Constraints of the Timber Authority Harvest Permit and Options for Improvement

Report prepared for activities 3.1 and 3.2 for the mid-term review of ACIAR project FST/2016/153 ‘Enabling Community Forestry in PNG’
April 2019

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June 2019

1 Introduction:
This report responds to project activity 3.1 ‘Identify key constraints associated with the current Timber Authority (TA) harvest permit process for clans to access formal timber markets’ and activity 3.2 ‘Identify possible ways to improve the TA process for ecoforestry.’ The methods intended for these activities were;

‘Action research working with selected forest communities, small-scale timber producers and the Papua New Guinea Forest Authority (PNGFA) to identify key constraints to the TA harvest permit and to facilitate improved access to formal timber markets for clan-based forestry operations. The research was to involve field-based group interviews and semi-structured interviews with rural forest communities. The research was to include participant observation of meetings and activities along with detailed discussions with PNGFA. The research was to also include an understanding of the community dynamics, decision-making processes and institutional arrangements in relation to natural forest management, which was to be an input into the development of an alternative model. The findings of the initial interviews were to be discussed in collaboration with staff from the PNGFA Policy Directorate for the review and revision of the TA requirements, including the required documentation and associated costs for communities involved in ecoforestry. There was to be an assessment of what level of costs are appropriate for communities to bear and the role that entrepreneurs can play in helping communities capture the value of their forest resources through access to value-added markets.’

Background information of the TA Harvest Permit
There are five specific arrangements of the TA; TA-01 Domestic Processing; TA-02 Road line Clearance; TA-03 Agricultural and Other Land Use; TA-04 Other Forest Produce (non-timber forest products); and TA-05 Plantation Harvesting. A TA for domestic processing allows a registered ‘forest industry participant’ (FIP) to harvest up to and not exceeding 5,000 m$^3$ over the duration of one year, through selectively harvesting from the natural forest for the purpose of downstream processing (Forestry Act 1991). The Forestry Act defines a FIP, as, ‘Any person engaging in, or intending to engage in, forest industry activities (otherwise than as an employee of a forest industry participant or in the capacity of a common carrier) where the timber or rattan harvested, processed, bought, sold or arranged or procured to be sold or purchased, by that person in a calendar year exceeds – (a) 500 m$^3$ in volume; or (b) in the case of sandalwood timber or rattan – 20,000 Kina in market value.’ A complete description of the requirements for the TA process is presented in Appendix A.

The Forestry Act (1991) does not clearly define the regulations for timber harvests less than 500 m$^3$. The Act implies that individuals can harvest up to 500 m$^3$ per annum for personal use, but not for commercial purposes. The Forestry Act (1991) does not define what qualifies as commercial use versus personal use. This vagueness in the wording has resulted in different interpretations of what the intent is for harvests less than 500 m$^3$. The predominant view in the
PNGFA is that personal use refers to harvesting timber for constructing personal homes, other personal buildings, and for fuel wood. Commercial use refers to the exchange of timber for money and/or other goods, which is predominantly viewed as a violation of the regulations.

2 Methods:
The methods used to conduct interviews with rural forest communities, small-scale timber producers, and non-participant stakeholders are described below.

Site Selection
The rural forest communities selected for interviews were in the Morobe Province on the outskirts of Lae. We visited six forest resource owner (FRO) sites. Of those six sites, four FROs owned their own portable sawmills and the other two did not. The small-scale timber producers that we selected for interviews were also near the city of Lae, as well as in the neighbouring Madang Province near the city of Madang\(^1\). We categorized the small-scale timber producers into two groups; those that only owned portable sawmills; and those that owned portable sawmills and additional wood machining equipment (small-scale manufacturing business).

We also conducted additional interviews with non-participant stakeholders that had expertise in forestry in PNG. In Lae, we interviewed seven professor/teachers from the Timber and Forestry Training College. In Madang, we interviewed four employees of the Foundation for People and Community Development, an ecoforestry focused non-governmental organization (NGO). In Madang, we also interviewed four provincial staff members of the PNGFA. In Port Moresby we interviewed an additional eight PNGFA staff members, a forestry professor from the University of PNG, a conservation and community development NGO representative, and two logging industry representatives. A total of 50 people were interviewed for this research.

Figure 1: Location of research sites

\(^1\) The interviews in Madang were conducted during phase one of this project; ACIR FST/2012/092.
Table 1: Descriptions and number of interviewees

<table>
<thead>
<tr>
<th>FROs and small-scale timber producers</th>
<th>Participants</th>
<th>Interviewees</th>
</tr>
</thead>
<tbody>
<tr>
<td>Forest Resource Owner</td>
<td>6</td>
<td>8</td>
</tr>
<tr>
<td>Sawmill owner only</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>Small-scale manufacturing business</td>
<td>7</td>
<td>9</td>
</tr>
<tr>
<td>Total</td>
<td>19</td>
<td>23</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Non-participant stakeholders</th>
<th>Organizations</th>
<th>Interviewees</th>
</tr>
</thead>
<tbody>
<tr>
<td>PNG Forest Authority</td>
<td>1</td>
<td>12</td>
</tr>
<tr>
<td>Foundation for People and Community Development</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>Timber and Forestry Training College</td>
<td>1</td>
<td>7</td>
</tr>
<tr>
<td>University of PNG</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Partners with Melanesia</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Sociele Generale de Surveillance (SGS)</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Forest Industry Association (FIA)</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>7</td>
<td>27</td>
</tr>
</tbody>
</table>

Interview data collection
The interviews were primarily conducted by the first author, with participation also provided by the second and third authors and a former research forester of the Tropical Forestry and People Research Centre. The initial questions asked of FROs and small-scale timber producers were; their perceptions of the TA; if they followed the TA regulations during timber harvests; and what they disliked about the TA regulations. This was followed up with additional questions related to community dynamics, decision making processes and institutional arrangements. These follow up question were; why people sold their timber; when they typically sold their timber; and where timber/wood products were sold and to whom. The interview format was similar for all interviewees. Hand-written notes were taken by the interviewers during all interviews. The length of the interviews varied between 30 minutes and one hour. At least one non-participant stakeholder was present at all the interviews with FROs and the small-scale timber producers to provide their post-interview perspective to the interviewers.

Data analysis
To address internal validity, we conducted a pattern recognition analysis of the data by arranging the rows of the database to represent the individual participants and the columns of the database to represent the questions asked to the interviewees. When we identified similar responses to interview questions we calculated the percentage of responses relative to the total. We also assessed patterns within the groups by filtering the data for; FROs, saw-miller only, and small-scale manufacturing businesses. We triangulated the interview data by collaborating it with additional evidence in the documents that we collected. Finally, we shared our findings with the non-participant stakeholder interviewees to get their perspectives.

3 Results:
We found that there are numerous constraints in the current TA process, which are acting as a hindrance to FROs desiring to access formal timber markets. We arranged these constraints into two primary categories. The first category was the structure of the TA being an inappropriate fit for most FROs and small-scale timber producers. The FROs typically chose to sell their timber to address immediate monetary needs, that did not match up with the time-
frame of a TA. The small-scale timber producers also tended to operate on a harvest time-frame that did not match the TA structure. In addition, these harvests were typically much smaller than the TA allotment. The second category of constraints we identified was related to the complex bureaucratic requirements and costs of the TA regulations. These requirements and costs often exceeded the human knowledge capacity and financial capacity of the FROs and small-scale timber producers.

Reasons FROs choose to sell their timber
FROs chose to sell timber to obtain cash to be used for five main purposes; school fees; store-bought goods; ceremonies; to build a home; and for Christmas celebrations. School fees were the most common response, being mentioned by 53% of the FROs/small-scale timber producers and corroborated by six of the non-participant stakeholders. This was initially misleading, because the PNG government passed legislation for the Tuition Fee Free (TFF) education policy in 2012 (DOE 2012). The purpose of the TFF policy was to abolish school fees for elementary and primary students, reduce fees for secondary students, and devolve the responsibility of fiscal management from the central government to the local schools and the district administrations. This policy also banned schools from charging additional fees to increase access to education for impoverished families. However, distribution of TFF subsidy funds from the central government to schools were often late or not able to cover all the school’s expenses due to increased student enrolment (Paraide 2015 and Walton 2018). Research on educational attainment in PNG has found that 50% of households with school-aged children had difficulty in sending at least some of their children to school and only a small amount of families did not pay any school fees (Ryan et al. 2017). Interviews with non-participant stakeholders revealed that the schools adapted to the lateness or shortage of TFF subsidies by continuing to charge fees under a different name, such as ‘project fees.’ The PNG Education Plan 2015-2019 projected that parent-paid project fees would range from 145 to 178 Kina per student during years 2016 to 2019 (DOE 2016). An online article by the PNG Education News Website (PNGENW 2018), discussed the increase of project fees in the East New Britain Province for years 2018 to 2020. The fees were increased to 150 Kina for elementary students (Grades 1 & 2), 300 Kina for primary students (Grades 3-8), 1,000 Kina for secondary students (Grades 9-12), and 800 Kina for technical and vocational school students. The article indicated that 60% of the fees were due upon enrolment, with the remainder due by the second term. Interviews with non-participant stakeholders revealed that school enrolment occurred during January. The non-participant stakeholders also explained to us that the term ‘school fees’ is often used to describe all expenses related to school; the actual school fees, project fees, stationary, uniforms, and transportation to school.

The second most common reason that FROs sold their timber was to get money for the purchase of store-bought goods, which was mentioned by 42% of the FROs/small-scale producers. Store-bought goods refer to consumables that FROs cannot provide for themselves, such as clothing, packaged rice, and canned meats. The remaining reasons mentioned by the cases as reasons that FROs sold their timber were ceremonies (21%), home construction (16%), and Christmas celebrations (11%). Ceremonies were typically referred to as weddings and funerals. One of the FROs we interviewed was in the process of building a new home. We were told that the non-lumber home construction materials that he needed to purchase were nails, plywood, metal siding, roofing materials, doors, windows, and window screens. The additional cost to purchase these materials and hire a carpenter was approximately 7,500 Kina. Money needed for Christmas celebrations was for the purchase of food to be shared with family members.
Why the TA structure is an inappropriate fit for small-scale timber producers

We found that the timber harvest volumes of all the portable sawmill owners were substantially smaller than the TA harvest allotment of 5,000 m$^3$. The majority of saw millers produced less than 100 m$^3$ of lumber annually. Assuming a lumber recovery rate of 45%, this equates to less than 225 m$^3$ of logs harvested. Only two of the saw millers that were not also manufacturing businesses produced an annual volume that was greater than 300 m$^3$ of lumber. With a recovery rate of 45%, this equates to less than 670 m$^3$ of logs harvested. One of the FROs we interviewed told us that using the TA harvest permit was problematic because there is an expectation by the FROs that 5,000 m$^3$ will be harvested. If production targets were not achieved, which was usually the case, it resulted in disappointment and often conflict.

Two of the manufacturing businesses owned multiple portable sawmills and were capable of milling much larger volumes of lumber. However, they only conducted harvests at sites owned by individual families to avoid payment distribution conflicts that were common on sites owned by multiple families or clans. We were told that the individual family harvest sites were typically between 20 to 50 hectares and not able to supply 5,000 m$^3$ of logs. We estimated that if a sawmill owner operating one mill could secure an agreement with a family that had forest land capable of supplying 5,000 m$^3$, it would take 1,250 days to complete the harvest and milling, assuming a daily log input of 4 m$^3$. This is well beyond the one-year timeline of the current requirements of the TA and would require more than six portable sawmills to reach the 5,000 m$^3$ production target, assuming 200 operating days per year and 4 m$^3$ of log input per day.

Bureaucratic nature and costs of the TA process

The process requirements for receiving a TA begin with an individual becoming a registered FIP. This requires the creation of a legal business entity, a completed registration form delivered to the Managing Director of the PNGFA in Port Moresby, and an application fee of 100 Kina by way of bank cheque (Forestry Act 1991). The second requirement is for the registered FIP to begin the TA application process. This requires a map and description of the proposed harvest area, the harvest commencement date, the expected harvest volume, a 275 Kina application fee, and the submission of a 20,000 Kina performance bond that is only released after the submission of a harvest completion report and verification that all terms and conditions of the TA were met (NFS 1991a). In addition, the TA application requires a verification of ownership and consent of landowners (Form 165) be completed by every incorporated land group$^2$, or individual having ownership rights over timber or forest products within the proposed harvest area (NFS 1991b). All the Form 165s must be signed in the village where the landowners live and be witnessed by a Village Court Magistrate or Land Mediator. The TA application also requires a Sales and Purchase Agreement (Form 166) be completed and signed by all parties involved in the agreement. (NFS 1991c). After all the required documents and fees have been submitted to the PNGFA Managing Director, the application is processed. For a TA application to be granted, it will have to be approved by the PNGFA Managing Director, the Forest Management Committee of the appropriate provincial forest, the Chairman of said Forest Management Committee, and the Forest Board$^3$. Non-participant stakeholders revealed that the time required to process an application is typically several months.

$^2$ We were told that individuals wanting to be part of an Incorporated Land Group must obtain a valid birth certificate at a cost of 15 Kina, which is an additional financial hindrance for many FROs.

$^3$ The Forest Board oversees the PNGFA and is chaired by the Forest Minister.
The Forestry Act (1991) requires that FIPs operating with a TA make royalty payments to the FROs for all timber harvested. The requirements for Forms 165 and 166 that were discussed above, and the payment of royalties to FROs must occur even if the FROs are the registered FIPs conducting the harvest on their own land. The royalty payment amounts are minimum fixed rates and vary between 10 and 35 Kina (PGK) per m$^3$, depending on the tree species. This is equivalent to $2.97 and $10.40 in 2018 USD using a conversion rate of 0.2970 Kina per 1.0 U.S. Dollar (NFS 2008, BPNG 2018) (Table 2). The timber species in PNG are categorized into four groups, with Group 1 representing the most sought-after species. The fixed-rate royalties have been in effect since 1 March 2008. Prior to this date, the minimum fixed-rate was 10 Kina (PGK) per m$^3$ for all species, which was set by the PNG Forestry Act (1991).

### Table 2: PNG timber royalty rates per m$^3$ (2018 PGK and USD)

<table>
<thead>
<tr>
<th>Group/Species</th>
<th>PGK</th>
<th>USD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group 1</td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Intsia bijuga</em></td>
<td>35.00</td>
<td>$10.40</td>
</tr>
<tr>
<td><em>Palaquium</em> spp.</td>
<td>20.00</td>
<td>$5.94</td>
</tr>
<tr>
<td><em>Dracontomelon dao</em></td>
<td>20.00</td>
<td>$5.94</td>
</tr>
<tr>
<td>Remaining Group 1 species</td>
<td>15.00</td>
<td>$4.46</td>
</tr>
<tr>
<td>Groups 2, 3 and 4 species</td>
<td>10.00</td>
<td>$2.97</td>
</tr>
</tbody>
</table>

We found that all 19 of the FROs/small-scale timber producers had been involved in commercial timber harvests without a TA harvest permit. Only two of the participants had ever acquired a TA and 50% of the participants that were not manufacturing businesses were not even aware of the TA regulations. Those that were aware of the TA regulations indicated that FROs were not concerned about government regulations because they owned the land and would use it in any way they chose. Another common reason given for not applying for a TA was the requirement of the 20,000 Kina performance bond. None of the sawmill operators that were aware of the TA regulations had the financial means to pay the bond. This challenge has been identified by others and included as part of a policy brief to the government (Bun 2012).

**Implication of the current TA system**

We identified numerous constraints in the current TA system that are hindering FROs from accessing formal timber markets. The implication is that the FROs/small-scale timber producer participants have mitigated these constraints by creating and operating in an informal timber market that functions outside the view and regulations of the PNG government. Research has been conducted on this informal timber market simultaneously with research for this report, which share many of the same findings. This research has resulted in completion of paper by Scudder et al. (2019a), titled ‘Addressing small-scale forestry informal markets through forest policy: A case study in Papua New Guinea.’

A related issue to the constraints of the TA, is the current timber royalty system. Research by Scudder et al. (2019b), found that the use of the fixed-rate royalty system has resulted in the real value of timber royalties for different species declining by between 32% and 66% since 1991. This research also found that FROs are currently receiving an average of 5% of the market value of logs harvested in the formal timber market from timber royalties, while the PNG government is collecting an average 32.5% of the market value through log export duties.
The effect of the relatively low share in market value being collected by FROs and the continuously declining real value of the royalties is that FROs have an increased incentive to participate in the informal market, where they can receive between 7% to 16% of the market value for their timber.

**Viewpoints of the non-participant stakeholders**

As of the current draft of this report, we have discussed our findings with 27 non-participant stakeholders. This research is ongoing and will be updated as we gain additional insights. Overall, we did receive recognition from the majority of the non-participant stakeholders that the TA constraints that we identified were issues of importance that should be addressed. Specifically, there was a recognition that the existing TA regulations have contributed to the rise of the informal timber market sector, which is a concern to many non-participant stakeholders. We found that addressing the constraints of the TA are not as simple as revising the existing policies. There are also several other existing issues that act as a hindrance to improving the livelihoods of FROs. We have summarized these issues below.

**Mis-management of royalties and financial illiteracy**

Multiple interviewees told us that within the formal timber market, FROs are often exploited by the landowner agents that they select to represent them in dealings with the PNGFA and the logging industry. These agents are typically selected by their clans because they have a higher level of education than the other FROs of their clan and they are multi-lingual. There are over 800 different languages spoken in PNG, along with a common language referred to as ‘Tok pisin’ and the English language. If the landowner agent is the only person in the clan that can act as an interpreter between the FROs and the PNGFA, they have a unique position of power. We were told that it is a widespread practice of landowner agents to use portions of the clan royalties for their own benefit. When other members of the clan ask where the money went, we were told that common reasons given by landowner agents is that they were robbed or that the Forestry Office kept the money.

We were told that financial education is a challenge in many of the rural communities. Royalties are typically quickly spent on store-bought goods, with no money put aside for long-term needs. Even if the people were interested in saving a portion of their income for future needs, approximately only 20% of the population has a bank account to safely store the money (Bakani 2018). An example that highlights the existence of financial illiteracy is the usurious money lending schemes that we were made aware of. We were told that usurious money lending is prevalent throughout the country both geographically and by income class. Interest rates quoted to us were between 30% and 50% of the loan principle, with loan time horizons typically being between one to three weeks. Some of the interviewees suggested that timber royalties should be invested into a financial instrument on behalf of the FROs that pays them dividends rather than a lump sum so that FROs will receive financial benefits over a longer timeframe. These same interviewees quickly recognized that the challenge of this approach would be selecting a financial manager that all stakeholders would trust to safeguard the investment and disburse the dividends. The existence of a lack of trust between stakeholders was brought up by the majority of interviewees.

**Mis-management of the timber levies**

Timber harvest levies are paid to the PNG government by FIPs conducting logging within the formal market. The levy monies collected are used to fund various
development projects. The types of levies and amount of monies collected varies with each timber harvest agreement. Research by Scudder et al. (2019b) estimated that timber levies collected in 2017 represented approximately 11.6% of the total log export values and totalled approximately 10.5 million Kina. We were told that a typical breakdown of levy expenditure is; 45% for provincial and local-level government (LLG) infrastructure and business development; 17% for reforestation and monitoring; 16% for administrative expenses; 11% for education; 6% for home construction; and 6% for spiritual activities.

Multiple interviewees expressed a concern that there is mis-management of the timber levies occurring. We were told by several interviewees that there are occurrences when levy committees use the levy funds in ways that will benefit the committee members and not the FROs. One example that we heard of in multiple instances was the abuse of the Log Export Development Levy (LEDL). The LEDL was established in 2007 to fund infrastructure development within the districts that timber harvested occurred. The National Newspaper (2017) reported that between 2007 and 2015 approximately 100.6 million Kina had been paid out of the LEDL to various district treasuries on behalf of the representative MPs, but these monies have yet to be acquitted. The lack of acquittals has led to the belief that the monies have been embezzled by those with access to the accounts for their own personal gain.

**Unrecognized economic benefits provided by the logging industry to FROs**

We were told that FROs also receive economic benefits from the logging companies and other private resource extraction companies that operate in rural areas. Some examples that we were given were; infrastructure development and upkeep such as roads, schools, churches, water tanks, and aid posts; increased employment opportunities; the provision of vehicular transportation to FROs for medical emergencies; and providing FROs with free mechanical maintenance of machinery such as chain saws. These are economic benefits that FROs receive that the logging industry is not compensated for and often does not get recognized for by other stakeholders. We were told by multiple interviewees that further reduction in logging industry profits to increase levies or royalties will force the logging industry out of business.

**The need for extension foresters**

A recurring theme that we heard during our interviews with non-participant stakeholders was the need for more extension forestry. We were told that if there was more extension forestry, foresters in the rural areas would be able to provide forestry focused training and management expertise to the FROs. We were told that prior to the Forestry Act (1991), government forestry was decentralized, allowing for more forestry personnel in rural areas. We were told that there were nurseries in each district that would give trees away to the people. The Forestry Act (1991) resulted in the creation of the PNGFA as a centralized management system that unified the 19 provincial forestry departments that were already in existence. We were told that the PNGFA currently does not have the have the funds or resources to put foresters in the rural areas continuously. The challenge this creates is that the PNGFA personnel are not able to gain the trust of FROs and build a working relationship since they are not there every day. One division of the PNGFA that was mentioned as not having adequate funding is the Community Forestry Division. We were also made aware of a Business
Development Division in the PNGFA but were told that this division is more focused on plantations and not native forest management or small-scale forest management.

4 Discussion:
The current TA harvest permit does not appropriately address the needs of the FROs and small-scale timber producers because it does not match the size of small-scale timber harvests currently being conducted, or the immediate monetary needs of the FROs. The volume of logs typically harvested with the portable sawmills is substantially smaller than the TA allotment of 5,000 m\(^3\). The performance bond regulations of the TA are an additional hindrance to most small-scale timber producers because they do not have the financial means to adhere to them. As such, most of small-scale timber producers choose to operate within the informal market. The time required to plan for a TA and get it approved by the government can take several months and does not fit with the FROs planning timeframe, which is usually dictated by the immediate need for cash. In addition, the revenues that FROs would receive from a timber harvest under a TA permit would be much larger than their immediate cash needs. For example, if 5,000 m\(^3\) were harvested and the average payment per m\(^3\) of log was 15 Kina, the total payment would be 75,000 Kina. Less than 15% of the population in PNG has a bank account (Bakani 2018). In the absence of a bank account, the majority of FROs do not have a safe place to store their cash. Furthermore, the FROs would have to wait for the forest to regrow before they could conduct another harvest for their future cash needs. Non-participant stakeholders often described the situation to us as that FROs view their forests as a bank automatic teller machine (ATM) and make a withdrawal (small-scale timber harvest) periodically for immediate monetary needs.

Addressing the constraints of the TA through policy revision alone is unlikely to reduce the participation in the informal sector due to other challenges existing in the formal market system; the declining real value of timber royalties; mis-management of the royalty payments; and mis-management of the timber levies. In the informal market, FROs typically receive a larger payment per unit of timber than they would in the formal market. The FROs are also able to conduct business directly with small-scale timber producers instead of having to rely on the input/advice of landowner agents, the PNGFA, and the industrial logging companies. The immediate payments received in the informal market are also a better match to the FRO’s immediate monetary needs rather than waiting for royalty payments and the assured development projects funded by timber levies that may or may not arrive as promised.

Making the small-scale timber informal market a legal and regulated formal market will likely require substantially increasing the level of extension forestry to rural areas and introducing a simplified small-scale timber harvest permit that matches harvest systems already occurring in the informal market (500 m\(^3\) or less per annum). If informal market participants are going to voluntary move to a formal market system, there will need to be perceived benefits for making the change. Some examples of benefits that could be provided by extension foresters are; sharing of timber market knowledge; forest management training; development of forest management plans; basic forestry related financial training; access to quality seedlings of high-value species or other species of interest to FROs; and connecting FROs with reputable/ethical small-scale timber producers. Extension foresters would also be able to provide assistance with completing the necessary harvest permit applications and related forms. A drastic reduction of the bureaucratic procedural requirements of the application process would be necessary to draw participants out of the informal market.
One challenge to increasing the level of extension forestry is sourcing the funding and the required resources to outfit extension foresters. We were told that extension forestry was much more prevalent in PNG prior to the Forestry Act (1991). We are continuing to research how extension forestry was previously structured and financed to gain a better understanding of if a similar system could be used again. Later versions of this report will be updated to reflect this ongoing research.

5 Recommendations:
We have made the following five recommendations for mitigating the constraints of the current TA system and reducing the participation of the informal timber market sector. This research in ongoing and will continue to revise our recommendations as new findings are made.

- **Introduction of a new small-scale TA for domestic harvesting.** The suggested harvest allotment is for 500 m$^3$ per annum at a given site. The suggested application fee is 28 Kina and the suggested performance bond is 2,000 Kina to reflect the reduced harvest volume.
- **Decentralized application process to reduce processing time.** We suggest that the proposed small-scale TA be processed at the provincial level by the Provincial Forest Management Committees.
- **Increased timber royalties for the proposed small-scale TA.** We suggest that royalties for this specific permit be increased to encourage the participation of FROs and reduce FRO participation in the informal market.
- **Development of a timber sale advertisement system for the proposed small-scale TA.** We suggest that FRO timber sales be publicly advertised at the provincial or district level to registered saw millers to encourage their participation and reduce participation in the informal market.
- **Increased extension forestry.** We suggest that the number of extension foresters be increased for the purposes of: informing FROs about the benefits of the new small-scale TA; assisting the FROs in developing a harvest plan; linking the FROs to a registered miller/manufacturer; assisting the miller/manufacturer with the completion of the application process; ensuring that harvest agreements are upheld and harvesting regulations are followed; proving tree seedlings for re-forestation, and providing forestry based training and education.

6 Conclusion:
The objective of this research was to identify key constraints associated with the current TA harvest permit process that limit FRO’s access to formal timber markets and identify possible ways to improve the process. To identify these constraints, we interviewed a total of 50 stakeholders. We found that the TA processes are structured for the use of industrial logging companies and do not fit the needs of FROs or small-scale timber producers. In addition to the TA constraints, we also identified several other challenges within the formal timber market system; the declining real value of timber royalties; mis-management of royalty payments; mis-management of levies; and the financial illiteracy of FROs. The combination of these challenges has hindered the ability of FROs to improve their livelihoods by participating in the formal timber market and has resulted in many of them participating in the informal market sector. Improving the livelihoods of FROs by assisting them in accessing formal timber markets will likely require addressing all of these issues and would not be accomplished by addressing the TA constraints alone. We recommend that a new small-scale TA be introduced
that better matches the timber harvest occurring in the informal market. For this proposed small-scale TA, we suggest that timber royalties be increased, and that timber sales related to this harvest permit be publicly advertised to increase the participation of FROs and small-scale timber producers. We also suggest that extension forestry be increased to aid in facilitating this system to provide management expertise and training to all stakeholders.
References:


DOE (Department of Education). (2012). Report on the implementation of the Tuition Fee Free Policy. Port Moresby, Department of Education.


NFS (National Forest Service). (1991a). Form 155, Timber Authority for Domestic Processing up to 5,000 Cubic Meters Per Year. Sec. 87, Reg. 159. Port Moresby, Papua New Guinea Forest Authority.


Appendix A: The Timber Authority Process
Appendix A discusses each of the steps required for an individual to receive a TA.

A.1 Registration of Forest Industry Participants
Registration as a forest industry participant is the initial requirement for applying for a TA. Application for registration is stated in Section 107 of the Forestry Act. There are three requirements for becoming a registered forestry industry participant. The first requirement is that the individual applying create a legal entity, such as a business, company, or incorporated association. The second requirement is the completion of a prescribed registration form to the Managing Director of the PNG Forest Service. The third requirement is an application fee of by way of bank cheque. The fee is 275 Kina for PNG Nationals and 550 Kina for foreigners. The application processing typically takes two months to complete.

A.2 Application for Timber Authority
An application for a domestic processing TA is required to be filed by a forest industry participant. The application is referred to by the PNGFA as Form 156 (NFS 1991b). There are seven additional required attachments to the application that are referred to as schedules. Schedule 1 requires that a map and description of the project area be completed. The harvest area on the map needs to be outlined in red. Schedule 2 requires the commencement date that the TA will begin. Schedule 3 requires the expected annual harvest volume, which is not to exceed 5,000 m$^3$. Schedule 4 is the performance bond, which requires the forest industry participant to submit 20,000 Kina to be released on the authorisation of the Managing Director of the PNG Forest Service after the holder of the TA has submitted a completion report and has satisfied the terms and conditions of the TA. Schedule 5 discusses the standard conditions that must be met by the holder of the TA to receive the performance bond monies. These conditions are listed below:

- The holder must maintain the validity of their registration as a forest industry participant.
- The holder must not exceed a harvest volume of 5,000 m$^3$.
- The harvest area must exist within a 10-kilometre radius.
- If the holder applies for another TA, they must disclose the existence of any previous TAs.
- The holder must not export any of the timber harvested under the TA.
- The holder must follow the PNG Logging Code of Practice and comply with the key standards of selection logging.
- The holder is not allowed to make food gardens, hunt, or fish within the project area or areas adjacent to it.
- The holder must not fell, cut, damage, or remove; any trees declared as reserve trees under Section 4 of the Forestry Act, any species of trees or plants specified or marked by the landowners in accordance with the Sales and Purchase Agreement, and any timber or other forest products existing within specified cultural areas, burial grounds, gardens, or other reserve areas in accordance with the Sales and Purchase Agreement.
- The holder must make payment for the timber harvested, to the landowners as royalties and to the PNGFA as levies. The royalty payments to the landowners must be made monthly and be based on the log scale recordings.
- The holder must construct all roads and bridges required for the operation and maintain them during the operation.
- The holder cannot charge the public for using these roads and bridges.
• The holder must not erect any buildings or fixtures within the project area without consent of the landowners.
• Any buildings or fixtures that are erected within the project area must be removed within 90 days from the expiration or cancellation of the TA.
• All the timber harvested must be scaled and recorded in accordance with direction given by the Managing Director of the Forest Service or in accordance with PNGFA’s directions for log scaling.
• The holder must carry out all the harvest operations and not sub-contract the work other than by the employment of individual contract workers on piece-rates.

Schedule 6 discusses the royalty payments that the holder agrees to pay the landowners, which must not be less than those required by the National Forest Service. The minimum required royalty rates vary by species and are categorized into four groups, with group 1 representing the most sought-after export species. Within group 1, three tree species have distinct royalty rates; *Intsia bijuga* (Kwila) is 35 Kina per m$^3$, *Palaquium* spp. (Pencil cedar) is 20 Kina per m$^3$, and *Dracontomelon dao* (Walnut, PNG) is 20 Kina per m$^3$. The remaining group 1 species have a fixed-rate of 15 Kina per m$^3$. All the remaining species in groups 2, 3, and 4 have a fixed-rate of 10 Kina per m$^3$. These fixed-rate royalties have been in effect since 1 March 2008 and are detailed on Form 221 (NFS 2008). Schedule 7 lists any additional requirements made by the Provincial Forest Management Committee. In addition to application of the timber authority, the forest industry participant is also required to submit two additional forms to the Managing Direction of the PNGFA. These are discussed in sections A.21 and A.22.

**A.21 Timber Authority Verification of Ownership and Consent of Landowners**

The verification of ownership and consent of landowners is listed as Form 165 (NFS 1991c). This form needs to be filled out by every clan agent, incorporated land group, or individual having ownership rights over timber or forest products within the proposed harvest area. This form must be signed in the village where the landowners live and be witnessed by a Village Court Magistrate or land mediator. Everyone that signs Form 165 needs to be given a copy of the application for the TA.

**A.22 Sales and Purchase Agreement**

The sales and purchase agreement is listed as Form 166 (NFS 1991d). This form is essentially a sales contract that lists the names of all parties involved in the agreement and the terms of the agreement. This form is divided into four sections or Schedules. Schedule 1 requires all the landowners to provide their names and signatures. Schedule 2 requires a map diagram of the clan area with the clan boundary in red and any cultural areas to be excluded from the harvest outlined in green or blue. Schedule 3 lists the agreement on royalty payment amounts, which cannot be less than those required by the National Forest Service. Schedule 4 is a list of any excluded areas if they cannot be shown on the map.

**A.3 Additional Documents related to the Timber Authority**

After the FIP has submitted the TA application, performance bond, and the other required documents, additional actions occur within the PNGFA. If the Managing Director of the Forest Service is satisfied with the application, they will refer the application to the Forest Management Committee of the appropriate Provincial Forest on Form 168 (NFS 1991e). If the Provincial Forest Committee is not satisfied with the application the forest industry participant will receive a notice of rejection on Form 169 (NFS 1991f). If the Provincial Forest Management Committee is satisfied with the application, they will send a recommendation to the Chairman of the Committee on Form 170 (NFS 1991g). The Chairman of the Committee
then sends a notice of intention to grant a TA to the Forestry Board on Form 171 (NFS 1991h). If the Forestry Board gives their consent to grant the TA they give notice of their consent to the Chairman of the Committee on Form 172 (NFS 1991i). The Chairman of the committee will then notify the forestry industry participant applicant that a TA has been granted to them on Form 155 (NFS 1991a). At any time after the TA has been granted to a forest industry participant and it is found that the holder of the TA has been convicted of an offense against the Forestry Act or a law other than the Forestry Act, the Chairman of the Committee sends notice of a cancellation of the TA to the holder on Form 173 (NFS 1991j).