



**Report on the Dynamics of Commercial Wood  
Products Trade in the Wara Wara Mountains of  
Koinadugu, Sierra Leone.**

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July 2011

This report was prepared for the USAID funded Promoting Agriculture, Governance and Environment (PAGE) program in Sierra Leone.

This report was prepared by Energy for Opportunity (EFO) with the assistance of PAGE. The contents of this report are the sole responsibility of EFO and can in no way be taken to reflect the views of PAGE.

This report provides an analysis of the research conducted in the Wara Wara Mountain region during June-July 2011.

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## Acronyms

ABC	-	Agriculture Business Centre
CRS	-	Catholic Relief Services
DDR	-	Disarmament Demobilization and Reintegration
EFO	-	Energy For Opportunity
FAO	-	Food and Agricultural Organisation
FLEGT	-	Forest Law Enforcement Governance and Trade
GoSL	-	Government of Sierra Leone
IUCN	-	World Conservation Union
Le	-	Leones
NaCSA	-	National Commission for Social Action
NTFP	-	Non-Timber Forest Products
NGO	-	Non-Government Organisation
PAGE	-	Promoting Agricultural Governance and Environment
PRA	-	Participatory Rural Appraisal
USAID	-	United States Agency for International Development
WWCF	-	Wara Wara Community Forest

## 1. Introduction

The purpose of this report is to provide a critical analysis of commercial wood products traded in the area surrounding the Wara Wara Mountains of Koinadugu, Sierra Leone. It specifically examines the role and dynamics of such trade in relation to the broader regional and national political economies and its implications for local livelihoods. It also provides some insights into local impacts and perceptions of the Promoting Agriculture, Governance and Environment (PAGE) programme still under development in the Wara Wara Yagala and Wara Wara Bafodia chiefdoms. The forest of Sierra Leone represents a renewable resource if exploited and managed in a sustainable and ultimately provides important subsistence for those living with its confines. However it is important that a balance be found between forest exploitation and forest preservation. Consequently this research project aims to inform PAGE's work with the communities in the Wara Wara Mountains, so that its future interventions can maximise their impact in improving livelihoods in an environmentally sustainable manner.

In this context, it is important to note that the analysis of 'livelihoods' is complex – the term itself is overused, frequently as a vague catch-all term and hence needs to be examined and understood in a critical light. As an example, the Government of Sierra Leone (GoSL) classifies the livelihoods of 77.6% of residents in the north of Sierra Leone as 'Crop Farmers,'<sup>1</sup> and doubtless the vast majority of the population of the Wara Wara would both self-identify and be classed by most state agencies as such. In certain respects, however, this kind of simple categorization presents a narrow and ultimately somewhat misleading perspective of how livelihoods in most of rural Africa actually function. While farming is undoubtedly very important in the Wara Wara chiefdoms, most households rely on a variety of different economic strategies and activities for their subsistence, melding these together in flexible and dynamics ways; a process described elsewhere as a 'productive bricolage.'<sup>2</sup> Recognising this, a variety of recent research projects have demonstrated the important economic role that Non-Timber Forest Products (NTFP) and other non-agricultural economic activities have in the daily livelihoods of communities in the Wara Wara chiefdoms.<sup>3</sup> However these research projects, at the most, make only superficial analyses of the commercial wood products trade, such that our understanding of its operation and socio-economic implications in the Wara Wara (as elsewhere in the country) is very limited. This report, therefore seeks to fill this research gap using new empirical data to specifically examine the production and marketing of: a) timber (for export); b) boards (used in construction and furniture making); c) poles or "sticks" (used for construction); d) firewood (largely sold in town markets), and; e) charcoal (used for cooking and blacksmith work).

The report is structured into six sections. After this **(1) Introduction**, it will discuss the **(2) Research Context** and **(3) Methodology** of the project. Then it will provide **(4) Village Level Descriptions** of the different commercial wood trade dynamics. A specific section on each village is important for the

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<sup>1</sup> Government of Sierra Leone (GoSL) *Poverty Reduction Strategy Paper*. (Government of Sierra Leone, 2008), 44.

<sup>2</sup> Andrew Warren, Simon Batterbury, and Henny Osbahr "Soil erosion in the West African Sahel: a review and an application of a 'local political ecology approach in South West Niger" *Global Environmental Change* 11 (2001): 79-95.

<sup>3</sup> For example see: Marcus Wangel, *Not All Things Equal: Economic Inequalities and Collective Action in Common Resource Management, A Case-Study of Community Forestry in the Koinadugu District, Sierra Leone* Masters Thesis (Uppsala University 2011); Laura Marini *Exploring Indigeneous Knowledge of Biodiversity. Non-Timber Products in Koinadugu District. Sierra Leone a Case Study* (FSCA 2009); PAGE *Sakuta Community: Participatory Rural Appraisal Report* (Promoting Agriculture, Governance and Environment (PAGE): 2010); PAGE *Kamabonkai Community Profile: Participatory Rural Appraisal Report* (Promoting Agriculture, Governance, and Environment (PAGE): 2009).

development of any nuanced and critical understanding of the trade due to its heterogeneous nature. Subsequently the report will then provide an overall **(5) Analysis** of the trade in the Wara Wara, divided into five different woods product categories (i.e. timber exports, boards, poles, charcoal and firewood). The final section will naturally provide a short **(6) Conclusion**.

The research team would like to thank all the research participants from the Wara Wara Mountains who kindly gave their time and contributed information for this project. Obviously this research would not be feasible without their involvement. The team hopes that we are able to repay them in part by providing critical understanding of timber and wood product issues in the Wara Wara, thereby enhancing the positive impacts of future outside interventions. The research team would also like to thank PAGE and the United Nations Food and Agricultural Organization's (FAO) Forest Law Enforcement, Governance and Trade (FLEGT) program for providing funding and making this research possible.

## 2. Research Context

The Wara Wara Mountains are located in the northern Sierra Leonean district of Koinadugu, northwest of the district capital of Kabala. The Wara Wara Mountains cover an approximate area of 85km<sup>2</sup>, crossing the three Chiefdoms of Wara Wara Bafodia, Wara Wara Yagala and Follasaba Dembelia, with the highest peak Kakamba rising to 952 metres above sea level. Historically the Wara Wara Mountains have been the home to the Limba tribe, with Bafodia as their capital. It is reported the Limba migrated to Wara Wara well before the 15<sup>th</sup> century from the Fouta Djallon region of modern-day Guinea.<sup>4</sup> More recently there has also been the migration of Mandingo and Fullah ethnic groups (also from Guinea) into the Wara Wara region, causing its villages to often have a multi-ethnic makeup. In addition to in-migration, however, displacement has also been a significant factor in changing the character of the area's population. Throughout the era of the trans-Atlantic slave trade, for example, many Limbas from the Wara Wara were captured and enslaved,<sup>5</sup> more recently during Sierra Leonean civil war (1991-2001) as the Wara Wara Mountains became a place of refuge for many when the rebels descended upon and attacked Kabala.<sup>6</sup>

The Wara Wara Mountains have been identified as a hotspot site for tourism by government officials and guidebooks alike.<sup>7</sup> This is unsurprising given its scenic beauty, wildlife, cooler climate (relative to the rest of Sierra Leone), rich Limba cultural history, proximity to the relatively well serviced district capital of Kabala and its reasonable travelling time from Freetown. However, increases in tourism and related economic benefits will likely to be slow process for Wara Wara Mountains, as with Sierra Leone as a whole. It is therefore imperative that local livelihoods are enhanced through other means, while still maintaining the integrity of the forests, both for the local ecosystem services that it currently provides and the potential economic wealth it could deliver from future tourism. As noted above, communities in the Wara Wara currently engage in a 'productive bricolage' to

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<sup>4</sup> C. Magbaily Fyle *Historical Dictionary of Sierra Leone* (Scarecrow Press: Toronto: 2006); Susanne LeVert *Culture of the World: Sierra Leone* (Marshall Cavendish 2007).

<sup>5</sup> M E Harvey "Social Change and Ethnic Relocation in Developing Africa: The Sierra Leone example" *Geografiska Annaler. Series B, Human Geography* 53(1971): 94-106.

<sup>6</sup> Michael Jackson *In Sierra Leone* (Duke University Press: London 2004).

<sup>7</sup> Katrina Mason and James Knight *Sierra Leone* (Bradt Travel Guides: Chalfont St Peter 2009); *Satellite News* (2010) "Tourism Minister Takes on his Critics" 5 October 2010.

construct their livelihoods, drawing incomes from a variety of economic activities. Trade in wood products provides an important livelihood for a number of the Wara Wara communities, as well as providing important commodities for local consumption, yet it is important that a balance be maintained between the consumption of such products and the conservation of the forests.

Historically, such productivist and conservationist concerns have existed in significant tension, both within central government, and between local and state interests –in <sup>8</sup>Part of the Wara Wara Mountains – the Wara Wara Hills Reserve (10.4km) - was designated as a forest reserve during the colonial period, although its establishment during this epoch was more likely intended to act as a long-term timber source for the central Government, rather than for the benefit of local communities. In the last couple of years, the USAID funded Promoting, Agriculture, Governance and Environment (PAGE) program has taken a different approach, starting to assist communities around the Wara Wara Mountains to establish “forest co-management” systems to help them to derive greater incomes from their forest resources. This research project naturally feeds into this PAGE program.

The Wara Wara Mountains are part of the Guinea Montane Forest area, which spreads across the border into the Fouta Djallon region of Guinea. The mountains are formed from Precambrian basement rocks, with the predominant granitic rock also containing dolerite, gneiss, schist, and quartzite. Lithosols are the most common soil type in these mountains.<sup>9</sup> The average rainfall of the region is between 1,600 to 2,400 millimetres per year, and most major rivers in West Africa have their origins within the peaks of the Guinean Montane Forest ecoregion.<sup>10</sup> A recent survey by Njala University College researchers, recorded a total number of fifty plant species belonging to twenty-three families in the Wara Wara Community Forests (WWCF).<sup>11</sup> Among the plants recorded, *Afzelia Africana* (name after the Sierra Leonean colony’s first botanist),<sup>12</sup> has been classified as vulnerable by World Conservation Union (IUCN),<sup>13</sup> The two most common species to be harvested for all wood products are (in Limba) *gbenge* (red wood – Latin: *Ficus capensis*) and *yemani* (white wood – Latin: *Gmelina arborea*). The most common trees for export timber harvesting, before a 2009 government export ban, were (in Limba) *Woyoh* (Latin: *Pterocarpus erinaceus*) and *Wonto* (*Afzelia africana*).<sup>14</sup> *Yemani* is an invasive species introduced from India, all the rest are native species.

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<sup>8</sup> P G Munro and G Hiemstra-van der Horst “Conserving exploitation? A political ecology of forestry management in Sierra Leone” *The Australasian Review of African Studies* 32:1 (2011): 59-72.

<sup>9</sup> A C Millington “Reconnaissance scale soil erosion mapping using a simple geographic information system in the humid tropics” in W. Siderious (ed) *Land Evaluation for Land-Use Planning and conservation in Sloping Areas* (International Institute for Land Reclamation and Improvement: Wageningen 1984): 64-81.

<sup>10</sup> World Wildlife Fund and Mark McGinley “Guinean montane forests” in Cutler J. Cleveland (ed) *Encyclopedia of Earth*. Eds. (Washington, D.C.: Environmental Information Coalition, National Council for Science and the Environment 2007). Retrieved July 25, 2011 [http://www.eoearth.org/article/Guinean\\_montane\\_forests](http://www.eoearth.org/article/Guinean_montane_forests)

<sup>11</sup> Abdulai M B Feika and Alhajie H Kamara “Draft report on Forest Inventory of Wara Wara Community Forest” February 2011.

<sup>12</sup> Adam Afzelius; see Adam Afzelius *Sierra Leone Journal 1795-1796* P. Alexander (ed) (Studia Ethnographia Upsaliensia, XXVII, Uppsala: Boktryckeri Aktiebolag [1796] 1967).

<sup>13</sup> Feika and Kamara “Draft report on Forest Inventory of Wara Wara Community Forest”

<sup>14</sup> G. Hiemstra-van der Horst “We are Scared to Say No’: Facing Foreign Timber Companies in Sierra Leone’s Community Woodlands”, *Journal of Development Studies*, 47:4 (2011): 574-594.

### 3. Research Methodology

Research for this project was conducted by nine researchers, two expatriate and seven Sierra Leonean, in June and July 2011. The team has a diverse range of educational and research backgrounds offering the great strengths for analysis and data gathering. Eight of the researchers were involved in gathering field data from the Wara Wara, while a ninth lead the critical analysis of the data. A list of the researchers can be found in Appendix A.

Twenty-one villages, representing all of the established villages along the main Wara Wara forest perimeter, were visited in total. Two of them (Kamkama/Santhia and Kakoya),<sup>15</sup> however, were not involved in any form of commercial wood trade and therefore the analysis here is focused on the remaining 19 villages<sup>16</sup> which were engaged in different forms of commercial wood trade (whether timber, board, pole, charcoal or firewood production). A twenty-second village, Kapongpong, was not visited, because, though lying near the forest perimeter road, it was furthest outside of the forest boundary and previous PAGE reports indicated no commercial wood products trade in the village.

This research project on the Wara Wara is part of a broader research project being conducted by the Energy For Opportunity (EFO) team, which is being co-funded by PAGE and the FAO FLEGT program. The broader research project looks at the wood product trade across the entire Northern and Western Provinces of Sierra Leone. Funding is also currently being sort to expand this research into the Eastern and Southern Provinces in order to achieve national coverage. We would like to emphasize that, while fieldwork in the northern province is currently ongoing, once analysis has been completed in November 2011, we will provide PAGE with a copy of the full report in addition to this focused report on the Wara Wara area, to support a more contextualised understanding of the local wood products trade.

### 4. Village Level Descriptions

This section provides a village level description of different communities on the edge of the Wara Wara Mountain forest across the three chiefdoms of Wara Wara Bafodia, Wara Wara Yagala and Follofaba Dembelia. Specifically it examines what role the commercial wood trade (in timber, boards, charcoal, poles or firewood) plays in local village livelihoods and these trades' links to broader political economies.

The village names of the Wara Wara have a variety of different spellings when written in roman script. For this research we have tried to use either the most common spelling (often on NGO placards in the villages) or the spelling used in previous PAGE reports. There are many twin villages or villages with dual names, this is a product of the multi-ethnic makeup of the region. Often Limba and Fullah (or Limba and Mandingo) towns emerged side by side, gradually developing into contiguous settlements with two distinctive sections which maintain their original names. In such cases both village names have been recorded.

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<sup>15</sup> Kamkama/Santhia and Kakoya; Kakamba/Santhia was the site of a recent PAGE participatory rural appraisal (PRA): see PAGE *Kakamba/Santhia Community Profile: Participatory Rural Appraisal Report* (Promoting Agriculture, Governance, and Environment (PAGE): 2010).

<sup>16</sup> Bafodia, Sakuta, Kasientity, Kayogobay, Kasasi, Madina I, Sunkuniabalia, Semamaya, Yataya/Yagala, Kulumbaya/Madina, Kamasiri, Sambasinaia, Kamabonkai, Katawuya, Khanuka, Affia, and Dogoluya.





Figure 1 - Map of the Wara Wara. Source: DACO / SLIS

Prices of products are given in Leones (Le), the current exchange rate at the time of writing is around Le 4,300 to US\$1. Tree species names are given in Limba and information about their Latin (scientific) names can be found in the Research Context section above.

## Wara Wara Bafodia

### *Bafodia*

Bafodia is the old Limba capital and the current chiefdom headquarter town of the Wara Wara Bafodia chiefdom. There is some limited commercial activity involving wood products in the community, predominantly involving the manufacturing of boards. There is no commercial charcoal or pole making operations in the community, and while firewood is harvested, it is only sold locally within the community.

There are two chainsaw operators operating within the community, one who has been operating for six years, after receiving a chainsaw from the country's Disarmament Demobilization and Reintegration (DDR) program. The second purchased his chainsaw in Guinea two years ago. These operators sell on contract to the community and to non-government organisations (NGOs) who build structures in their community. The demand for their boards is highest during March to April, and for the other months demand is low, when they normally only harvest ten pieces of board during this whole period. People from Bafodia are also involved in harvesting boards from the nearby community of Sakuta, which is about four kilometres away (see below). One of the operators said that business has improved, but the other stated that business had been fluctuating, because of increases in fuel prices and greater competition from other operators. They indicated that they are limited to sales within their community because of bad road conditions, which make transportation to others such as Kabala very expensive. They have also talked and arranged with forestry officials to make small payments during each visit, as they are not able to afford the Le 6 million which is required for the licence and registration fees.

They only harvest and sell white boards (*yemani*), due to the high cost involved in harvesting red boards (*gbenge*), which makes them prohibitively expensive for the community. The prices of the board range from Le 4,000 to Le 15,000 depending on their size and shape. Some community

members purchase boards from the nearby community of Kasientity (see below), as their hand sawn boards are cheaper. The forest around the town contains many timber trees, but timber logging business (for export) has never taken place in the community. The community is surrounded by thick forest cover, as the chainsaw operators tend to go deep into the forest to harvest individual trees for their boards. Operators indicated that, if government lifts the ban on the exportation timber, they plan to talk to and attempt to convince the Paramount Chief to allow them to be involved in the trade, as there are great profits that can be made.

PAGE's intervention into the community evidently has had a substantial impact. A community reserve is being established which includes, sacred, family and communal forests. The idea for this reserve seems to have arisen from the Paramount Chief and elders, after their discussion with PAGE about the impacts of deforestation. Furthermore, the Paramount Chief limits the number of chainsaw owners in his community to avoiding over harvesting and deforestation. However, with the help of forestry officials there is currently some tree planting underway (*Tectona grandis*), and if this proves to be successful, the Paramount Chief will allow for the expansion of the community's board production.

### *Sakuta*

Sakuta has a population of around 500 people living in 80 households. In a recent Masters study, Marcus Wangel argues that in Sakuta there is a high degree of collective action in the preservation of communal forests; an initiative that was driven by the wealthier individuals in the community.<sup>17</sup> This initiative appears to have arisen independently of outside intervention, as forestry officials who visited in 2009 failed to return to help facilitate a tree planting program, while PAGE's program has only just started in the village and, as the chief noted, it therefore is too early to recognise any benefits from it. Nevertheless the community as a whole appeared to have a positive view of the PAGE project.

The only commercial wood products traded in the community were boards, although charcoal is used for blacksmith work. Board production used to be a major activity in the community prior to the war, and according to the chief nearly every man was involved in the trade. At this time, only hand saws were used for harvesting, although this dramatically changed in the post war period with the introduction of chainsaws. After the war, three ex-combatants from their community were trained on how to operate a chainsaw under the DDR program, and one chainsaw was given to the whole chieftom (and was kept in Bafodia). Subsequently, most of the people in Sakuta stopped Board production, feeling unable to either purchase chainsaws or compete with its advantages of speed and improved finished products.

From before the war, the chief had been involved in the board trade, buying locally-produced boards and then selling to Freetown, Makeni, and Kabala. Prior to the war trade was more reliable and he used to do business with a Lebanese man (now deceased) and other people outside the community. However he stopped five years ago due to issues of non-payment by customers in Makeni through which he lost his capital.

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<sup>17</sup> Marcus Wangel, *Not All Things Equal: Economic Inequalities and Collective Action in Common Resource Management, A Case-Study of Community Forestry in the Koinadugu District, Sierra Leone* Masters Thesis (Uppsala University 2011).

At the time of the research the one extant chainsaw was not functioning and therefore no one in the community was currently involved in board trade. The prohibitively high cost of repairing the chainsaw (spare parts have doubled in price in the last couple of years) and the license fees has meant they have been able to resume trading. However, at the time of the interviews, a contractor from Bafodia was present in the community to help build the Agriculture Business Centre (ABC) structure. He is a chainsaw owner, and was also helping the community by harvesting boards to be used in the construction of their houses. Similar to local regulation in other towns, there is a 20% in-kind commission for outsiders harvesting boards, two out of ten boards are to be left with the community. One of these boards is for the chief to be held in trust for community projects the other for the landowner's personal use.

Overall, Sakuta represents an interesting microcosm to examine the impacts of chainsaws in communities in the post-war period. Its introduction dissipated the existing handsaw-based ("manpower saw") board harvesting industry in the community, concentrating the trade into a minority of the population. Yet long-term issues of maintaining the chainsaw caused the trade to be eliminated altogether and for the community to be reliant on neighbouring communities for the harvesting of boards. The chainsaw revolutionised and then destroyed the community's own board harvesting trade.

#### *Kasientity*

Similar to nearby Bafodia and Sakuta, the only wood product trade that Kasientity is involved in is the board trade. There are around ten people the town who are involved in board production. Unlike Bafodia and Sakuta, chainsaws have never been acquired by members of the community and all harvesting is still done by axes and handsaws. This type of business has been operating in the town for many generations and people from surrounding villages, especially Bafodia, are buying from them. Despite the presence of chainsaws in Bafodia, its community continues to buy boards from Kasientity as its board prices are cheaper (Le 7,000 to Le 8000). The demand for this product is high during the dry season due to a fluctuation in construction activity. A tree produces about two to three boards, and they harvest at least 2 to 3 trees per day. The board prices vary, and depend on the thickness of the board, as well as due to rice and fuel price fluctuations. The handsaw owners and harvesters identify the area where the harvesting takes place, and they later talk and arrange with the landowner. There is an arrangement that the landowner should be given either money or twenty-five boards out of one hundred boards that is harvested on their land.

Transportation and access has been a major concern for those trading in boards. Immediately after the war, a middleman used to come into the community to buy and transport the boards with vehicle to Freetown. However, due to the deterioration of the road, people now transport their supplies by foot. Although things have started to improve in the past couple of years as the community has started to voluntarily repair the road and now the occasional vehicle is able to gain access and buy boards.

No officials from the forestry division have apparently ever visited the community. They have only received advice from PAGE that they should not harvest tree from watershed areas (streams, rivers), because of the impacts this has on water supply. There do, however, appear to be some issues of communication between PAGE and the communities, as one respondent told us they do not even know where deforestation is happening and they some not even know the meaning of deforestation

– though they do claim to be greatly concerned about it. Respondents also said that the forest around the community has grown in past few years because, as they cut the bigger sticks to allow the smaller ones to grow to replenish the forests. In fact, as a number of respondents described, landowners will in many cases request the board makers to come to their plots to cut particular large trees in order that others in the understorey (typically of more desired species) may mature more quickly. As such, board production in Kasientity (and likely in other communities as well) is associated with landscape modification, and hence livelihood, impacts beyond those most obvious at first glance. As a result, its interlinkages with various (perhaps seemingly unrelated) other activities and strategies for making a living (or a living space) should be explored carefully in any given community before dramatic changes in land management are decided upon.

### *Semamaya*

The village of Semamaya has mixed population of Limbas and Fullahs of around 500 people.<sup>18</sup> The town is around fifteen kilometres from Kabala. The town is involved in both charcoal and firewood production. Poles and boards are produced on contract bases from people in Kabala, although demand is extremely low. There is only one person in the community who is involved in charcoal production and he was unfortunately not present in the village during the focus group discussions.

The firewood producers are all Limba women and they harvest firewood all year around, except in August when the rains are too heavy. The men, although not physically involved in the trade, are in charge of taking decisions on where, when and how to do production. They women have been involved in this business for a long time. They sell their firewood to people in Kabala and complain that they have to pay a Le 500 fee on their way to revenue officers at a checkpoint. They note the long distances they need to go in order to sell their products and hope for improved roads and transport in future. In Kabala, a bundle of firewood is sold at Le 500 and Le 1,000, based on size and quality, although some days pass where they make no sales.

The respondents showed an area of land that was designated with the help of PAGE to become a forest reserve. The rest of the forest is free for everybody to farm and do their firewood production. Nonetheless, the group claimed that the environmental change cannot be blamed on their activities as they can see heavy forest surrounding their community and therefore assert that deforestation is of little concern to them.

### *Kayogobey*

The village of Kayogobey has a current population of around 300 people.<sup>19</sup> It is not currently involved in any commercial wood product trade. Occasionally people in the village hire chainsaw operators from other villages to cut boards in their property for personal use, but this tends to be very expensive due to operator's fuel and transports costs. This is unsurprising, as a recent study noted, it is a village with fairly widespread economic deprivation.<sup>20</sup> More frequently people from Kayogobey purchase boards from nearby villages at Le 15,000 to Le 16,000 per plank. People from this village have heard about charcoal production and have ideas about going into this business, as they have

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<sup>18</sup> PAGE *Semamaya Community Profile: Participatory Rural Appraisal Report* (Promoting Agriculture, Governance, and Environment (PAGE): 2009)

<sup>19</sup> Wangel, *Not All Things Equal*

<sup>20</sup> *Ibid.*

been told that they are able to earn substantial money from it. However they are not sure about its feasibility due to the distance and lack of transport connections to Kabala. Firewood and poles are only harvested for subsistence use.

### *Kapongpong*

Kapongpong village has a population of about 960 people.<sup>21</sup> It was not visited during this research project as it is further outside the Wara Wara Mountain area and because relevant information was already available from a recent PAGE participatory rural appraisal (PRA). In the PAGE report, commercial board production was lowest ranked livelihood activity, and was only conducted within the community on a contractual basis.<sup>22</sup> This is unsurprising considering its long distance from Kabala, where the main market for boards is. There was no reported firewood, charcoal or pole commercial trade occurring in Kapongpong.

## **Wara Wara Yagala**

### *Kasasi*

The Kasasi village shows how community forestry can be intimately enmeshed in the global political economy, impacted by central government strategies and facilitated through extensive contacts. Although there is only one man in Kasasi involved in harvesting and ripping boards, his case is a particularly interesting one. He owns a chainsaw and has three boys that are working as apprentices under him; two are operators and one carries the logs from the harvesting site to the place that the board making takes place. He is a farmer and started this business in 2007 because he believed that he would be able to generate more income from the board business and raise the living standard of his family.

The board business appears to be quite successful for the man, and is facilitated through his relatively extensive contacts. He is part of the Koinadugu Timber Association operating in Kabala (his sister is also the chairlady of the association) and he is close friends with head of forestry in Kabala. There is an arrangement between the association and forestry that any unlicensed chainsaw owner should pay Le 20,000 monthly to the association chairperson (which the man himself pays), and the chairperson pays the total money on behalf of the chainsaw owners. He also pays between Le 20,000 and Le 30,000 to police at the two different checkpoints he passes through when transporting his goods. He harvests boards both in Kasasi and other communities, after negotiations with their chiefs. The arranged commission for the work is 10% in-kind from the harvest (ie ten out of every 100 boards) for the landowner), although usually the landowner sells his 10% back to the saw operator.

A carpenter in Kabala purchases the man's supply of boards, to make or manufacture furniture, and he also has a customer in Freetown who buys board from him. He normally harvests 10 to 40 pieces of board a day, depending on the machine. If the chainsaw functions well he rips 30 to 40 pieces of boards a day. They always work for six days in a week and rest on Friday. The prices for white and red boards are different. He sells all white boards (*yemani*), regardless of length, for Le 12,000 and all red boards (*gbenge*) for Le 20,000. The prices have increased in recent times, due to increases in

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<sup>21</sup> PAGE *Kapongpong Community Profile: Participatory Rural Appraisal Report* (Promoting Agriculture, Governance, and Environment (PAGE): 2010)

<sup>22</sup> *Ibid.*

fuel and oil costs. Demand for his products is particular high during the dry season when there is a fluctuation in construction activity and over the past years his board business has continued to improve.

He was involved the timber export business after the lifting of the first timber export ban in 2008. It was facilitated though a friend who was then living in Conakry Guinea. He offered to buy ten Sierra Leoneans a chainsaw each to log and pay with the timber for the power saw, and his friend would then sell the timber to a Chinese contact for export. He bitterly complained that he lost exactly four million Leones due to the Government's second timber export ban in 2009. He was naturally frustrated stating that they were given go ahead from government to go and log and then they were taken unawares by the same government suddenly banning the timber business. During the period between the bans he did not have time to recuperate his costs for the chainsaw. He was told a few days before the interview that the ban has been lifted for three months, and that they should transport their stock to Freetown. However the timbers that he had logged before the ban had been destroyed by fire because they were stored in the forest. He believed that if the timber export business resumed, many people would re-enter the business, and lot of cash would flow within Kabala, as prior to the ban there were a lot of timber dealers fronting payments for harvested goods.

#### *Yataya / Yagala*

The population of Yataya/Yagala is around 1,361, spread across about 200 households.<sup>23</sup> It is a twin town, with the Yagala section being home to the Mandingo and the Yatala section being home to the Limba. It is located eight kilometres from Kabala. Firewood production is the most dominant commercial wood activity, followed by charcoal production. Poles and board production is much more limited and only conducted on a contract basis. Recent research by PAGE indicates that these contracts were usually done with government bodies and NGOs involved in post-war community infrastructure reconstruction, such as National Commission for Social Action (NaCSA), CARE and Catholic Relief Services (CRS).<sup>24</sup> Similar to other communities, landowners receive a 20% in-kind commissions from power saw operators harvesting within their land.

Yataya/Yagala, as well as the nearby village of Kamabonkai (see below), have a system of firewood harvesting conducted by the Limbas and Mandingos that is different from all of the other villages. After the men have cleared the farms, the women go into the farm and clear all the big raw sticks and remove their branches. They then pile them under the sun at one corner of the farm to dry. After the drying process they will split these sticks in to firewood. The colour of their own firewood is red and white as they most times use *gbenge* and *yemani* trees to produce their woods. After processing the firewood, they carry their firewood bundles for selling. They used to sell their firewood at Le 200 and Le 300 but more recently they have started selling bundles between Le 500 and Le 1000 in Kabala. They also complained about the Le 500 which they have to pay to the revenue collector and that collectors sometimes seize their firewood if they fail to pay the fee.

Charcoal production in Yataya/Yatala is not large scale compared to firewood production. The trade has just started and those involved find the production process to be somewhat tedious. The

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<sup>23</sup> PAGE *Yagala/Yataya Community Profile: Participatory Rural Appraisal Report* (Promoting Agriculture, Governance, and Environment (PAGE): 2009)

<sup>24</sup> *Ibid.*

charcoal is harvested from felled trees and similar to the firewood producers, the charcoal producers also complained of the Le 500 they pay to council officers as revenue.

There is extensive forest cover in the Yataya/Yatala area and the farmers have had success with using a rotational strategy to enable the young trees to on the previous farm bushes to grow big.. They said there is no community land within their boundaries as all their forests belongs to different families, inherited through the generations. No one has the right to enter into another family bush/forest to do farming or any production activity without the approval of that family head and some family members. There had previously been a land boundary dispute between Yataya and Yagala, although it had recently been settled by PAGE. According to them, they had no dealing with the government on how to use their forests as they owned and control their forests locally. They said that PAGE sometimes sent their staff to teach them on how to manage the forests and noted that they felt very positive about PAGE's efforts to establish protected forest areas in their community.

### *Kamabonkai*

Kamabonkai is a small village of about 120 people and, with the exception of a few Fullahs and Mandingos, the town is largely Limba. It would appear that these Fullahs and Mandingoes are recent migrants to the town, as a recent survey by PAGE in 2009 reported the town to be 100% Limba.<sup>25</sup> Kamabonkai is located on the Kabala-Bafodia road, about eight kilometres from the district capital of Kabala. Boards, firewood, charcoal and poles are traded in the village, but However poles are only traded on a very limited contractual basis, while only one man produces charcoal at a very limited scale.

People from Kamabonkai do not harvest boards themselves, as they do not have a chainsaw and do not engage in hand saw work. Instead chainsaw operators come from Guinea and Freetown to harvest in the community. The agreement, similar to those of other areas, is a 20% in-kind commission (i.e. 20 boards out of every 100 boards) given to the landowner. On a few occasions the operators had absconded with all of the boards without honouring their part of the agreement. Therefore now the first 20 boards produced go to the landowner and then the operator is closely monitored to ensure he does not exceed his allotted 80. A recent PAGE report in 2009 observed that chainsaws had been banned in the community for over five years,<sup>26</sup> and that in 2002, just after the war, commercial loggers came across from Guinea and destroyed a local stream in the area due to the total clearing of its watershed. Nonetheless, it appears that this chainsaw ban is no longer being enforced.

Firewood is the main source of income for the Limba women of Kamabonkai and is harvested in a similar manner to Yataya/Yagala village (see above). They use *wosseh* and *gbenge* trees for the production of firewood, *gbenge* fetching a higher price. After processing, the firewood is transported to Kabala in different size bundles sold at Le 500 and Le 1000 (recently rising from prices of Le 200 and Le 300). Similar to other villages they complained of the Le 500 they had to pay the revenue collector on the way to Kabala. The firewood they produce is of a high quality and has a higher demand than the other types of firewood.

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<sup>25</sup> PAGE *Kamabonkai Community Profile: Participatory Rural Appraisal Report* (Promoting Agriculture, Governance, and Environment (PAGE): 2009)

<sup>26</sup> *Ibid.*;

The Kamabonkai people have a lot of forest around them though they said they have no relationship with government in terms forest management and control. They state that they have their own local forest management techniques and arrangements and find their shifting cultivation practices to be well suited to forest regeneration. They also noted that PAGE is the only organization that has engaged with them recently on the issue of forest management.

#### *Kathawaya*

The village of Kathawaya contains both Limbas and Fullahs, the former being in the majority. Commercially-oriented firewood and pole production both occur in the village.

The women of Kathawaya produce firewood from their farms. They wait for the men to burn the farm, after which the women can get into the farm and collect the wood, transport them into the village on their head. This is reason why their own firewood is different in colour from that of Kamabonkai and Yatala/Yagala villages. Apart harvesting as a by-product of farming, the women of Kathawaya also go into the forest and cut down trees, rip off the branches and allow them to dry under the sun. After the sticks dry up, they split them into wood and carry them to Kabala for selling. Similar to the other villages the prices they sell their firewood bundles at in Kabala are Le 500 and Le 1000. Also similar to other villages, they complained of the Le 500 they always have to pay to the revenue collector on their way to Kabala and how the wood is seized if anyone fails to pay.

The men of Kathawaya told us that they harvest poles but only on contractual basis and mainly towards the start of the rainy season as people have to roof their houses at this time of the year. The consensus among harvesters and other villagers was that the young trees harvested for poles typically regenerate to a similar size in about 1 year. They stated that they do not have chainsaws in the community and therefore they do not produce boards, and suggest that this is one of the reasons why they have a lot of forest cover.

In Kathawaya, there is both community land and family land. The community land is for the community people and every member of the community is free to cut trees for firewood or to hunt animals. Family lands are inherited use of the forest or bush is restricted to the owner family unless they grant permission to others. In general, villagers indicated that the boundaries with surrounding villages are well respected and they have no land conflicts in and around their community.

#### *Kuraykoma*

The village of Kuraykoma is a small settlement only 2.5 kilometres away from Kabala. The main commercial wood trade activity in the village is firewood production, poles are sometimes produced on contract, while in the past there has previously been some board harvesting.

Firewood harvesting is conducted by some of the women of Kuraykoma and has been in operation since before the war. They produce two types of firewood, which are harvested from farm bush and forests (similar to Kathawaya). They generally use *gbenge* and *wossey* for the firewood. Similar to all of the other villages, after harvest, the wood is transported to Kabala for sale, Le 500 has to be paid to revenue collectors at a checkpoint, before bundles of four sticks can be sold for Le 500.

There are no board producers or chainsaw operators in Kuraykoma. Chainsaw operators used to visit the village to harvest timber and boards from their forests. The agreement at the time was that the operators had to pay a small gratuity to the chief and give two out of every ten boards to the



landowner. However operators have not been coming to their village lately as a result of the government ban on timber production.

#### *Khanuka*

Khanuka is a Limba and Fullah town, about seven kilometres north of Kabala along the Kabala-Bafodia road. The village has both charcoal and firewood producers. Production is split along ethnic lines, with the Limbas producing firewood, and the Fullahs producing the charcoal. There is some limited trade in poles and boards, but this is only conducted on a contractual basis.

Similar to other villages, firewood is produced by the Limba women. They harvest firewood from their farms and transport bundles to Kabala for selling. They have to pay Le 500 to revenue collectors, and in Kabala they sell a bag of five sticks of firewood at Le 500. They express their frustration over the labour involved in producing and transporting of their products to Kabala town. Like other firewood sellers in Kabala, they complain of the sporadic nature of business and how some days they fail to sell anything. Firewood production is conducted throughout the year. But production is higher during the dry season. Price also fluctuates, and wood is more expensive during the rainy season due to difficulties with harvesting (Le 500 more). In contrast to the firewood sellers flat rate fee at checkpoints, the Fullah charcoal makers have to pay Le 500 for each bag of charcoal but sell their bags at Le 10,000 each in Kabala. Demand for charcoal is highest during the rainy season.

There is a lot of forest cover around the Khanuka village, despite widespread farming in the community. According to community they do not have any formal relation with the government and its programs; rather they have developed their own local ways of managing their forests.

#### *Facinayah*

Facinayah village is situated along Kabala-Bafodia road, about fifteen kilometres from Kabala. The village produces charcoal, poles, firewood and boards.

Nine people are involved in the pole trade and have been operating since 2001 at the end of the civil war. The harvesting time is between March and April and it is also the period of high demand. The period of lowest demand is between June and September. The poles are only harvested from the *yemani* tree. Vendors come from Kabala to purchase the poles and are responsible for their transportation. In 2010 the price per pole rose from Le 500 to Le 700, and usually they are purchased in groups of 70 to 90 poles (which is the usual amount needed for roofing).

The respondents stated there are state laws governing the use of the forest and that forestry officials occasionally visit to enforce them. However they do not have a government forest reserve in their community. They further stated that the forest cover was the same or even thicker in the area they harvest the poles, as they harvest selectively and when one harvests a *yemani* tree, it regenerates quickly with many new shoots (usually 10-20). This appears to be a reasonable observation, as *yemani* is well known for its coppicing abilities.

Commercial firewood production is conducted by almost every household in the village. Firewood bundles get sold to passing trucks, as well as being carried to be sold in Kabala where it sells for Le 2,000 per head load. They used two methods to harvest: as well as the most traditional methods used by Kathawaya and Kuraykoma villages (see above), they also do *kay-kay* (ring-barking) of trees

and collect the subsequent dead branches. They harvest from *gbenge* and *wosseh* trees and state that they have not witnessed any changes to the environment affecting firewood availability in recent times.

The community has five charcoal producers, who recently started in the business in 2010. Vendors come from Kabala to buy the charcoal, paying Le 8,000 per bag. They harvest in the same area of the forest where people collected firewood and only use wood from the *gbenge* tree for their production. In contrast to the firewood producers, they claim they have witnessed forest cover change, yet – intriguingly, given the contrast with most other communities perceptions – they specifically blame the board producers for this.

There are no actual board producers in town, instead chainsaw owners come from Kabala and make an agreement with the Paramount Chief to harvest in the community. Usually they will harvest between 500 to 1,000 boards, giving ten percent of their production to the Paramount Chief. The people of Facinayah do not receive any benefits from the harvesting, although they do occasionally buy boards from the harvesters at Le 13,000 each. The community states that they have ongoing conflicts with the board harvesters. However the Paramount Chief ignores their complaints. They said the production is an ongoing issue and the producers are always in the bush looking for trees of their choice to harvest. The community respondents stated that there has been significant loss of forest cover and mature bush even though the forestry division officers sometimes come around trying to control their community forests and advising them how they should manage their environment.

### *Affia*

Affia is location about nine kilometres to the north of Kabala. The only commercial wood trade that the people of Affia are involved in is the firewood trade, selling their harvest in Kabala. The business is quite limited and bundles are sold for the usual Le 500 to Le 1,000 amounts.

## **Follosaba Dembelia**

### *Dogoluya / Kabakeya*

The twin settlement of Dogoluya/Kabakeya is in is one of the biggest towns in the region and is where the section chief resides. While there is some limited charcoal and firewood production in town, it is the board trade that Dogoluya/Kabakeya is famous for in the region.

There are about 20 power saws in Dogoluya, generally producing 30-40 boards per workday each however only about 12 of them were effectively in action. The remaining eight are not currently working due to lack of sponsorship and the lack of trusting relationships between some of the vendors and various operators (some of the operators, it is claimed, will sell board orders to other customers if payment is not produced quickly enough, causing supply problems for the vendors). Board production had been existence in in the town prior to the civil war. However then it was only of a very small and sporadic nature. Post-war, with the introduction of chainsaws, the trade boomed in the town, with vendors from Kabala, Makeni and Freetown coming in to buy large quantities of *yemani* boards (400 to 700 at a time). They pay Le 50,000 for each board. All operators are asked to register and obtain licenses for their chainsaws. The registration fee charged by the section chief (on top of forestry fees) is Le 150,000; and they also have to give to the chief three boards out of every

10 boards produced, to be used for community projects. Operators are paid Le 1,500 per board while labourers who transport the boards to the main access road are paid Le 2,000 per board for a one mile trip and 3,000 per board for a two mile trip. These sums are paid by vendors who own the boards.

With respect to the land management practices in the area, producers indicated that the land is not typically divided by production activity, but rather is managed in a multi-use fashion due to the interdependence of the various productive uses: e.g. farm bush clearance and board production wastes are used as inputs for fuelwood production (usually firewood and charcoal, respectively). As well, as in many communities, cattle rearing was noted as a major benefit to charcoal makers and other producers because, as they enjoy *yemani* fruits, they aid in the proliferation of this popular (though almost invasive exotic) tree by spreading its seeds in their dung.

The town also used to be a major centre for export timber production and they complained that the 2009 ban on timber exports had caused them to have massive losses. Timber use to be sold at Le 50,000 per log. While most of them expected that government would lift the ban soon, it had caused them fear of being involved in the timber export business.

#### *Kulumbaya / Madina*

The twin village settlement of Kulumbaya/Madina is an important centre for board production in the Wara Wara. As well, some members of the community also used to be involved in the commercial pole trade on a contract basis with people in Kabala. However they have not been involved in this for the past ten years. There is no commercial charcoal or firewood trade occurring in Kulmbaya/Madina.

The production of boards in Kulumbaya/Madina is a relatively new phenomenon and operates somewhat clandestinely. When the research team turned up to the settlement all of the chainsaw operators initially hid, suspecting that they were police officers. However, they were contacted and alter returned and enthusiastically gave interviews.

There are four chainsaws and eight operators in the settlement. The majority of the operators are young male Guineans, who migrated into Sierra Leone in early 2007 during a ban on timber production in Guinea. One of the operators had been in the business for less than a month, while another had been involved in board production for over 13 years. They produced only *yemani* boards and can produce up to 40 boards on a good day. Vendors who buy the boards come from Kabala, Makeni and Freetown and usually purchase up to 300 to 400 boards per trip, resupplying twice a month. The boards are manually transported from the forest to the main access road by men from the village. The payment varies by distance: Le 3,000 for 1.5 miles, Le 4,000 for 2 miles. Each board is sold for Le 4,000. The chainsaw operators avoid forestry fees for their chainsaws by keeping their activities clandestine. However, at the chiefdom level, the chain-saw owners pay Le 10,000 to Le 20,000 to the chief before harvesting. Then 10% of the harvest is given to the chief, and 20% is given to the landowner.

The community has never been involved in export timber production. However they have heard that good profits can be made from the profits and hope that the government would lift the ban sometime in the near future.

### *Madina I*

The village of Madina I only has three young boys that are being trained in Sunkuniabalia on charcoal production. These three boys are between eight and ten years and use profits made from occasional charcoal bags (2-3 per month) that they sell to pay for their school fees.

### *Sunkuniabalia*

There are both charcoal and board operations occurring in Sunkuniabali. The board trade is limited to a small operation by one man, who harvests for personal use and small sales in the village. The charcoal trade is particularly interesting as it operates under a cooperative system. Three people are involved in the charcoal business with some youths within the village and one nearby village (Madina I) working as trainees. They have noticed that their activity of cutting down bigger trees has allowed the younger trees to grow very fast and they have witnessed an increase in forest area in the surrounding area overall. In recent years, charcoal production has also been coordinated with another interesting initiative. Since the war, the village has managed to enter into fruit production for selling agents with whom they have contact in Freetown. Each year, the charcoal producers are organized to clear certain areas for charcoal burning where expansion of the agroforestry plantations is desired. Then village takes its seedlings, nursed from the produce of the plantation (or the large number of fruit trees in the village) and plants the charcoal area to various fruit tree crops. So far, they say, the business is going well and they are optimistic about the future development path of the village due to their ability to earn cash incomes.

With respect to the charcoal itself, they started this business three years ago, and have people from Kabala and surrounding villages who buy from them. They work together whenever they want to create charcoal, but the produced charcoal at the end is given to one of them on a rotational basis. This arrangement is known as *osusu*. Most of the time they produce ten to fifteen bags of coal. They sell the coal at Le 8,000 (if the person brings a bag) and for Le 10,000 (if they do not bring a bag). They produce two types of coal called *yemani* and *gbenge* coal. The coal producers have a savings scheme, putting aside Le 30,000 every month, and divided this between themselves at the end of the year. Also, every four months, they collective put Le 30,000 into a community development fund. They also have an ambitious plan to rebuild the houses in their town and improve their children's education with the profits they get from their plantations and charcoal production.

### *Sambasinaia*

There is very little commercial wood trade in the village of Sambasinaia. Charcoal production does occur in the village, although apart from the occasional sales to blacksmiths in neighbouring villages, it is almost exclusively for local use. They use to conduct roadside firewood selling before the war, yet they have not yet resumed the trade in the post-war period. Chainsaw operators used to come into the village for harvesting, however this has now stopped since a co-management agreement established with PAGE.

### *Kamasiri*

The village of Kamasiri has some limited trade in commercial wood products. They produce charcoal, although apart from sales to blacksmiths, this is predominantly for household use. In the recent past, chainsaw operators came from Guinea and Kabala, through an arrangement with the Paramount Chief, to harvest boards within the community. The (quite frustrated) community received no

benefits from this harvesting and the chainsaw operators were often cutting family, town bush and community bushes. The Paramount Chief died on 5<sup>th</sup> July 2010, and the new Paramount Chief was only crowned new paramount about one month ago. The community is waiting to see what the new Paramount Chief's approach to the issues will be.

## 5. Analysis

### Timber Exports

Currently there is no export-oriented timber trade occurring in the Wara Wara Mountains (or the rest of Sierra Leone) as there has been a ban on timber exports since 2009. Although at the time of research the government did allow a three month window (beginning in early July 2011) for owners and communities to transport for sale in Freetown the previously harvested timber which had been sitting in limbo since the ban was put in place (piles of timber can be seen randomly around the country).

The roots of the timber ban go back to early 2007 when neighbouring Guinea placed a ban on timber production. Several Chinese companies, then operating in Guinea, crossed in to northern Sierra Leone and started harvesting high value species (mainly *Pterocarpous erinaceous* and *Azelia Africana*). Initial operations – opportunistic harvesting in sparsely populated border areas and smuggling through Guinean ports – presented a relatively localised problem. Within months, however, expansion of the logging deep into northern districts and commencement of shipping operations through Freetown sparked a national crisis. In response to the logging, the government imposed a ban on all timber exports in August 2007 in order to regain control over the forestry sector. The ban was lifted in 2008, with dramatically heavier fees introduced for logging operations and related equipment.<sup>27</sup> However in 2009 the Sierra Leonean Government imposed a second timber export ban, which is still in place. The reasons for this second ban are not entirely clear, although a number of respondents noted that the government wanted was concerned over the serious shortage of domestic lumber that had resulted from large numbers of board producers shifting over to timber production – thereby creating major constraints for the construction industry.

The impacts of this banning and re-banning of timber exports were directly felt in the in the communities of Kasasi and Dogoluya-Madina, where a number of vendors had begun engaging in the timber export trade after the lifting of the 2007-2008 ban. The timber trade was generally conducted by the comparatively wealthier residents of the Wara Wara, those that could afford equipment such as chainsaws and those who had strategic contacts in Kabala, Freetown and Guinea. They made substantial investments in the trade, only to find their business banned again in 2009, causing major financial losses. Overall, the government's inconsistent stance on the timber trade and the rapid and unexpected nature of the bans has caused those involved in the trade in the Wara Wara to become particularly embittered towards the current administration (at least with respect to forestry issues). The ban also indirectly impacted the board trade (discussed below), as after the 2007-8 ban the government dramatically increased in prices for chainsaw licenses and registration.

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<sup>27</sup> See G. Hiemstra-van der Horst 'We are Scared to Say No': Facing Foreign Timber Companies in Sierra Leone's Community Woodlands', *Journal of Development Studies*, 47:4 (2011): 574-594.



Figure 2 - Stockpiles of timber in limbo due to the 2009 export ban.  
Photo taken by: Albert Thoronka

If the ban (on new timber production) is lifted, which most are expecting to happen, there could be a dramatic rise in logging in the Wara Wara. Many reported an interest in being involved in the lucrative trade in future (such as those at Kulumbay-Madina, Bafodia), although no doubt some will be cautious to invest in the trade for fear of future bans. While there was no evidence of the past timber trade having a major impact on the forests of the Wara Wara, it was operating in certain (especially eastern) areas on a limited scale. Out of the all commercial wood products traded in the Wara Wara, it has perhaps the greatest potential impact on forest cover. Particularly, as has historically been the case in Guinea,<sup>28</sup> if the trade is driven by urban and foreign elites who have limited or no interest in ensuring the ongoing integrity of local forests. Already in a number of villages (most notably Kamasiri) outside traders from Freetown, Kabala and Guinea have been able to access village forests for the board trade through deals made with the Paramount Chief. These do not involve any consultation or input from the local communities. If such a practice were to occur in the context of the export timber trade, it could have noteworthy negative impacts on the forest resources and hence community livelihoods, at least in the short to medium term. On the other hand, the trade – if conducted sustainable fashion – could undoubtedly provide a major source of the income for the communities. Naturally, the key challenge will be the development of appropriate governance institutions to ensure the realisation of desired outcomes.

## Boards

The trade in boards used for housing construction and furniture manufacturing has been quite dynamic, especially since the end of the civil war. The creation and maintenance of roads, timber export bans and the diffusion of power saws throughout different Wara Wara communities have all had great impacts. Many of the Wara Wara communities visited had relocated during the 1940s and 50s to be closer to roads linking them to Kabala (i.e Yagala/Yataya, Sakuta, Semamaya).<sup>29</sup> This subsequently allowed board production, and other wood product trades, to move from a

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<sup>28</sup> See J. Fairhead and M. Leach *Misreading the Africa Landscape: Society and ecology in a forest-savanna mosaic*. Cambridge University Press: Cambridge 1996), Chapter 7.

<sup>29</sup> PAGE *Yagala/Yataya Community Profile*; PAGE *Sakuta Community Profile*; PAGE *Semamaya Community Profile*

subsistence and community level activity (which according to respondents had been occurring for many generations) to a commercial activity, with trade links to Kabala, Makeni, Freetown and Guinea. Nevertheless it was not until the introduction on the chainsaw in 2002, after the civil war, that board production peaked in the region.<sup>30</sup> These chainsaws seemed to have largely first appeared as a part of the Disarmament Demobilization and Reintegration (DDR) for ex-combatants and from contacts across the border in Guinea; although they are now regularly purchased from urban centres in Makeni and Freetown.

Villages involved in the board trade can broadly be placed into three categories: 1) those that produce for the local economy; 2) those that just conduct it for outsiders strictly on a contractual basis, and; 3) those that produce for the broader national economy.

For the majority of communities in the Wara Wara, involvement in the board trade is limited to occasional contracts. This can often be for in-village construction projects which are being funded by outside donors or NGOs. Other villages allow chainsaw contractors to come into villages and harvest from their forests. This is usually done on a contract system, (used in other parts of Sierra Leone as well as in Guinea),<sup>31</sup> where the contractor gives an in-kind commission of 10% to 30% of the boards harvested to the landowner and/or the chief. In contrast, however, in the villages of Facinayah and Kamasiri there have been some alarming developments where contractors, under the permission of the Paramount Chief, have been harvesting local forests without compensation to village residents. The local communities and landowners have had no control or input on how the process takes places – meaning that they receive no benefits from the trade and the harvesting, being outside their control, is more likely to occur in an unsustainable fashion.

Interestingly, the villages of Wara Wara Bafodia appear to have created their own localised economy in the trade of boards. There is no direct board trade from these villages to Kabala, probably due to the Wara Wara Bafodia chiefdom's greater isolation in terms of travelling distance and accessibility to Kabala, compared to Follosaba Dembelia and Wara Wara Yagala chiefdoms. Although the production of boards has had long history in the region, particularly in the villages of Sakuta, Bafodea and Kasientity, the introduction of the chainsaw into the region in the post-war era has had some considerable impacts. In Sakuta the introduction of a chainsaw as a part of the post-war DDR to three ex-combatants ultimately destroyed the hand-sawing board trade in the village, which the majority of male inhabitants were previously involved in – they simply found themselves unable to compete. Moreover, the trade in boards has now completely stopped as their own chainsaw is now broken and they now rely on chainsaw harvesters from nearby chiefdom capital Bafodia for making boards. Nonetheless, while Bafodia has two chainsaw operators active in town, it is not able satisfy local demand and many residents purchase cheaper hand-sawn boards from the nearby village of Kasientity, which has never had chainsaws. Overall the introduction of the chainsaw had a dramatic impact, transforming a generations-old economy of hand-sawn board trade in the Wara Wara Bafodia chiefdom.

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<sup>30</sup> Historically, the east of the country, namely Kenema and the adjacent Gola forest were the main sites of timber production in Sierra Leone, with substantial trade occurring there between the 1930s and 1970s.

<sup>31</sup> See J. Fairhead and M. Leach *Science, Society and Power: Environmental Knowledge and Policy in West Africa and the Caribbean* (Cambridge, Cambridge University Press 2003), Chapter 6.



Figure 3 - Boards being exported from Dogoluya/Kabakeya.  
Photo taken by Albert Thoronka

The villages of Kulumbaya/Madina, Dogoluya/Kabakeya and Kasisi are involved in fairly high volume board trade with urban centres such as Kabala, Makeni and Freetown. Essential to the trade is the use of chainsaws. Dogoluya/Kabakeya has the largest trade by due to this prominence they have to pay a number of fees associated with their trade, and particularly with the use of chainsaws. Harvesting in Kulumbaya/Madina is a much more recent practice, fees are paid to chiefs. However these operations are essentially clandestine to avoid paying forestry fees. In Kasisi only one man operates and is able to reduce the fees paid for operating his chainsaw and business through his contacts in the Kabala Timber Association. None of the chainsaw owners paid the full Le 6 million that they are officially supposed to pay for the licensing and registration, bringing into question the effectiveness of the post-timber ban laws and policies.

### **Poles**

There is very limited trade in poles in the Wara Wara. This is perhaps unsurprising given that the construction market in Kabala is much more limited than in other district capitals such as Freetown, Bo, Kenema and Makeni. The only village to be involved in the trade in any substantial manner was the village Facinayah, which specializes in selling poles to the Kabala market. They have nine people involved in the trade and appear to sell a reasonable volume of poles throughout the year. All the other Wara Wara villages' involvement in the commercial pole trade is limited to small contracts with NGOs for minor construction work.

### **Firewood**

The commercial firewood trade is almost exclusively conducted by Limba women. More than half of the villages visited in the Wara Wara Mountains area were involved in the firewood commercial trade in some form. A variety of techniques are used in the harvesting of firewood; collecting from farms, harvesting from forests and the occasional ringbarking of trees. From observations it appears that firewood trade has little or no impact on the overall forest cover in the Wara Wara. These observations are in-line with recent empirical studies that indicate that firewood harvesting



generally has little or no impact on forest cover, contrasting with previous historical perceptions, particularly during the 1970s, of fuelwood harvesting as an environmentally destructive practice.<sup>32</sup>



Figure 4 - Women in Kathaway carrying their firewood.  
Photo taken by Aiah Wurie Kembey

The firewood trade represents an important source of income for women and households in the Wara Wara. Money raised from this trade generally contributes to household food items and children's school fees. However it is fairly labour intensive work and the women often have to travel long distances on foot to Kabala to sell their bundles, as this is where the main firewood market exists. Bundles are generally sold between Le 500 and Le 1000, although sales are unreliable and women frequently have days when they sell no produce, though firewood producers from Yagala/Yataya and Kamabomkai seem to have fewer sales issues due to their superior firewood produced from a different harvesting technique. A major issue brought up by all communities involved in the trade was the Le 500 they have to pay to revenue collectors at a police checkpoint. They have to pay this irrespective of whether they are able to sell their bundles or not, and non-payment ultimately results in the confiscation of their firewood produce. The Le 500 is promoted as going towards community development projects, although it is unclear how and if this is happening (and seems far more than a little unlikely). Considering the small profits in the trade and the intense labour (both for harvesting and travel) involved in the trade, the fee appears to be overly burdensome.

## Charcoal

Charcoal production is present in a number of communities in the Wara Wara Mountains. However, for the most part the trade is very limited in each community, mostly for blacksmith work and some community consumption. Its trade as a commercial commodity in Kabala appears to be a much more recent phenomenon and seems likely to expand more in future. The village of Facinayah has just started commercially trading charcoal in the last couple of years, Madina I seems likely to soon be producing and selling charcoal, while Kayogobey has indicated it has interest in joining the trade in

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<sup>32</sup> J. Ribot 'A history of fear: imagining deforestation in the West African dryland forests' *Global Ecology and Biogeography* 8(1999):291–300; G. Leach and R. Mearns *Beyond the woodfuel crisis: people, land and trees in Africa*. (London: Earthscan; 1988); Greg Hiemstra-van der Horst and Alice J. Hovorka 'Fuelwood: The "other" renewable energy source for Africa?' *Biomass and Bioenergy* 33 (2009) 1605 – 1616.

future. Similar to firewood trading, charcoal vendors have to pay fees at revenue collection checkpoints on the way to Kabala, and generally bags are sold between Le 8,000 and Le 10,000. Occasionally vendors will come in and buy charcoal direct from the villagers.

Charcoal production and trading from the village of Sunkuniabalia is an interesting case and could act as an excellent model for other villages. They operate under a cooperative system, employ apprentices (even those from neighbouring villages) and have developed a system that improves their plantations and allows for quick forest regrowth. They put some of their profits towards a community development fund and offer buyers a Le 2,000 discount if they bring their own bag. They have only been in the charcoal trading business for around three years, yet have already turned it into a successful business that assists the entire community. Their use of a community development fund, appears to be an approach which could complement PAGE's village savings schemes.

## 6. Conclusion

Over the last decade there has evidently been a great changing dynamic in the wood products trade in the Wara Wara Mountains region of Koinadugu. It has been affected by a variety of (formal and informal) laws and fees at local, chiefdom, district and national levels. While the impact on forest cover by the trade appears to be fairly limited at this stage, forest management (perhaps unsurprisingly) appears to be best when villages have a direct stake in the trade and are empowered to negotiate on more even terms with outside traders.

Each of the different products traded has a distinctive profile, benefits, issues and challenges. Trading in timber exports had a very erratic life between 2007 and 2009 in a couple of Wara Wara villages, first boosted by Chinese timber traders and then later stymied by successive government timber export bans. Commercial charcoal and board trading have both increased since the war period, and both appear to be relatively profitable industries and, finally, boards are being traded as far as Freetown and Guinea. Charcoal trading is still limited, yet seems to offer its producers relatively decent returns, and it is likely to expand in the near future. There are, however, issues in some villages where chainsaw operators are able gain forest access for board production without local consent. The commercial trading of firewood as elsewhere in Sierra Leone, is widespread and offers an important source of income for women, though profit margins are small, and even seemingly minor fees can have a substantial impact on the benefits it provides. While poles are the least commercially traded wood item in the Wara Wara, their trade is also likely to increase as Kabala grows and the construction market expands. Overall, the commercial wood trade plays a significant role in the livelihood of most communities living in the Wara Wara. It would be wise for future interventions to recognise its importance and to develop strategies so that communities are able to develop optimal long-term benefits from it; elevating their living standard, while maintaining the integrity of the forest.

## Appendix A – List of Researchers

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## Appendix B – Summary of Village Commercial Wood Product Trade

Village Name	Chiefdom	Wood Products Traded	Price	Fees
Kayogobey	Wara Wara Bafodia	Boards	just purchasing from other towns	
Kapongpong	Wara Wara Bafodia	Boards	contract basis	
Semamaya	Wara Wara Bafodia	Firewood	Le 500 to Le 1000 per bundle	Le 500 (checkpoint fee)
		Charcoal	no information	
		Poles (Sticks)	contract basis	
		Boards	contract basis	
Bafodia	Wara Wara Bafodia	Firewood	small scale	
		Boards	Le 4,000 to Le 15,000 per board	license fees (various)
Kamkama / Santhia	Wara Wara Bafodia	none	no commercial trade	
Kakoya	Wara Wara Bafodia	none	no commercial trade	
Sakuta	Wara Wara Bafodia	Boards	external harvesters	20% to landowner
Kasientity	Wara Wara Bafodia	Boards	Le 7,000 to Le 8,000 per board	25% to landowner
Kasisi	Wara Wara Yagala	Boards	Le 12,000 to Le 20,000 per board	20,000 to 30,000 to police at different check points; 20,000 to the Koinadugu Timber Association per month for powersaw licence; 10% to landowners
		Timber (until 2009)	Le 50,000 per log	Banned
Khanuka	Wara Wara Yagala	Firewood	Le 500 per bundle	Le 500 (checkpoint fee)
		Charcoal	Le 10,000 per bag	Le 500 per bag
		Boards	contract basis	
		Poles (Sticks)	contract basis	
Kamabomkai	Wara Wara Yagala	Firewood	Le 500 to Le 1000	Le 500 (council revenue)
		Charcoal	small scale	
		Boards	external harvesters	20% to landowner
		Poles (Sticks)	contract basis	
Yataya / Yagala	Wara Wara Yagala	Firewood	Le 500 to Le 1000 per bundle	Le 500 (checkpoint)
		Charcoal	Le 8,000 to Le 10,000 per bag	Le 500 per bag
		Poles (Sticks)	contract basis	
		Boards	contract basis	
Kathawayaya	Wara Wara Yagala	Firewood	Le 500 to Le 1000 per bundle	Le 500 (at checkpoint)
		Poles (Sticks)	contract basis	
Facinayah	Wara Wara Yagala	Firewood	Le 2,000 per headload	None
		Charcoal	Le 8,000 per bag	None
		Poles (Sticks)	contract basis	
		Boards	external harvesters	20% to landowner
Affia	Wara Wara Yagala	Firewood	Le 500 to Le 1000 per bundle	Le 500 (checkpoint)
Kuraykoma	Wara Wara Yagala	Firewood	Le 500 per bundle	Le 500 (checkpoint)
		Poles (Sticks)	contract basis	
Kulumbaya/Madina	Wara Wara Yagala	Boards	Le 20,000	Le 10,000 to Le 20,000 + 10% to Chief; 20% to landowner; Le 3,000 to Le 4,000 for transportation
Sambasinaia	Follosaba Dombelia	Charcoal	small scale	
Kamasiri	Follosaba Dombelia	Charcoal	small scale	
		Boards	external harvesters	No committee benefits
Dogoluya	Follosaba Dombelia	Firewood	small scale	
		Charcoal	small scale	
		Boards	sold in bulk for various prices	Le150,000 registration fee; 30% payment to chief
		Timber (until 2009)	Le 50,000 per log	Banned
Sunkuniabalia	Follosaba Dombelia	Boards	small scale	
		Charcoal	Le 8,000 (without bag) Le 10,000 (with bag)	Le 90,000 per year (community fund)
Madina I	Follosaba Dombelia	Charcoal (in future)		