhav (2004) working in Karnataka in India found that women's participation in forest enterprises decreased significantly when extraction and processing was mechanised, and when factory type units were established. Indeed, promoting the NTFP trade without the consideration of gender could create competition between men and women, as observed for marula fruit collection in South Africa for commercial production of a liqueur know as 'Amarula cream' (Shackleton and Shackleton 2005, Shackleton *et al.* 2010).

Constraints to women's empowerment in the NTFP trade

Women, because of gender differentiated roles and rights, often face many disadvantages that hamper their ability to engage in economic activity, including NTFP commercialisation. For example, the poor, uneducated and sometimes illiterate women who rely on the NTFP trade tend to have little status in society and thus are more disadvantaged than men and may be at the receiving end of unfair treatment. This is compounded by the fact that they are frequently involved in the lower end of the value chain, form part of unpaid family labour, or are employees and therefore lack control over key functions (Carr 2008). Such hidden 'women's work' tends to go undervalued (FAO undated b). Women's traditional

roles in the home also mean that they are often constrained by their household and caregiver duties, which may limit their mobility and time to participate in some of the more rewarding activities in the value chain or to engage in the trade on a full-time basis. In many parts of Africa this situation has been exacerbated through the need to care for family members suffering from the effects of HIV/Aids (e.g. Shackleton and Campbell 2006). Numerous studies have also shown that women are often restricted by cultural traditions in their access to productive resources such as land, trees and other natural resources with little say in forest management and use (e.g. Adedayo *et al.* 2010, Elmhirst and Resurreccion 2008, Gausset *et al.* 2005, Chabala 2004). Consequently, their voices are hardly heard or even silenced by their under-representation on local decision-making committees. In other settings women may be affected by their lack of legal status and may experience difficulties accessing credit or opening bank accounts, which, in turn, limits their ability to take control of their businesses. Women are also constrained by religious norms and restrictions which are often paternalistic and which may prevent them participating in certain activities perceived to be the domain of men (FAO undated a,b).

Purpose of this analysis

Drawing on the above thinking and conceptual framework, the purpose of this paper is to use a gendered lens and analysis to consider the role of women, and the opportunities and constraints to enhancing their role, in the value chains of three NTFPs, namely gum arabic (from *Acacia* species), gum olibanum (frankincense – from *Boswellia* species) and honey from the dry forests of Burkina Faso, Ethiopia and Zambia respectively. The analysis draws on a set of semi-independent research studies of these products that were undertaken as part of the Center for International Forestry Research's (CIFOR) "work in the dry forests of Africa" (Table 1). The aims of this paper are to: 1) identify where women are involved in the value chains of the three selected products and why they perform these particular roles; 2) assess the benefits women obtain from their involvement; 3) evaluate how women's roles and benefits could be expanded and what the constraints to this may be; and 4) generate policy and practice recommendations that will facilitate the socio-economic empowerment of women involved in trading dry forest NTFPs.

The section below provides an overview of the approach used in this analysis which was undertaken retrospectively and relied on data that had been collected for the country case studies under a broader project. This is followed by a section that provides some contextual information on the products, values chains and respective trades, before moving on to the first analytical part of the paper in which the values chains for each selected NTFP are described from a gender perspective. This is followed by a section that explores opportunities for enhancing women's involvement in production and trade based on the analysis of the value chains, while the conclusion presents generic lessons and recommendations for promoting women's roles in the value chains of these and other similar NTFPs.

TABLE 1 Study sites, product characteristics and contextual information on the respective value chains and markets

	Gum arabic (Burkina Faso)	Gum olibanum (Ethiopia)	Honey (Zambia)
Case study sites	Boundoré, Kollakoye and Tambondi in the Yagha province where gum picking is a traditional activity.	Two regional State – Amhara and Tigray – that supply the bulk of Ethiopia's gum olibanum.	Districts of Mwinilunga, Kapiri Mposhi and Chongwe. Mwinilunga is a traditional beekeeping area. Kapiri and Chongwe are new areas where beekeeping is being promoted by external stakeholders to encourage improved forest management.
Uses of product a) Traditional b) Commercial	a) Cooking, appetite suppressant, ink fixer, starching of clothes, ingredient for traditional medicines. b) Ingredient in food and drinks, pharmaceuticals and slimming aids, non-food applications (fireworks and explosives, ceramics and porcelain, inks, etc.).	a) Incense for ceremonies. b) Ingredients in food, beverages and perfume industry.	a) Food, medicine, beer. b) Honey, beeswax, propolis and royal jelly.
Contextual information	The last decades, through external interventions by government and development partners, have seen increased involvement of local people in the trade. Collected from natural Acacia stands (without tapping) which are open access. Gum picking is often done while performing other tasks (e.g. collecting fuel wood or looking after livestock).	Gum has been tapped and collected for centuries in Tigray, however in Amhara it is a newer activity, driven to some extent by the over-exploitation in Tigray. Found in extremely isolated, marginal areas and often on steep slopes. In Amhara tapping is restricted to concession areas which may be owned exclusively by companies or specialised gum cooperatives.	Zambia is the only country in the region that is not an importer of honey. Beekeeping is practiced on communal land. In Mwinilunga hives are often suspended high in trees and far from the homestead, in the other two areas apiaries are usually built nearby the home.
Markets: Local, regional and international	Local informal. Some formal local trade performed by producer organisations and export companies. Informal cross-border trade. Formal trade to international markets by two private companies.	Local informal and formal. Bulk marketing dominated by gum cooperatives and private or State-owned companies. Informal cross-border trade. Formal trade to international markets dominated by private or State-owned companies- gum olibanum forms some 90% of the country's export volume of gums and resins (Mulugeta and Kassa, 2009). No certification. Cooperatives not permitted to export unless organised under a union and there is presently no union.	Local informal and formal. Formal trade dominated by small-scale traders and companies. No producer organisations trade. Informal cross-border trade. Formal trade to international markets (including organic) dominated by few private companies. No producer organisations export.

APPROACH TO THE ANALYSIS AND SOURCES OF DATA

The analysis presented in this paper is based on information and data from a series of sub-studies (together forming a case study) on each of the products that were undertaken in each country and that included market, livelihood and employee surveys; organisational and collective action and certification

studies; interviews with a variety of stakeholders; and reviews of secondary and export data (see Lemenih and Kassa 2010 and Kassa *et al.* 2011 for Ethiopia). As far as possible, similar research questions and instruments for data collection were designed and used in the different study countries, but the cases varied according to their contextual setting, the nature of the product studied, the range and number of actors involved, and the researchers' individual focus on particular

stages in the value chain thought to provide economic opportunity and incentives for sustainable forest management. Consequently, data are not consistent across all case studies and matched data do not exist for every situation described. Indeed, much of the research was based on qualitative methods such as group discussions and semi-structured key informant interviews and so the use of quantitative data is limited.

Information at the top (consumer) end of the value chain was obtained primarily through key informant interviews with a range of stakeholders and secondary sources including export data. Local organisations, especially those targeting women, were an important source of information particularly in terms of understanding existing interventions and constraints. Interviews with producers, traders, retailers and export company employees were conducted to gain insight into how NTFP trading activities contribute to local livelihoods and incomes (the number of interviews depended on the number of people involved in the different stages of the value chain and varied from 292 women working in a State owned gum oblibanum sorting and exporting company in Ethiopia to as few as 10 women doing the same thing in Burkina Faso). Information on the role of collective action in improving access to forests and markets was obtained through focus group discussions with different groups of actors active in the trade.

The original research did not have a gender focus nor was designed to specifically capture gender data. However, the gender related patterns that emerged warranted further exploration. Consequently, from the multipurpose data collected, we used a value chain framework (Kaplinsky and Morris 2000, ILO 2006) to piece together a comprehensive picture of the trade in each product from production/harvesting, through processing, packaging, storage, transporting, wholesaling and retailing (Fig 1–3). In particular, the gendered dimension of activities at each stage of the value chain was elucidated from the existing information and the first hand experience of the researchers. From this, it was possible to elaborate on these roles, tease out the benefits, and understand the factors impacting on current and future opportunities for women. The emphasis of this paper is thus not so much empirical, but is rather an analysis of how to improve the opportunities for women through an improved understanding of their roles in the respective value chains and the various constraints to their socio-economic empowerment.

CONTEXT: PRODUCTS AND COUNTRIES

The three products (gum arabic, gum olibanum and honey) were selected by CIFOR's "Achieving the millennium development goals in African dry forest: from local action

to national forest policy reforms" (www.cifor.cgiar.org) project team based on their perceived importance for local livelihoods, poverty alleviation and the national economy by government and non-government stakeholders. The study sites were chosen to correspond to areas in each country with high levels of production and trade of the respective products. Key features of the cases, products and markets are described in Table 1.

All the products have a long history of use in the countries, have traditional and commercial value, are sold in both domestic and export markets, and have both men and women involved in various stages of the value chain (Table 1). The products and respective trades differ with respect to tenure and governance arrangements, the complexity of the value chain and degree of value addition, the accessibility of raw material and technologies required to harvest and process it, the arrangements for export, the degree of specialisation or skill needed at different stages, and the type and amount of government and external support provided. All of these factors influence women's involvement and benefits.

GENDERED ROLES IN THE PRODUCT VALUE CHAINS: ACTIVITIES, BENEFITS, AND CONSTRAINTS

Gum arabic in Burkina Faso

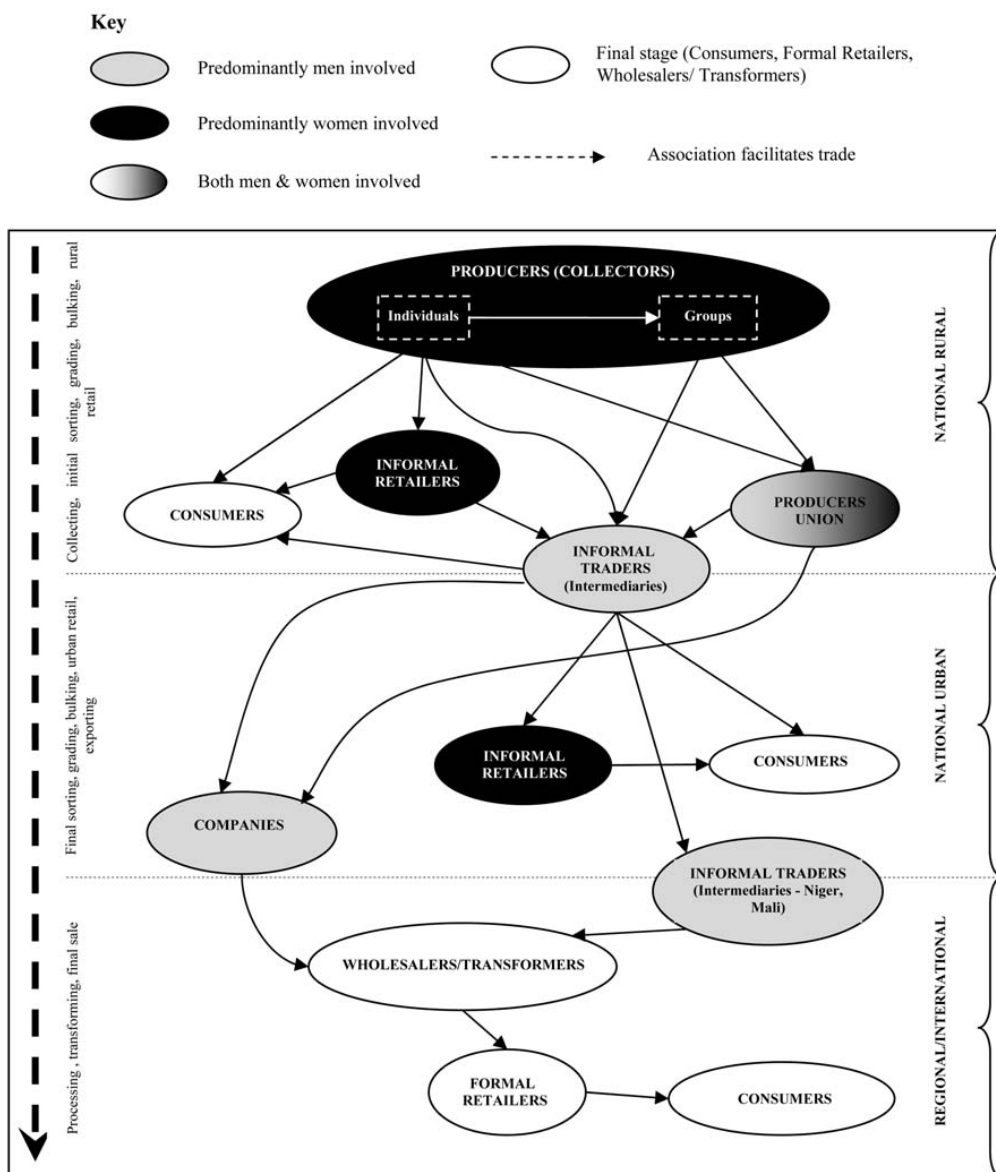
In Yagha province of Burkina Faso women play an important role in the gathering and sorting of gum, that builds on a long tradition of use. They are, however, less active in the sale and more lucrative marketing of the product which tends to be dominated by men.

Harvesting (picking)

In contrast to Ethiopia, gum arabic in Burkina Faso is picked (i.e. natural secretions) rather than tapped, although limited tapping does occur. This picking is done mainly by women, children, young male herders and men from marginalised, minority ethnic groups (10%) (e.g. the Rimaibé, Sonraï, Haoussa, Maouri), with women dominating (Figure 1). About half of collecting households were considered 'very poor' based on local wealth ranking by three key informants, suggesting that gum collection is an important livelihood activity for vulnerable groups. More women collectors were found to be unmarried (43%) than male collectors (17%), with women collectors being on average 10 years younger (30 ± 4 years) than their male counterparts (39 ± 3 years). The predominance of young women suggests that gum collection is a low entry supplementary activity undertaken by female members of households. The modest revenues associated with the trade (one picker can earn from 59 to 79 USD² per year with GDP

² Gum pickers receive about 0.33 to 0.44 USD/kg from middle men (who can earn up to 0.67 to 0.89 USD/kg from exporters). The amount of gum that one person can pick generally varies from less than 1 kg/day to 2 kg/day depending on the productivity of the gum trees, the distance to the gum stands, and the level of involvement in the activity (picking as set task or on an ad hoc basis). There are about 90 picking days per year as a maximum.

FIGURE 1 Burkina Faso – gum arabic value chain depicting gender dimensions. The regional/international part of the chain is not dealt with in this paper



per capita being 510 USD in 2009) as well as cultural factors also influence the predominance of this group. Gum is traditionally used in cooking lending a gender dimension to its use, while men tend to consider gum collection as an inferior and marginal activity. Poor returns to labour (0.44 to 0.88 USD per day relative to a labour value of 1.1 USD per day in the case study area) discourage men as well as wealthier groups from getting involved, although there are cases where the income earned has been sufficient to attract men.

Collecting trips are usually done in groups and therefore play an important role in establishing and maintaining kinship ties and building women's social networks. Gum is collected either as a 'set' task or on an *ad hoc* basis while performing other household tasks or in response to cash needs. It is generally collected after the agricultural season when women have

more time. Unlike the Ethiopian case, the gum producing trees are within the distance range that women normally collect other resources.

Processing (sorting)

Processing raw gum arabic into its commercial forms requires equipment and technologies currently not available in Burkina Faso. However, there are various stages at which cleaning and sorting occur. At the local level, women collectors will roughly sort the gum before selling it to cooperatives, in local markets (retailing) or to local traders, mostly men (Figure 1). Revenues earned at this stage are less than those further along the value chain, although discussions with women collectors and retailers indicate that the cash from local sales is put to multiple uses. Older women invest in

clothing, food and small livestock (43% of the women interviewed noted the contribution of earnings towards livestock maintenance and purchases), while younger women tend to keep some income aside to buy personal luxury items that they would normally not afford before turning over the remainder to the household for food (Table 2). Amongst women, in 29% of cases the picker controlled the income, while in 43% of cases the mother of the picker controlled earnings.

Further cleaning and sorting of gum occurs in the capital, Ouagadougou, before it is exported. Exporting companies (of which there are two) employ women on a temporary basis to clean and grade the gum before it is packed and either sold internationally (high grade) or returned to the domestic market. The number of jobs created for poor urban women in this process is, however, minimal as both companies are relatively small and together export less than 100 tons of gum per year.

Eleven of thirteen female employees of one of the companies (Gomburki in Ouagadougou, total employees=16) were interviewed. The company was started by two women. Employees are paid a guaranteed minimum monthly salary during the sorting season. The same women often return year after year. The majority of employees (82%) are married, with an average age of 42±3 years, 91% have no education, and all consider themselves as poor with gum cleaning/sorting identified as their most important source of income. Women are preferred employees because of the nature of the task which requires both dexterity and patience. However, they have little control over their working conditions and wages, receiving a minimum wage and only seasonal work opportunity. Women accept these conditions because there are limited alternatives

TABLE 2 Selected quotes from women key informants involved in gum collection and sale in Burkina Faso's Yagha province on some of the positive aspects of picking

Quotes
<ul style="list-style-type: none"> Hindatou Boubacar, 30 years old, village of Tambondi: "I picked 37 kg of gum in 2008–2009 and the money I got has been used to buy clothing and shoes for myself and my children. From the gum money of the current year, I was planning to buy a sheep to fatten but I picked only 20 kg, which was not enough. So I'm looking for additional money."
<ul style="list-style-type: none"> Mairama Amadou, 37 years old, village of Tambondi: "During the current season, I picked and sold about 20 kg of gum and I saved the money to buy a goat later."
<ul style="list-style-type: none"> Mairama Sorè, 19 years old, village of Banguel: "I got more than CFA F 20,000 last year from gum picking. With the money, I bought loincloths and shoes for myself and I gave the remaining money to my father to buy millet for the family."
<ul style="list-style-type: none"> Boussoura Aamal, 13 years old, village of Banguel: "In 2008–2009, I sold for CFA F 8,000 from gum picking, which allow me to buy jewels and one scarf."

available. The introduction of more advanced processing in Burkina Faso could potentially provide further opportunity for urban women to benefit from this stage of the value chain, providing it is done in a gender sensitive way.

Marketing and sales

While women do sell the gum they collect in local markets (see above), they are limited from engaging in more lucrative aspects of the value chain by strong religious and cultural barriers that prevent them from travelling to markets further afield and from interacting with men to negotiate prices. Their lack of assets, often entrenched by social stigmas (e.g. women cannot ride bicycles), is a further constraint. These various constraints limit the ability of women to bulk sufficient quantities for wholesale trade (e.g. women sell smaller quantities of gum than men, i.e. on average 15±5 kg versus 36±13 kg per annum). Consequently, beyond the local level the trade is dominated by men. In general, men are responsible for the storage, transport and wholesale stages of the trade (Figure 1). Intermediary male traders as well as traders from neighbouring Niger and Mali bulk and transport gum to more distant markets in towns and cities, and only men deal with exporters in the capital. Cooperation to pool raw material offers an opportunity for women to engage in the wholesale trade of gum arabic, through for example the Yagha producers' organisation, but their numbers and influence is still negligible.

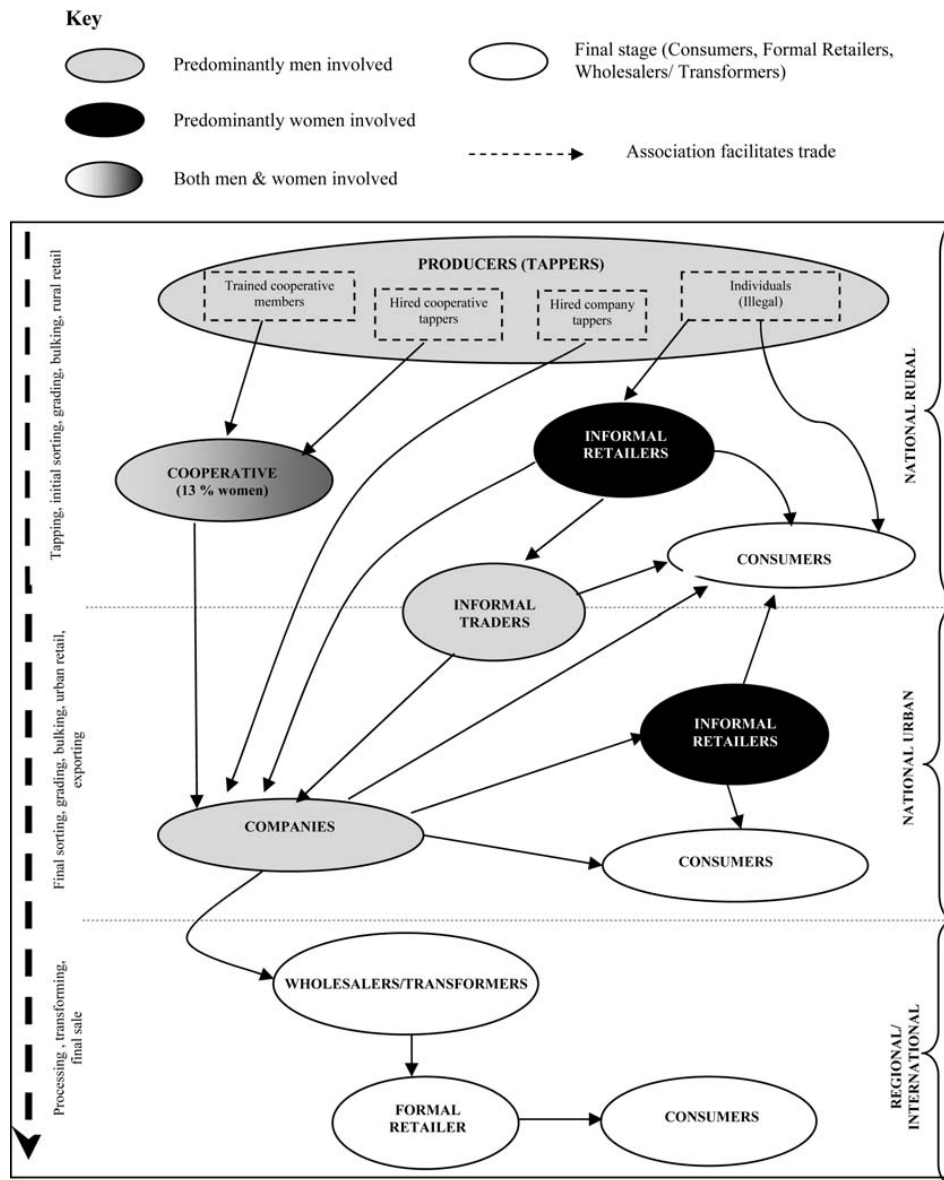
Gum olibanum in Ethiopia

Harvesting (tapping)

In Ethiopia gender roles at the collection and production level are determined to some extent by location and the livelihoods of local people (Lemenih and Kassa 2010, Kassa et al. 2011). In northern and north-western Ethiopia (the focus of this study), it is primarily men who are involved in tapping and collection, however in southern Ethiopia women are involved to some degree. People in the south are mainly pastoralists and women and children, responsible for herding livestock, pick gums and resins while herding. These are sold in local markets (often in small quantities) and earnings are used by women in meeting miscellaneous household expenses. In the north, however, where people are dependent on crop farming, young, able-bodied men collect gum, mainly by tapping, from forested areas which are often far from their villages (Figure 2). These men organise themselves in groups, and in some cases migrate to other production areas to be employed by cooperatives or private/State-owned companies, and spend weeks away during the collection season.

Several factors prevent women from engaging in the tapping and collection of gum in the selected study areas. Similar to Burkina Faso tradition is important. But, the distance to production areas and tapping skills are also important. Distant, isolated production sites prevent women from participating. Collection trips may extend over several weeks and require travelling within the same district, to neighbouring districts, or even from one regional State (e.g Tigray) to others (e.g. Amhara or Benishangul Gumuz). In addition to

FIGURE 2 Ethiopia – gum olibanum value chain in northwestern Ethiopia depicting gender dimensions. The regional/international part of the chain is not dealt with in this paper



security concerns (i.e. the vulnerability of women when alone in isolated areas), women cannot leave their households for such extended periods of time. With respect to skills, the ability to tap is considered a specialised male activity in Ethiopia, to the extent that tappers from Tigray with a history tapping that dates back centuries are employed by companies and cooperatives to tap in Amhara (Kassa *et al.* 2011). This skills barrier is entrenched by regional legislation barring unskilled tappers from accessing concession areas for harvesting. These legal restrictions are in place to protect the resource base from indiscriminate tapping. As such, companies and cooperatives with concession areas rely on skilled male tappers, effectively excluding women from participating as they have no legal access and are not members of the cooperatives. During this study we found that amongst fourteen specialised gum cooperatives only 13% of members

across the country are women, emphasising the predominance of men at this stage of the value chain.

Processing (sorting)

As with gum arabic in Burkina Faso, no frankincense processing takes place in Ethiopia, although cleaning and grading occurs at two stages. The first is done in the field immediately after the gum is collected by collectors themselves, i.e. predominantly men. These men are hired by the companies/cooperatives to clean the gum in addition to collecting it. In some cases, if the gum is collected closer to home, women may assist in the drying and cleaning. Once collected and cleaned the gum is bulked and sold. Gum sold through major companies and destined for export undergoes another round of cleaning and grading. This is done in the major cities almost exclusively by women. The involvement of men is

TABLE 3 Selected quotes and 'stories' from women key informants involved in sorting gum in one of Ethiopia's State-owned companies

Quotes/stories
<ul style="list-style-type: none"> Mrs Zewditu, 78 years old: "who would employ an elderly woman of my age and responsible for bringing up two grandsons orphaned by HIV/Aids? Although I do not earn much from the job, it helps support me and my grandsons."
<ul style="list-style-type: none"> Alemesh, 17 years old, is a high school self-supporting student who sorts gum in the afternoons and over the weekend when there are no classes. Although she recognises that the pay is low and that other opportunities would pay more, these don't have the flexible work modality and the performance based system of pay.
<ul style="list-style-type: none"> Miss Abeba, 28 years old, is unmarried and believes that "earning one's own income gives you the dignity you need for yourself to secure societal respect. When you are not educated, getting a job in the cities is extremely difficult, except joining the sex industry. I hope that the enterprise will raise the payment so that we will also cope with the rising cost of living".

limited to loading and unloading only. As for gum arabic, women dominate this stage mainly because the task is finicky and women are considered more adept in this regard, especially as quality is an important criterion for export.

Sorting gums and resins is labour intensive, but poorly paid. Women engaged in this stage tend to be poor, uneducated, elderly, unmarried, often with additional family responsibilities (e.g. caring for orphaned grandchildren) and therefore cannot compete in the formal job market. There are also a few students who support themselves by adjusting their working time with their school programmes (Table 3). Ninety-six percent of women (n=292) working in one of the State-owned gum collecting and exporting company noted that their job constituted their only source of income, with 87% earning less than 2 USD/day (< 50 USD/month). Women are employed on a piecemeal basis, and paid on quantities sorted and cleaned (hence providing flexible working hours which allow for other household tasks). They can also bring children and other family members to work, with the latter often assisting. The low entry barriers, lack of alternative employment and flexible working modalities attract these women despite the low income (Table 3). The majority (89%) of women interviewed said that they took the job because they liked the flexibility associated with the work, while 83% felt that they did not have the necessary qualifications for other jobs in the city. As with the sorting of gum arabic in Burkina Faso, women's contribution to the trade of this important product is poorly acknowledged and rewarded. According to a representative of the company, the low price paid to sorters is influenced by the low export price which, in turn, is influenced by poor governance of the production and marketing

aspects of the gums and resins sub-sector and a lack of organisation amongst exporters, with excessive competition between the latter driving the export price down.

A recent directive from various State governments to companies engaged in the gum trade to add value to gum at production level could leave these urban sorters jobless. When asked about the consequences of this possible loss of income, interviewees noted a number of impacts including: being unable to afford medical treatment (63%); failing to pay rent and education fees (57% and 15% respectively); being unable to participate in local social activities (53%); and losing independence and so become dependent on husbands (33%) and family (29%). Some 19% stated they would search elsewhere for work, while 11% stated they would be forced to beg, and 14% admitted that they would have no option but to move into the sex industry. This inadvertent oversight of the impacts of the new regional policy on poor urban women is partly due to their complete invisibility in the value chain.

Marketing

As with cleaning and grading, the sale of gum olibanum in Ethiopia occurs at several stages in the value chain, and is sold in both formal and informal markets. Although trading is dominated by men, women are involved in retail at the local rural level and in informal urban markets (Figure 2), with the latter consisting of low grade gum olibanum rejected during the sorting process in exporters' warehouses. This gum re-enters the local market for coffee and church ceremonies, and is sold by poor, urban women. Profits are slight. It was estimated that the local share from the marketing margin of gum olibanum is only about 19% (Kassa *et al.* 2011). With respect to the rural retail trade, women engage to some extent in bulking small amounts bought from individual collectors. Men are also involved in the informal trade, buying gum from individuals, bulking it and selling either in the local market, or, if quantities are sufficient, to cooperatives. Cooperatives also bulk gum from their members, from their employed tappers and from others who sell to them. This gum is then sold to the private or State-owned companies for export. These later stages of the value chain, including transportation from the production areas to company warehouses, are dominated by men although one of the private companies involved in export is owned and managed by a woman. At this stage gendered barriers are less pronounced than at harvesting.

Although there is some local rural retail trade, because tapping is restricted to company employees and cooperative members, supply is limited and markets small. Other barriers to women's involvement in the bulking and upward sale of gum olibanum include family responsibilities that prevent travelling and difficulties obtaining licences for the transport of tradable volumes of gum. The licence application process is bureaucratic and requires a considerable amount of paper work which inhibits rural women due to their low levels of literacy and confidence. Accessing credit is also constrained by poor literacy amongst women (estimated at 25% nationally but much lower in rural areas). There is the option to trade without a license; however this is illegal and may require

bribes, creating a potentially threatening situation for women. In addition, husbands may not allow their wives to engage in such activities or provide permission for them to apply for licences.

Honey in Zambia

Production and collection

Honey in Zambia is both collected from wild colonies ('honey hunting') and from hives. These two activities have traditionally been dominated by men. This has largely been driven by the nature of production, which requires physical strength and extended periods of time in the forest. Traditional hives, made from carved out logs or strips of bark tied into a cylinder, are placed deep in the forest, hung from tree branches sometimes in excess of 15 m above the ground. Making and placing these hives is labour intensive and requires certain skills and strength that excludes women. Furthermore, cultural taboos exist against women climbing trees suggesting that, even with the necessary skills, they would be unlikely to undertake this activity. Male beekeepers also often spend days camping out in the forest placing, managing and harvesting their hives. Women are not permitted to join on these trips and would not go on their own for safety reasons.

However, despite beekeeping being a traditional area of male employ, women are finding ways to participate in honey production. Discussions with women beekeepers revealed that they often hire male community members to make and place bark hives, or, in the case of beekeeping groups, request a male member to assist with these tasks in return for support in other areas of production such as processing. External agencies have also promoted 'modern' beehives that are placed on stands about one meter above the ground and located in apiaries close to the homestead, thereby supporting female participation. The shifting focus to more concentrated apiary sites allows women to play a greater role in either assisting their husbands in maintaining and managing apiaries or in establishing their own apiaries. These alternative hives are however more costly (although they can be more productive), leaving women with either the option of greater investments in technology or the costs of hiring labour to manage traditional hives. These costs undermine the profits of women beekeepers. Women beekeepers noted a number of benefits from beekeeping including money for education, economic independence, self-esteem, and avoidance of risky activities (Table 4).

Processing and mbote beer

The degree of honey processing that takes place in Zambia depends on the market. Most companies prefer to buy unprocessed comb honey and process it themselves (mechanically) to ensure quality. However, there is also a market for processed honey and women play a key role in processing raw honey (i.e. from comb honey into liquid) as part of the family division of labour. Interviews indicated that more than 40% of male beekeepers were assisted by their wives. Traditionally honey is sieved, although presses are increasingly available.

TABLE 4 Selected quotes from Zambia's women beekeepers on the positive aspects of beekeeping (many of these comments were repeated by different women)

Quotes
• I am able to raise my own money as a female to support my family and send my children to school.
• I used to admire male beekeepers and the money they were making, now others admire me.
• I can start my own business from the beekeeping profits.
• I used to wait for my husband to give me money but now I earn my own.
• I am protected from getting HIV/Aids because I have my own money.

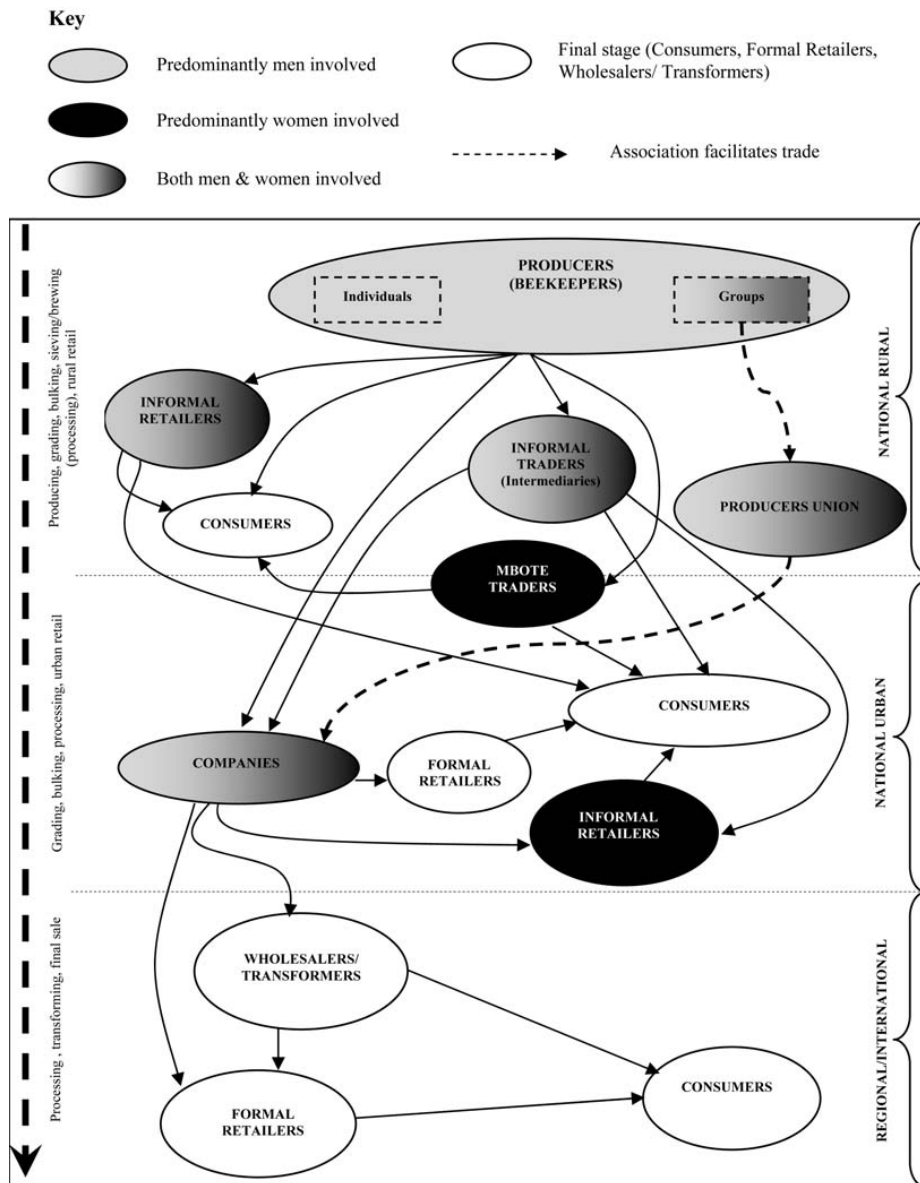
These presses require greater strength than the sieving technique and are faster and therefore men are beginning to replace women in the processing of raw honey. The grading of honey at household level is also done by women as it is a time-consuming task. This processed honey is bought by small companies and informal traders.

The processing of honey into the traditional honey beer (*mbote*) is done almost exclusively by individual female entrepreneurs based in small rural towns and cities. Some 600–700 tons of honey, a quantity that is equivalent to, if not greater, than the amounts exported, are converted into *mbote* annually and sold at homestead taverns (Mulenga and Chizuka 2003). In a survey of *mbote* brewers/traders, 10 of the 13 interviewees were women. These women, averaging 39±9 years, were not necessarily single or the least educated in the community, and, for most, the sale of *mbote* constituted a supplementary source of income for the household. They had been selling *mbote* for an average of 12±10 years and were earning around USD 2.5 per day. Brewers choose to make and sell *mbote* because it allows them to work from home, with almost all the taverns being next to or on the homestead plot. Although there were some reports of harassment from drunken customers, the convenience of working from home was seen to outweigh this disadvantage. However, as is the case with many informal enterprises, the scale and importance of the *mbote* trade for women is little appreciated by the government or NGOs, and it is unclear how more modern hives, increased mechanisation amongst export companies, and greater demand for unprocessed honey may impact this market.

Marketing and sales

In terms of trade, honey and honey products are sold at different stages of the value chain through both formal and informal channels. Women are engaged in all stages although their involvement increases in later stages of the chain, particularly in urban informal markets. The nature of the trade is determined to some extent by the accessibility of production areas and the quality of honey. In more isolated, traditional honey

FIGURE 3 Zambia – honey value chain depicting gender dimensions. The regional/international part of the chain is not dealt with in this paper



production areas, honey is sold directly to buyers who travel to source. In less isolated areas, producers or intermediaries may travel to the market. At a local level, women sell within the community or in larger quantities (through bulking as a group) to buyers who travel to the village. Women tend not to travel beyond the local area to sell, as this requires travelling long distances (e.g. on foot, by bicycle, or other means) interfering with household tasks. In Zambia women also seldom ride bicycles, one of the most used forms of transport. Although women sell honey within villages, negotiations with buyers are often done by men who tend to control the finances except in the case of women’s beekeeping groups.

Buyers include formal companies and traders (intermediaries). Small, medium and large companies buy honey from individuals or groups, with many beekeeping groups existing solely for the purpose of bulking honey in a central place

to which companies come and buy. Some of the formal companies include or are owned by women. These companies send representatives to production areas to purchase honey, although in some cases owners themselves travel. Informal traders, including both men and women (*mbote* brewers, intermediaries), also travel to the production areas from urban centres such as Lusaka and the Copperbelt. According to Mickels-Kokwe (2006) the traders may be “full or part-time traders, who travel by public transport to supply areas and buy honey from the producers, and hire transport to take it into town to resell”. They may also retail themselves in informal urban markets or sell to urban retailers or brewers. This is often done as a supplementary activity with some of the traders in gainful employment (e.g. teachers who will trade during the school holidays) (Mickels-Kokwe 2006). One of the primary constraints in this informal trade is capital for

buying honey and packaging. Where informal bulk traders include women, they are generally from the urban areas; they have more disposable capital; are more exposed to markets, transport, logistics, etc; and are less constrained by the cultural barriers rural women (especially those in isolated areas) face. Informal urban honey traders (e.g. those retailing in Lusaka's City Market) are predominantly women. These traders often trade in other types of products as well. In a survey of Lusaka's informal traders across six markets, the percentage of women traders averaged 60% (ranging from 33–100%); most were married. The majority purchase raw honey from beekeepers or middlemen and process and package it before reselling. Others sell branded products from companies. The majority have been selling since 2000 – encouraged to start trading by beekeepers and middlemen. Intermediary traders also resell along the roadside between towns, although these are predominantly men.

ENHANCING THE ROLE OF WOMEN IN THE PRODUCT VALUE CHAINS

The case studies demonstrate that the benefits women obtain from engagement in the respective value chains are multiple, ranging from increased business skills to independent income, protection from risky forms of work such as prostitution, ability to support children, greater livelihood security in terms of coping with problems, and expansion and diversification of livelihood sources. Earnings are used for a range of purchases from food to clothing, small luxuries and livestock, and for health and education needs. Rural women participate in the NTFP trade because it is worth their while to do so, but, for most, it is not a full-time activity. However, being able to diversify into these activities is important as a poverty buffer (Shackleton *et al.* 2008). On the other hand, for most urban retailers and employees in processing warehouses it is their major occupation. Poor urban women tend to rely more on the trade for meeting basic livelihood requirements and loss of their jobs (whether formal or informal) would severely impact them.

However, despite the benefits, the case studies reveal that the roles played by women in the value chains of the selected products are generally poorly supported. Indeed, in common with other products (e.g. Shackleton *et al.* 2007), external intervention is often at the production/collection stage and linked to formal markets as illustrated in the honey case. Support is rarely given to building opportunities for women in parts of the value chain in which they are already involved, e.g. *mbote* beer production and sales in Zambia, or gum processing in Ethiopia where women have little status as part-time employees. Local, informal markets (roadsides, pavements, and homesteads) generally dominated by women also tend to be neglected in favour of the export trade, although, in many instances, the local trade may be as beneficial (e.g. Shackleton *et al.* 2007). Given the importance of the various products in women's lives (e.g. in Ethiopia sorting and cleaning gums and resins forms the only source of income for 96% of woman involved, while in Burkina Faso

gum arabic sorters' only income is some 67 USD per month for 3–4 months of the year) and in the well-being of their families, it is essential that mechanisms are sought to promote their involvement, empowerment and enhance the benefits they receive (see final section).

The previous section also highlighted some of the constraints that surround women's roles in the respective trades. Several of these relate to social-cultural and religious norms (e.g. traditional gender roles, restrictions on travelling to markets (e.g. on bicycles), deferment to men, prohibitions on accompanying male beekeepers to the forest and tree climbing). Others are related to what might be thought of as differences in physical characteristics and natural abilities between men and women (Shilling 2002). For instance, for all three products, men carry out activities that require physical strength (placing hives), hardship (camping out for long periods) and the ability to fend for one's self (collecting in remote forests). Women are seen to be more at risk in terms of personal security than men. Such constraints can be complex and difficult to overcome (Esplen and Brody 2007), certainly more so than those related to a lack of recognition, organisation, legal rights, access to information, and appropriate technologies to facilitate women's involvement. The remainder of this section considers opportunities to overcome some of the identified constraints and to build women's roles so they move from being what Carr (2008) calls *ad hoc* actors to integrators, partners and co-owners.

Opportunities and overcoming constraints

Clear opportunities are recognised for enhancing women's control and obtaining greater recognition for their activities through collective action or cooperation (Carr 2008). For instance, in Burkina Faso, women in gum producing areas declare their low interest in gum-related activities to be the result of poor prices offered by middlemen. Collective action to pool raw material and efforts could improve women's ability to negotiate better prices and enhance the income generating potential of gum collecting. Overall, if women collectors could be assisted to organise themselves better this would improve their access to resources, external support, venues for selling, training and credit opportunities [e.g. as was done by the Self Employed Women's Association in India (SEWA 2000)]. In Ethiopia, only a few women are members of producer cooperatives. Potential opportunities exist for more women to join these bodies and through their participation work with or hire male tappers and engage more in production and local processing. One factor acting against women's participation in male dominated organisations is cultural barriers that may prevent women speaking out or limit their involvement in decision making. In recognition of this, some externally facilitated projects in Zambia have promoted separate women's and men's beekeeping groups. While this reduces conflicts, women members are then restricted in terms of assistance with hard labour. Divided groups may also not be an appropriate route where women are marginalised or have small roles in the value chain, such as in the case of gum collectors in Burkina Faso. Whatever the

approach, the encouragement of collective action has been relatively successful in Zambia, with several groups and families working together in the production, bulking and selling of honey, with buyers usually coming to the groups. However, women operating in informal markets (*mbote* beer brewers and sellers) are not well organised, mainly because they have not been supported to do so, and so are unable to bring their concerns to the attention of relevant stakeholders. As a result they tend to be overlooked in various government and donor initiatives and are often viewed negatively by the community and authorities and so subject to harassment. Indeed, they are particularly vulnerable as the sale of alcohol is illegal without a licence.

Physical constraints that prevent women from becoming involved in some aspects of the trade can be addressed, in some cases, through alternative appropriate technology such as in the beekeeping example. In this case, easy to make mud hives or wooden top bar hives that can be purchased and placed close to the ground have replaced the difficult to make bark hives that are suspended high in the forest. Access to protective clothing has also encouraged more women to participate in beekeeping. Interestingly, the alternative hives are adopted mostly in areas where there is no traditional beekeeping and presumably no competition from male beekeepers. In new beekeeping areas, it was found that women still need men to assist with the preparation of apiaries, particularly the cutting of poles for shelters and stands, and that many of the beekeeping groups, for this reason, are of mixed gender. Men also have better literacy levels than women and so women often depend on them for help with recording minutes, doing accounts, reporting on production, and applying for loans. Payments for assistance from males for heavy labour can limit the profits women obtain from honey production, especially since their costs tend to be higher due to the more expensive hive types they use. In contrast to honey, the harvesting of gum olibanum in Ethiopia is unlikely to ever become a women's task due to far distances, rough conditions, lack of tapping skills and time away from home. Attempts have been made to domesticate trees, which would assist women, but have had limited success. However, if women became more active in the gum cooperatives, opportunities could arise for them to hire male tappers.

The case studies document that time away from home is a major factor limiting women's involvement in several stages of the value chains for all products. The opportunity costs of time away from household responsibilities and the security concerns related to travelling considerable distances to harvest raw material or to sell are common concerns (e.g. Carr 2008, Shilling 2007). Generic solutions to free women's time, such as facilitating child care services, are rarely given attention (Esplen and Brody 2007). However, there are examples of specific interventions that help to increase efficiency in time use. A positive example is from Zambia where the introduction of a cellular phone pricing system allows women

producers to learn about prices and communicate with buyers without leaving the household. Buyers then travel to source to purchase honey, negating the barriers related to distance to markets. Alternative hive technologies resulting in apiaries close to the homestead also facilitate management and harvesting. Collective action can also reduce the need to travel if raw material is bulked up to sufficient quantities to make it worthwhile for buyers to travel to source.

While case specific opportunities to enhance women's roles exist, there is also a need to look beyond just the product trade to understanding women's roles in family life and economic production in general (Esplen and Brody 2007, Carr 2008). Policies need to support women to become more economically active, which may include further education and training, access to credit and recognition of inadvertent gender biased regulations such as those for gum tapping licences. While in all three countries several policies (e.g. Citizen Economic Empowerment Fund in Zambia, the Constitution and Five Year Development Plan in Ethiopia, and the Environmental Plan for Sustainable Development in Burkina Faso) promote women's economic development this is usually at a macro level and seldom translates into action on the ground, or the promotion of women in informal markets including those for NTFPs. Indeed, specific policies on NTFPs do not exist in Ethiopia or Burkina Faso, whereas Zambia started the process of developing a national beekeeping policy that will mainstream gender issues, although it is likely this will now become part of the new forestry policy. In Ethiopia, a recent directive³ that prevents the transport of raw gum will inadvertently cut poor urban women out of the value chain; an unintended consequence resulting from limited attention to gender issues when considering such products. Better advocacy is needed to ensure greater gender awareness amongst government officials working in the NTFP trade and in other sectors that may impact on this (Carr 2008). Non-government organisations are, however, more proactive in promoting women's involvement in the product value chains, but do sometimes encounter cultural barriers. In Zambia, much of the support has been to mixed groups of men and women and this has provided a good understanding of the context in which both sexes participate and what constrains or facilitates their participation, but the focus has been on production ignoring other parts of the value chain. An area requiring more attention by both government and non-government stakeholders is access to micro-credit, particularly for informal women traders (Carr 2008). At the moment limited opportunities exist and this has been detected as a constraint to empowering women traders.

Training provides an ideal opportunity to enable women to become more active in NTFP commercialisation (Carr 2008, Williams undated). However, training often excludes women because of their perceived minor roles or the timing of sessions to conflict with women's work at home. For example, in Zambia all training is focussed on production at

³ This is being implemented in the Amhara and Tigray regions, but raw products from southern Ethiopia and from Benishangul Gumuz State are still transported to major cities for cleaning and grading.

the one end of the value chain and the export trade at the other. There has been little business skills training for people involved in activities between these two extremes, which includes all women traders and retailers. Where training does include women, it may fail to address some of their basic concerns such as poor literacy (Kalu and Rachael 2006, Williams undated), awareness of cultural and gender biases in mixed groups, or focus on building skills (such as negotiating skills) that will boost their confidence in their own abilities. This is exacerbated by mostly male trainers and extension officers who tend not to be sensitised to women's priorities and may not be permitted by social custom to meet with women (Williams undated, Table 5). More effort needs to be made to specifically address women's concerns when designing training packages as this is an easy entry point to enhancing their roles and benefits.

The level of final processing in all three countries is limited. In Burkina Faso and Ethiopia, the lack of equipment and technology requirements for processing within the country means that the gum is exported unprocessed except for cleaning, sorting and grading. Further processing could create

new opportunities for poor urban women beyond just sorting and grading, as long as mechanization does not displace them. However, the small export market in Burkina Faso and the poorly governed market in Ethiopia, limit opportunities to further add value. Although some local processing occurs in Zambia, particularly into honey beer, most formal companies prefer to process themselves to ensure quality, again restricting the opportunity for women. Opportunities for home-based processing could open new doors for both urban and rural women (e.g. Kalu and Rachael 2006, Carr 2008), although this is not easy in these cases. It would require local quality standards and related training/capacity building, as well as appropriate technologies and improved hygiene; measures that can be difficult for poor women to meet.

CONCLUSIONS AND RECOMMENDATIONS

Lessons and key policy messages emerging from the case study analysis regarding the mainstreaming of gender issues and women's empowerment in dry forest management and

TABLE 5 Recommendations for enhancing women's benefits from the trade in dry forest NTFPs

Suggestions and recommendations
Understand gender roles, and the opportunities and constraints to these roles, in the entire value chain , including in urban markets. Without this it is not possible to specifically target interventions at women.
Support activities performed by women (often in the household) to improve efficiency and the quality and standards of products – e.g. simple practices such as sorting gum into source species and proper cleaning and packaging would add value. This may require national standards and a system that encourage buyers to pay more for quality and for total value added to the product.
Understand women's time and mobility constraints and divisions of labour and build opportunities around these. E.g. trying to promote women in tapping in NW Ethiopia is not likely to be successful.
Carefully assess the gender impacts of interventions to increase production, profits and efficiency. What may be best for profits is not always what is best for women. Getting the balance right is critical. E.g. strengthening the competitiveness of the value chain so that the quality and volume of products exported increases, and bargaining power of sellers is improved will increase farm gate price to producers and the wages of women involved in processing. But there is also the risk, if not carefully managed, that women will be displaced by men as production profits are improved. In Burkina Faso increased profitability and the formation of the Yagha's producers' union has increased male involvement in production, an area traditionally dominated by women.
Support women traders in domestic markets as well as the export markets, e.g. storage technologies, reduced harassment, legal rights.
Organise women into groups for effective collective action . This can help women overcome their reluctance to speak out, act or intervene. This is significant when it comes to obtaining credits, machinery, tools, access to resources and support services. It can help women bulk products to access markets that they don't normally trade in.
Provide relevant technical and other training to women around their roles. Often only men are trained or training is not geared towards women and their specific needs and roles (e.g. literacy).
Take cognisance of cultural sensitivities related to gender, e.g. in Burkina Faso a woman was hired to work with women's groups. This also applies to extension programmes – most extension officers are men.
Lobby at a legal level for gender dimensions of certain activities to be recognised. E.g. minimum/fair wage for urban graders of gum, allowing women to sell honey beer, compulsory minimum quota of female trainees when extension services or NGOs organise training sessions targeting parts of the value chain where it is well established that women are the dominant actors (relevant for Burkina Faso where women are almost systematically excluded by middlemen from participating in training on gum production techniques though women are the main actors in collection).
Make technology work for rather than against women. E.g. the introduction of modern honey presses could undermine the processing role of women as these presses are often too difficult for women to use, while the introduction of modern hives has promoted their participation in production.

enterprise development vary from increasing the awareness of gender issues in value chain support to the implementation of specific policies and actions. While there is no single recipe for success (Carr 2008), recommendations that ensure greater cognisance of women's roles can be important in devising specific strategies for selected products, locations and cultural settings.

Understanding NTFP commercialisation through a gendered lens requires mapping of the full value chain and the gendered division of labour along this chain, as well as the interactions and relationships between men and women in the different stages (Shilling 2002). Value chains may be complex and include a number of parallel pathways such that some participants become hidden. It is critical to ensure that less visible parts of the value chain such as home processing of products (e.g. honey and gum) and informal, often neighbourhood, markets are given due consideration. Women are key actors in domestic rural and urban trading and retailing (Carr 2007, Shilling 2002), but these roles tend to be overlooked especially for products with high value export markets. Better appreciation is needed of how export-orientated enterprise development at producer level impacts on domestic markets and the poor women dependent on them. At the same time, where there is evidence of benefits, opportunities should be sought to integrate women into parts of the value chain where they are not present and to synergise this with their existing activities and daily responsibilities. Women often select options that allow them to manage their traditional roles (e.g. looking after a child while working), and they may trade flexibility for income as experiences from Ethiopia show. Consequently, up-scaling of trade in traditional NTFPs needs careful consideration as it could displace women through labour-saving technologies and centralised processing that no longer requires the patience and dexterity of women or that need male strength (e.g. honey presses, marula fruit in Namibia – Wynberg *et al.* 2003), and through enhanced profits and more specialised value chains that attract male involvement. Shortening of the value chain to close the gap between producers and consumers is a common approach encouraged by donors. But, as is clear from the above this may have negative outcomes particularly for poor women involved in local trade. Focusing on production may also not be best for supporting women's involvement. Women are often more active in other parts of the value chain, e.g. for honey in Zambia assistance is focussed on production, while from a gender perspective trade and processing in the value chain are more important.

Recommendations for enhancing women's roles in the value chains of the selected products and other similar dry forest NTFPs are presented in Table 5. Clearly, promotion of women's involvement in and benefits from NTFP value chains will require tailored support to meet women's needs in terms of independent legal status, technology, organisation, and managerial capacity. The case studies suggest that with increased awareness amongst government agencies/departments and NGOs of the less visible roles that women play and targeted interventions, particularly in policy and legislation, training and collective action, women could

benefit more from their current activities and, in some cases, from expansion into new areas of the value chains.

ACKNOWLEDGEMENTS

The authors wish to thank producers, traders and other stakeholders interviewed for this paper for their cooperation and insights. We also gratefully acknowledge valuable suggestions for improvement of the manuscript made by anonymous referees. Support for CIFOR's work in the dry forest of Africa and for the respective case studies was provided by the Swedish International Development Cooperation Agency (Sida). A research incentive grant from the South African National Research Foundation (NRF) granted to Sheona Shackleton was used to fund Fiona Paumgarten's travel to Rhodes University to work on this paper. Both Fiona Paumgarten and Madeleen Husselman were funded by the Dutch Government as Junior Professional Officers. The views in this paper represent those of the authors and not the funding agencies.

REFERENCES

- ADEDAYO, A.G., OYUN, M.B. and KADEBA, O. 2010. Access of rural women to forest resources and its impact on rural household welfare in North Central Nigeria. *Forest Policy and Economics* **12**: 439–450.
- BROWN, K. and LAPUYADE, S. 2001. A livelihood from the forest: gendered visions of social, economic and environmental change in Southern Cameroon. *Journal of International Development* **13**(8): 1131–1149.
- CARR, M. 2008. *Gender and non-timber forest products: Promoting food security and economic empowerment*. International Fund for Agricultural Development (IFAD), Italy.
- CHABALA, C. 2004. Forest management in Zambia: A focus on women's access to forest resources management in Chief Chiwala's area, Masaiti District. Masters thesis, Southern African Regional Centre for Women's Law, University of Zimbabwe, Harare.
- DFID. 2000. Poverty alleviation and the empowerment of women. DFID, London.
- ELIAS, M and CARNEY, J. 2007. African Shea butter: A feminised subsidy from nature. *Africa* **77**(1): 37–62.
- ELMHIRST, R and RESURRECCION, B.P. 2008. Gender, environment and natural resource management: New dimensions, new debates. In: RESURRECCION, B.P. and ELMHIRST, R. (eds.) *Gender and natural resource management: Livelihoods, mobility and interventions*. Earthscan, London, Sterling, VA.
- ESPLEN, E. and BRODY, A. 2007. *Putting Gender Back in the Picture: Rethinking Women's Economic Empowerment*. BRIDGE (development – gender), University of Sussex, Brighton.
- FAO. Undated a. *Assessing the value of non-timber forest products to local people*. FAO corporate document

- repository. Available at: <http://www.fao.org/docrep/t9450e/t9450e09.htm>.
- FAO. Undated b. *Men and women in forest activities: Differences and complementarities*. FAO corporate document repository. Available at: <http://www.fao.org/docrep/w6206e/w6206e02.htm>.
- GAUSSET, Q., YAGO-OUATTARA, E.L. and BELEM, B. 2005. Gender and trees in Péni, South-Western Burkina Faso. Women's needs, strategies and challenges. *Danish Journal of Geography* **105**(1): 67–76.
- HASALKAR, S. and JADHAV, V. 2004. Role of women in the use of non-timber forest produce: A review. *Journal of Social Science* **8**(3): 203–206.
- HECHT, S.B. 2007. Factories, Forests, Fields and Family: Gender and Neoliberalism in Extractive Reserves. *Journal of Agrarian Change* **7**(3): 316–347.
- ILO. 2006. *A guide for value chain analysis and upgrading*. International Labour Organisation (ILO), Geneva.
- JONES, N., HOLMES, R. and ESPEY, J. 2008. *Gender and the MDGs*. Briefing paper 42, September 2008. Overseas Development Institute (ODI), London.
- KALU, C. and RACHAEL, E. 2006. Women in Processing and Marketing of Non-timber Forest Products: Case Study of Benin City, Nigeria. *Journal of Agronomy* **5**(2): 326–331.
- KAPLINSKY, R., and MORRIS, M. 2000. *A handbook for value chain research*: IDRC, Ottawa.
- KASSA, H., B. TEFERA and G. FITWI. 2011. Preliminary value chain analysis of gums and resins marketing in Ethiopia: Issues for policy and research. Policy Brief. CIFOR. Bogor. Indonesia.
- LEMENIH, M., ABEBE, T. and OLSSON, M. 2003. Gum-resins from some Acacia, Boswellia and Commiphora species and their economic contributions in Liban zone, Ethiopia. *Journal of Arid Environment* **55**: 465–482.
- LEMENIH, M. and KASSA, H. 2010b. Socio-economic and environmental significance of dry land resources of Ethiopia and their development challenges. *Journal of Agriculture and Development*: 71–91.
- LEMENIH, M. and KASSA, H. 2010a. *Opportunities and challenges for the production and marketing of gums and resins in Ethiopia*. Working Paper, CIFOR, Bogor, Indonesia. 88 p.
- MICKELS-KOKWE, G. 2006. *Small-scale woodland-based enterprises with outstanding economic potential: the case of honey in Zambia*. CIFOR, Bogor, Indonesia, 82 p.
- MULENGA, A.M. and CHIZHUKA, F. 2003. *Industry profile of honey in Zambia*. Lusaka (mimeograph).
- NEUMANN, R.P. and HIRSCH, E. 2000. *Commercialisation of Non-Timber Forest Products: Review and Analysis of Research*. Center for International Forestry and Research, Bogor, Indonesia.
- SCHRECKENBERG, K. and MARSHALL, E. 2006. Women and NTFPs: Improving income and status? In: MARSHALL, E., SCHRECKENBERG, K. and NEWTON, A.C. (eds.) *Commercialization of non-timber forest products: Factors influencing success*. UNEP-WCMC, Cambridge. 136 p. Available at: <http://quin.unep-wcmc.org/forest/ntfp/gender.cfm?displang=eng>.
- SEWA. 2000. The gum collectors: Struggling to survive in the dry areas of Banaskantha. SEWA, Ahmedabad, India.
- SHACKLETON, C.M. and SHACKLETON, 2004. The importance of non-timber forest products in rural livelihood security and as safety nets: A review of evidence from South Africa. *South African Journal of Science*: 658–664.
- SHACKLETON, S.E. and SHACKLETON, C.M. 2005. The contribution of marula (*Sclerocarya birrea*) fruit and fruit products to rural livelihoods in the Bushbuckridge district, South Africa: Balancing domestic needs and commercialisation. *Forests, Trees and Livelihoods* **15**(1): 3–24.
- SHACKLETON, S.E. and SHACKLETON, C.M. 2010. Exploring the role of wild natural resources in poverty alleviation with an emphasis on South Africa. In: HEBINCK, P. and SHACKLETON, C.M. (eds). *Reforming land and resource use in South Africa: impact on livelihoods*. Routledge.
- SHACKLETON, S.E., SHANLEY, P. and NDOYE, O. 2007. Viable but invisible: Recognising local markets for non-timber forest products. *International Forestry Review* **9**(3): 697–712.
- SHACKLETON, S.E., CAMPBELL, B., LOTZ-SISITKA, H. and SHACKLETON, C.M. 2008. Links between the local trade in natural products, livelihoods and poverty alleviation in a semi-arid region of South Africa. *World Development* **36**(3): 505–526.
- SHILLINGTON, L.J. 2002. Non-timber Forest Products, Gender, and Households in Nicaragua: A Commodity Chain Analysis. M.Sc. thesis, Virginia Polytechnic Institute and State University, Virginia. 103 p.
- UNEP World Conservation Monitoring Centre (WCMC). 2009. Available at: <http://quin.unep-wcmc.org/forest/ntfp/gender.cfm?displan>.
- WILLIAMS. P.J. Undated. NGOS, women and forestry activities in Africa. Unaslyva, 171. FAO, Rome. Available from: <http://www.fao.org/docrep/u7760e/u7760e08.htm>.
- WORLD BANK. 2007–10. World Bank's gender and equity plan. World Bank, Washington DC.
- WYNBERG, R., LAIRD, S., SHACKLETON, S., MANDER, M., SHACKLETON, C., DU PLESSIS, P., DEN ADEL, S., LEAKEY, R.R.B., BOTELLE, A., LOMBARD, C., SULLIVAN, C., CUNNINGHAM, T. and O' REGAN, D. 2003. Marula commercialisation for sustainable and equitable livelihoods. *Forests, Trees and Livelihoods* **13**(3): 203–215.