



Supplying Legal Lumber to the Ghanaian Market

Options and Chain of Custody
Procedures

Richard Gyimah



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Tropenbos International Ghana

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LIST OF ACRONYMS

| | |
|-------|--|
| AM | Artisanal milling |
| CoC | Chain of Custody |
| CRMC | Collaborative Resource Management Centre |
| CSM | Chainsaw milling |
| dbh | Diameter at Breast Height |
| EU | European Union |
| FC | Forestry Commission |
| FC-HQ | Forestry Commission Headquarters |
| FLEGT | Forest Law Enforcement Governance and Trade |
| FSD | Forest Services Division |
| GoG | Government of Ghana |
| LAS | Legality Assurance System |
| LMCC | Log Measurement Conveyance Certificate |
| LRMCC | Logging Residue Measurement Conveyance Certificate |
| MLNR | Ministry of Lands and Natural Resources |
| MRMCC | Milling Residue Measurement Conveyance Certificate |
| MoP | Manual of Procedures |
| TBI | Tropenbos International |
| TIDD | Timber Industry Development Division |
| TRAU | Timber Rights Allocation Unit |
| TUC | Timber Utilization Contract |
| TVD | Timber Validation Department |
| VAT | Value Added Tax |
| VPA | Voluntary Partnership Agreement |
| WTS | Wood Tracking System |

PREFACE

Ghana has entered into a Voluntary Partnership Agreement (VPA) with the European Union to supply only legal wood products to the European Union market and to the domestic market. A crucial success factor of the implementation of the agreement is a chain of custody system that makes it possible to trace any wood product on the market to its source in the forest. Serious efforts are on-going to design a chain of custody system for wood products from conventional producers.

Supply of legal timber to the domestic market, however, has been very challenging. The bulk of the supply has been from chainsaw milling which has been banned since 1998. In place of the banned chainsaw milling, Ghana has proposed the concept of artisanal milling to supply legal timber to the domestic market. Different models (options) of the artisanal milling concept are being considered but it is not clear how the different models will lend themselves to a chain of custody system which could aid strict monitoring and enforcement of legality.

This document is a response to this need. It outlines how forestry and private operators (loggers/millers/wood processors) will document and keep track of the flow of wood through the various stages of the domestic timber supply chain. Besides the supply chain options, the document also describes procedures and work instructions that may be put in place to ensure that wood products can be traced throughout the supply chain.

ACKNOWLEDGEMENTS

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We gratefully acknowledge the critical review provided by Messrs K.A. Adam, (Dr.), Joseph Boakye, Edward Obiaw, Kyereh Boateng (Dr.), K. S. Nketiah and Robert Simpson and Mesdames Marieke Wit and Sophie Lemaitre.

Mr. Bossman Owusu did the final layout and editing for the publication, for which we are very grateful. We also acknowledge the contributions of the project team and stakeholders who painstakingly piloted the system.

INTRODUCTION

Background

Supply of illegal timber to the domestic market has become one of the main forest governance issues in Ghana today. Discussions on chainsaw milling have become an important part of the European Union (EU)-Ghana Voluntary Partnership Agreement (VPA) since the country cannot fully meet the legality assurance system (LAS) of the agreement without adequately addressing supply of illegal timber to the domestic market. As matter of fact, the VPA concluded with the EU emphasized that the LAS must extend to the domestic market which makes it binding on Ghana to develop systems that will ensure that legal timber is traded on domestic market.

In 2007, Tropenbos International (TBI) in partnership with the Forestry Research Institute of Ghana (FORIG) and Forestry Commission (FC), with support from the EU commissioned the project *“Developing alternatives for illegal chainsaw milling (CSM) through multi-stakeholder dialogue”* to address the problem of illegal CSM in Ghana. This project which constitutes phase 1 of the EU chainsaw milling project is expected to end in March 2013. Phase 2 of the project which began in 2011 aims at supporting the integration of legal and legitimate domestic market into the VPA.

Following the implementation of the project phase 1 in which the drivers of chainsaw milling was extensively studied, TBI concluded that CSM is increasing because (1) the high demand for lumber on the domestic market is not being met from sawmills and (2) CSM provides livelihood support to a wide range of local people and thus plays a significant role in rural economies. Based on these findings, a domestic lumber policy was formulated through a multi-stakeholder discussion as one of the first steps to deal with the unmet demand for legal lumber on the domestic market. The policy however hinges strongly on giving opportunity to artisanal millers to also produce lumber for the domestic market, alongside the conventional millers. The problem however has been how to get legal logs to the artisanal millers since most of the resource is now in the hands of forest concession holders who invariably sell to the conventional millers.

To make logs available to artisanal millers, TBI Ghana sought to implement a series of activities to link communities to timber felling right holders to produce legal lumber to the domestic market. The action is part of the broader ACP-FLEGT Support Programme (*The Forest Law Enforcement, Governance and Trade Support Programme for African, Caribbean and Pacific Countries*); a collaborative effort amongst the Food and Agriculture Organization of the United Nations (FAO), the European Commission (EC) and the African, Caribbean and Pacific Group of States (ACP) to address forest law enforcement, governance and trade issues in ACP member countries.

The objective of the project is to develop and pilot systems for linking local communities with forest timber felling right holders to produce legal lumber for the domestic market. The expected outputs include artisanal milling models to demonstrate the potential of artisanal milling in addressing the illegal lumber supply to the domestic market and a Wood Tracking System for the domestic timber market.

It is against this background that this document has been prepared. It outlines potential supply chain options and a wood tracking system for the domestic market. Particular emphasis is placed on artisanal milling as a new concept to complement the efforts of conventional sawmills in the supply of legal lumber to the domestic market.

Artisanal Milling Concept

An agreed definition for artisanal milling based on stakeholder consultation is indicated in Box 1. The definition takes into consideration the following criteria:

- Who qualifies as an artisanal miller
- Scale of operation
- machinery type and efficiency
- target market
- location of activity and milling as a type of wood processing activity
- source(s) of raw material

Box 1: Definition of Artisanal milling

"Artisanal milling is small-medium scale milling of timber from specified legal sources by a trained, certified, registered and licensed Ghanaian artisan, using licensed mobile sawmilling equipment that excludes any form of chainsaw machines capable of recovering at least 50% of dimension lumber from logs for the domestic market only. This may be processed in-situ or ex-situ"

From this definition, Artisanal Milling (AM) as a concept is not entirely new in the forestry sector at least, in terms of scale of operation and the target market. AM has considerable potential to reduce poverty through the creation of rural forestry enterprise and, also provide legal lumber to domestic markets scattered across the nation. There is a supply gap in the quantity of wood demanded on the domestic market and that supplied from legal sources thereby causing illegal lumber supply to the domestic market. Therefore, a policy option that gives green light to AM to help address the illegal lumber supply to the domestic market is laudable. However, the concept needs to be understood and practiced in the context of existing legal timber regime of Ghana in order to ensure standardization of procedures and, also fit into the regulatory framework of the forestry business processes particularly as they relate to domestic timber market.

Furthermore, AM concept needs some clarity in legislation that allows access to raw materials, the acquisition of equipment, and the right of existing timber felling right holders to renew, transfer and partner their holdings with

communities and artisanal millers. As a new policy strategy to be adopted, there is also the need to draw inspiration and lessons from other countries in which such concept has been practised over a considerable period.

Artisanal Milling in the Context of Ghana's VPA Legality Regime

One of the key requirements of the Voluntary Partnership Agreement (VPA) between Ghana and the EU under the Forest Law Enforcement, Governance and Trade (FLEGT) action plan is the establishment of a Chain of Custody (CoC) or a Wood Tracking System prescribed in the VPA Legality Assurance System (LAS). The CoC is required to cover both the export and domestic market.

The AM concept forms an integral part of the domestic market supply chain. The passage of the new Timber Resources (Legality Licensing) Regulations, 2012 (L.I. 2184) has legislated that:

- a timber product is legally produced if it has been checked in accordance with the Wood Tracking System prescribed by the FC, and
- conforms to the definition, principles, standards, and criteria set out in Ghana's definition of legal timber as prescribed in the VPA;
- a person shall not (a) export from Ghana; or (b) distribute for sale on the domestic market a timber product without a licence issued by the FC

Therefore, a Wood Tracking System (WTS) that provides a mechanism for tracing forest products from its source, usually the forest, through the production to the point of sale or export of the final product is very critical for the implementation of the L.I. 2184. In order to carry out its mission of monitoring and controlling all wood flows under the VPA, the FC has established a control process to cover all identified timber flows along a supply chain. This process chain will rely on a WTS to establish a computer-based CoC with provision for manual interfaces where necessary.

Record keeping and documentation by the various data custodians (i.e. forestry regulators and private operators) along the supply chain is therefore very important for the control and verification of a functioning CoC. To ensure effective monitoring and supervision of this CoC, FC should undertake appropriate field staff planning and deployment. Furthermore, FC should encourage the concerned trade association to practice self-regulation.

Procedural guideline that outlines how forestry regulators and private operators (loggers/millers/wood processors) will document and keep track of the flow of wood through the various stages of the domestic lumber supply chain is necessary. This document briefly describes procedures and work instruction that may be put in place to ensure that wood materials can be traced through the domestic lumber supply chain with particular reference to artisanal milling.

In order to implement a secure chain of custody under the VPA, especially for the domestic market there should be a mechanism to identify and track forest products from their source to point of sale or distribution, preventing illegal material from mixing with legal material and also ensuring proper record keeping. This procedural guideline further covers the development of a system to identify and track timber within transformation points and sources of the timber identified for the domestic market. The aim of the CoC guideline includes elaboration of the **minimum processes** which domestic market operators must adopt during conversion, processing and manufacturing in order to:

- identify the timber, ensure it is tracked throughout the conversion or manufacturing process;
- generate supporting data and information which are provided in a timely manner to the appropriate FC authority in order for this authority to be able to ensure the legality of the timber within the processing chain is maintained – thereby facilitating the issuance of a legality license.

Schematic Description of Timber Flows Identified under the VPA Legality Regime

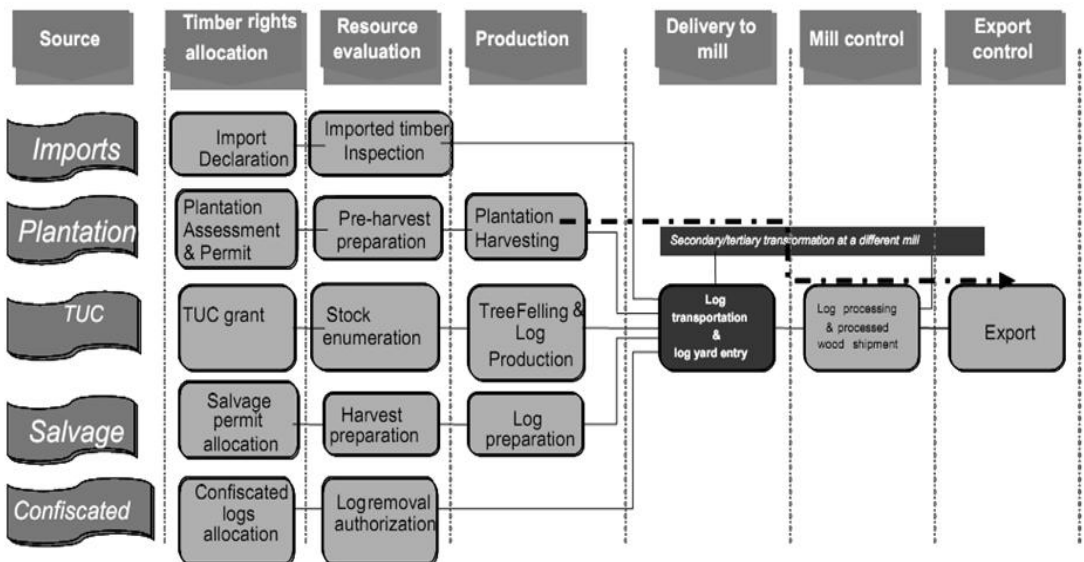
The flow diagram in Fig.1 below depicts the different timber flows that have been identified under the supply chain which relate to the VPA Legality Assurance System, especially for timber consignment destined for export.

Scope of Ghana's Chain of Custody under the VPA

Essentially, the description of CoC which is biased towards export starts from timber allocation rights and ends at export of processed wood (Fig. 1). Additionally, the associated transfer of ownership of the resource as well as changes in the status of the resource as it moves along the supply chain form part of the CoC. The key CoC control points for the export market are listed as follows:

- I. Timber Rights Allocation
- II. Stock Enumeration
- III. Yield selection
- IV. Tree felling & Log production
- V. Transportation
- VI. Mill/Factory Gate/Log yard
- VII. Log Processing
- VIII. Export of logs/processed wood

Fig.1 Supply chain types identified under the GoG-EU VPA



Scope of Chain of Custody for Domestic Market with Reference to Artisanal Milling

In principle, as far as the VPA requirements are concerned the description of CoC for domestic market should not be different from the export market. However, the envisaged scale and mode of operation and equipment to be used under AM provides an opportunity to simplify and standardize the processes involved. This is based on the assumptions that for AM, legal arrangements for sourcing timber will be clarified in the shortest time possible to allow implementation; actors involved cooperate with forestry regulators and managers; government provides incentives and support schemes for artisanal millers to acquire appropriate equipment.

The key CoC control points for domestic market, especially for AM may include the following:

- I. Source of timber
- II. Timber rights allocation
- III. Pre-milling requirements
- IV. Log processing
- V. Transport
- VI. Domestic market and supply control

Potential Timber Supply Chain Types for the Artisanal Milling Concept

Stakeholder consultation to develop and pilot artisanal milling models revealed that partnership arrangements, access to timber rights and arrangements for marketing lumber locally constitute key areas of concern that need informed policy decision. Based on field information from the project, applicable laws and regulation and the VPA LAS, the supply chain types shown in Figures 2 to 4 have been identified as possible supply chain models. They are (1) Concession/TUC (on and off-reserve) timber flow; (2) Logging and mill residue timber flow; and (3) Purchased and salvaged timber flow.

Timber and Wood Product Scope for the Artisanal Milling Concept

Timber products to be covered under the AM concept shall be primarily sawnwood (dimensioned lumber) and to a limited extent engineered wood manufactured for domestic market.

Organisation of the Manual

For ease of use, this manual is divided into the following sections to coincide with the different sources of timber feeding the AM supply chain:

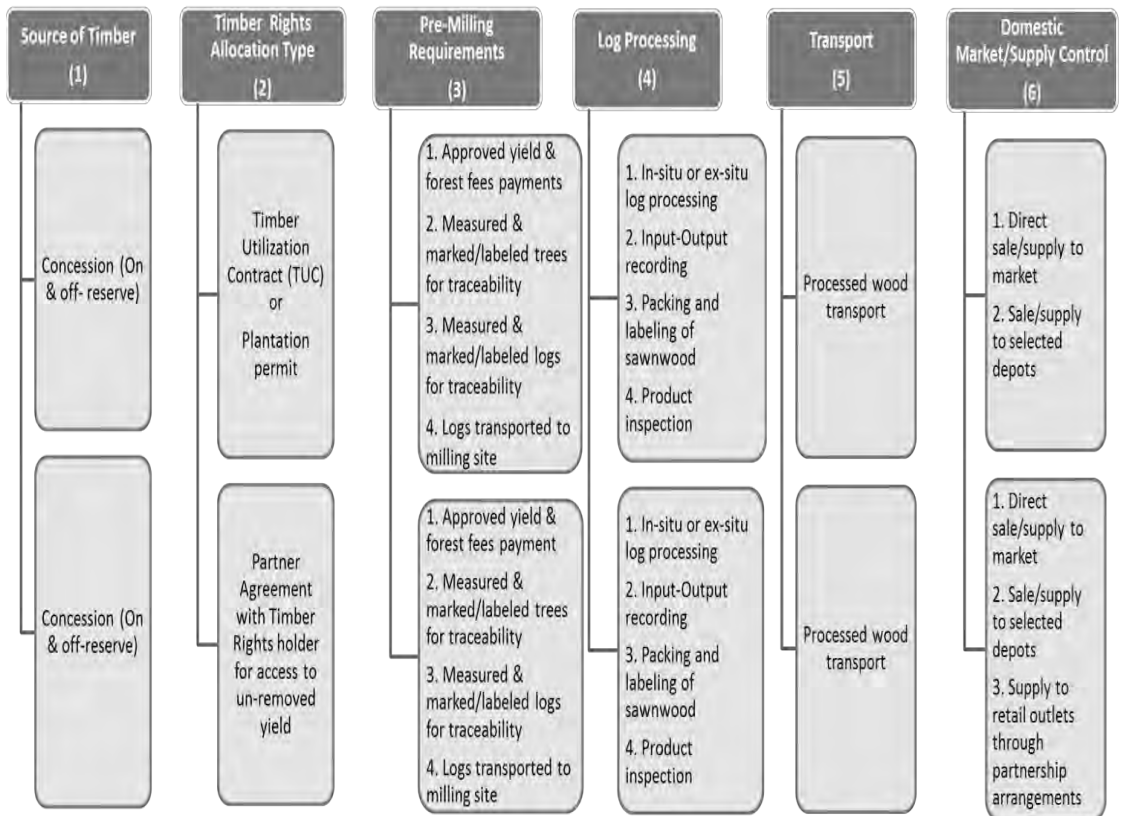
- **Section 1 – Concession (On- and Off- reserve) timber flow**
- **Section 2 – Logging and mill residue timber flow**
- **Section 3 – Purchased and salvaged timber flow**
- **Section 4 – Offences and Sanctions**

SECTION1: CONCESSION (ON & OFF-RESERVE) TIMBER FLOW

Where standing timber (natural or planted) feeding the AM concept is sourced from a concession (on or off-reserve) governed by TUC, two timber flow options are feasible for implementation as depicted in Figure 2. The key difference in the two timber flow options is that the TUC holder may operate as an artisanal miller or enter into partnership agreement with other legal entity to produce dimensioned lumber for the domestic market.

The two flows keep information trail about how timber is acquired, processed and sold at a local market outlet. Pre-milling requirements and other intermediary processes are also outlined for compliance. Change in ownership of the timber product and the various transformation of the timber itself as it moves along the supply chain is further documented for ease of traceability.

Figure 2: Concession (on and off-reserve TUC or Plantation Permit) timber flow diagram



1.1 Timber Rights Allocation from Concession (on and off-reserve)

TUC allocation in a natural forest is a mechanism by which access is granted to timber resource from a forest reserve and off-reserve area. Timber Resources Management Act¹ 547 of 1997 establishes the procedure for the grant of such right.

Allocation of timber harvesting rights for plantation timber shall be through competitive bidding or permits issued by the FC in consultation with the sector Minister (Timber Resources Management Act 547 of 1997; Timber Resources Management Amendment Act 617).

Key pre-conditions governing timber originating from this timber flow type include:

- Timber rights are acquired legitimately and timber is sourced from extant Timber Utilization Contract (TUC) or approved plantation permit area.
- The Timber Felling Right Holder commits to operate either as legal entity or enter into partner agreement to produce dimensioned lumber for the domestic market.
- Where an agreement has been concluded between the Timber Felling Right Holder and other entity(ies) for the supply of dimensioned lumber to the domestic market, proof of such legal partner agreement will be required by forest regulators (MLNR and FC).
- Timber Felling Right Holder is in good standing with FC and/or has good track record in forest operations.

¹ This repealed the Concessions Act, 1962 (Act. 124) and provided for the grant of timber rights in a manner that secures the sustainable management and utilization of timber resources

(i) FC's Responsibility

- The Timber Rights Allocation Unit (TRAU) of FC documents and keeps records of approved procedures for the acquisition of Timber Rights in on and off-reserve areas (i.e. TUC and Plantation permit).
- Following the change in status of a Timber Felling Right Holder as an artisanal miller or when Timber Felling Right Holder enters into agreement with third party (other entity) for domestic lumber supply, TRAU of FC updates records accordingly.
- FC shall furnish the Collaborative Resource Management Centre (CRMC), forest forums, Community Based Organisations (CBO's) with timber rights allocations and partner agreements.
- FC shall conduct regular capacity enhancement programs for CRMC/Forums/CBO's and Trade Associations in matters relating to timber allocation rights.

(ii) Timber Felling Right Holder's Responsibility

- Maintains a basic Company's address details including key contact persons as shown in Template 1a in the annexure.
- Maintains a simple TUC or plantation permit register either manually or electronically as shown in Template 1b in the annexure.
- Submits updated company and TUC or plantation permit register details to FC-WTS through approved procedures (manually or electronically).
- Submit any agreement related to the use of the timber rights to TRAU.

(iii) Partner's Responsibility

- Partner entity registers with the Registrar general as a legal entity to conduct business in the forestry sector.
- Partner entity registers with FC to trade in lumber on the domestic market and provides relevant documentation including but not limited to:
 - legal proof of agreement with Timber Felling Right Holder to FC in order to commence formal business
 - list of operating equipments and trained staff
 - certificate of relevant training in artisanal milling.

(iv) CRMC/Forums/CBOs/Trade Association Responsibility

- They shall verify the authenticity of TUC or plantation permit and related agreement for timber sourcing.
- Trade Associations shall undertake self- regulation of their members' activities and provide quarterly feedback to FC.

1.2 Pre-milling Requirements

(i) FC's Responsibility

The FSD of FC undertakes the following activities:

- The FSD confirms details of yield (FC approved standing tree yield) from a defined forest area and officially communicates to the timber felling right holder (e.g. TUC holder)
- Where unremoved yield is earmarked for lumber production for the domestic market, a yield balance sheet (see Template 2 in annexure) showing quantities of available timber is officially communicated to the TUC holder.
- Felled trees in the yield are measured and marked/labeled as prescribed by FC manual of procedures and information details (see Template 3 in annexure) transmitted to FC-WTS through approved procedure
- In cases where logs have to be transported over a distance for ex-situ milling, FSD shall prepare Log Measurement Conveyance Certificate (LMCC) and Plantation Measurement Conveyance Certificate (PLMCC) to accompany logs from natural and plantation forests, respectively.
- Approved stumpage fees and applicable forest fees are prepared and submitted to Timber Felling Right Holder for payment

(ii) Timber Felling Right Holder's Responsibility

- Maintains a felling register to indicate yield removals earmarked for domestic market lumber supply.
- Ensures that tree stumps are marked/ labeled as prescribed by FC Logging Manual.
- Logs produced from approved yield in natural or plantation forest are measured and marked/labeled as prescribed by FC manual of procedures and information details captured on Template 4a (natural forest) or Template 4b (plantation forest) as indicated in the annexure. The information is then transmitted to FC-WTS.
- Logs are hauled to approved sites in the forest for milling in-situ (off-reserve concession) or transported to a mill outside the forest for ex-situ processing (on-reserve concession); Timber Felling Right Holder shall obtain LMCC or PLMCC from FC in cases where logs have to be transported over a distance for ex-situ milling.
- Pays stumpage and applicable forest fees as prescribed by law.
- Timber Felling Right Holder shall inform FC in writing of any assigned role to a partner entity in the forest operations.
- Timber Felling Right Holder must ensure compliance of forestry laws by the partner, since he/she shall be held liable for any omission or commission by the partner.

(iii) Partner's Responsibility

- Partner shall perform assigned roles and responsibilities relating to forest operations as described in the partner agreement.

1.3 Log Processing

(i) Timber Felling Right Holder's Responsibility

- Where Timber Felling Right Holder is an artisanal miller he/she conducts in-situ or ex-situ milling of logs.
- Records the required details as indicated in the lumber production sheet (Template 5 in annexure) and then transmits same information to FC-WTS.
- Packs and labels sawnwood as prescribed by FC.
- Timber Felling Right Holder shall inform FC in writing of any role assigned to a partner in the forest operations.

(ii) Partner's Responsibility

- Where partner is an artisanal miller he/she conducts in-situ or ex-situ milling of logs.
- Records the required details as indicated in the lumber production sheet (Template 5 in annexure) and then transmits same information to FC-WTS.
- Packs and labels sawnwood as prescribed by FC.
- Partner performs other assigned roles and responsibilities relating to log processing as agreed in the partner agreement and also prescribed by FC.

(iii) FC's Responsibility

The TIDD of FC undertakes the following activities:

- Conducts product (dimensioned lumber) inspection and issues Product Inspection Certificate.
- Performs input and output analysis.
- Submits the required information to FC-WTS.

1.4 Transport

Transport here refers to conveyance of dimensioned lumber (i.e. processed wood) after in-situ or ex-situ sawnwood production.

(i) Timber Felling Right Holder's Responsibility

- Where a Timber Felling Right holder is an artisanal miller he/she shall complete the lumber production sheet for a parcel/pack of dimensioned lumber ready to be conveyed to an intermediate storage point or the final sales point at a domestic lumber market.
- Labels issued by FC for traceability of dimensioned lumber shall be well kept/recorded and accounted for by Timber Felling Right holder.
- Prepares an official way bill to accompany wood products in transit.
- Each individual piece of lumber in the pack must be labeled. Labels may include a stamp, paint/ crayon inscription, etc.
- Where a Timber Felling Right holder has undertaken agreement with a partner, the holder shall be responsible for the partner's operational activities.

(ii) Partner's Responsibility

- Where partner is an artisanal miller he/she shall complete the lumber production sheet for a parcel/pack of dimensioned lumber ready to be conveyed to the domestic lumber market.
- Labels issued by FC for traceability of dimensioned lumber shall be well kept/recorded and accounted for by the partner entity who is an artisanal miller.
- Prepares an official way bill to accompany wood products in transit.

(iii) FC's Responsibility

The Timber Industry Development Division (TIIDD) of FC shall undertake the following activities:

- Prepare and make the necessary arrangement for the issuance of labels for traceability of dimensioned lumber in transit.
- Prepare and issue dimensioned lumber conveyance certificate if all the requisite transport documentation are complete and accurate.

In situations where the TIDD is unable to perform the above-stated tasks due to unavailability of staff, FC shall take the necessary steps to train suitable persons from the community or trade association to perform such duties.

1.5 Domestic Market and Supply Control

(i) FC's Responsibility

The TIDD of FC undertakes the following activities:

- Verifies validity of license of artisanal miller.
- Provides guidance on product grading and pricing.
- Estimates company's product volume and value for local market annually based on the contracts fulfilled.
- Ensures that designated lumber depots and lumber retail outlets are supplied with lumber.
- Checks that all requirements including applicable tax certificate necessary for a domestic lumber vendor to operate are secured and valid.
- Facilitate the creation of lumber depots.

(ii) Artisanal Miller's Responsibility

- Artisanal miller (Timber felling right holder or partner) prepares lumber sales invoices and keeps basic sales record (Template 8) for domestic market lumber supply.

- Artisanal miller (Timber felling right holder or partner) informs the FC on the terms and conditions for the lumber supply to the domestic market.
- Artisanal miller (Timber felling right holder or partner) who is a lumber vendor must obtain valid license from FC-TIDD to market timber on the domestic market.

(iii) TVD's Responsibility

In order to maintain the legality of timber traded on the domestic market, the Timber Validation Division (TVD) of FC shall undertake the following activities:

- Verify the legality of timber by conducting an audit trail of the source of timber and associated supply chain procedures using a simplified checklist
- Conduct data reconciliation on timber quantities along the supply chain

In situations where TVD is unable to perform the above-stated tasks due to unavailability of staff, FC shall take the necessary steps to train suitable persons from the community or trade association to perform legality audit trail.

SECTION2: LOGGING AND MILL RESIDUE TIMBER FLOW

Logging residue from timber harvesting operations and milling residue from timber processing facilities could be potential raw material sources feeding the AM concept.

Logging residue could be sourced from a concession (on or off-reserve) governed by a prescribed Timber Rights Allocation (e.g. TUC). Logging residue primarily include branch wood of at least 30 cm dbh, butt-ends of harvested trees and other utilizable tree parts abandoned in the forest in the course of harvesting and extraction operations. Mill residue on the hand, primarily refers to mill rejects of lower quality dimensioned lumber that do not meet export quality and other mill residue materials that are re-usable for dimensioned lumber.

A possible timber flow for logging and mill residue is depicted in Fig.3. In the timber flow types, partner agreement for access to logging and milling residue to produce dimensioned lumber for the domestic market is feasible. The two flows keep information trail about how logging and mill residue is acquired, processed and sold at a local market outlet. Pre-milling requirements are also outlined for compliance. Change in ownership of the timber product and the various transformation of the timber itself as it moves along the supply chain is further documented for ease of traceability.

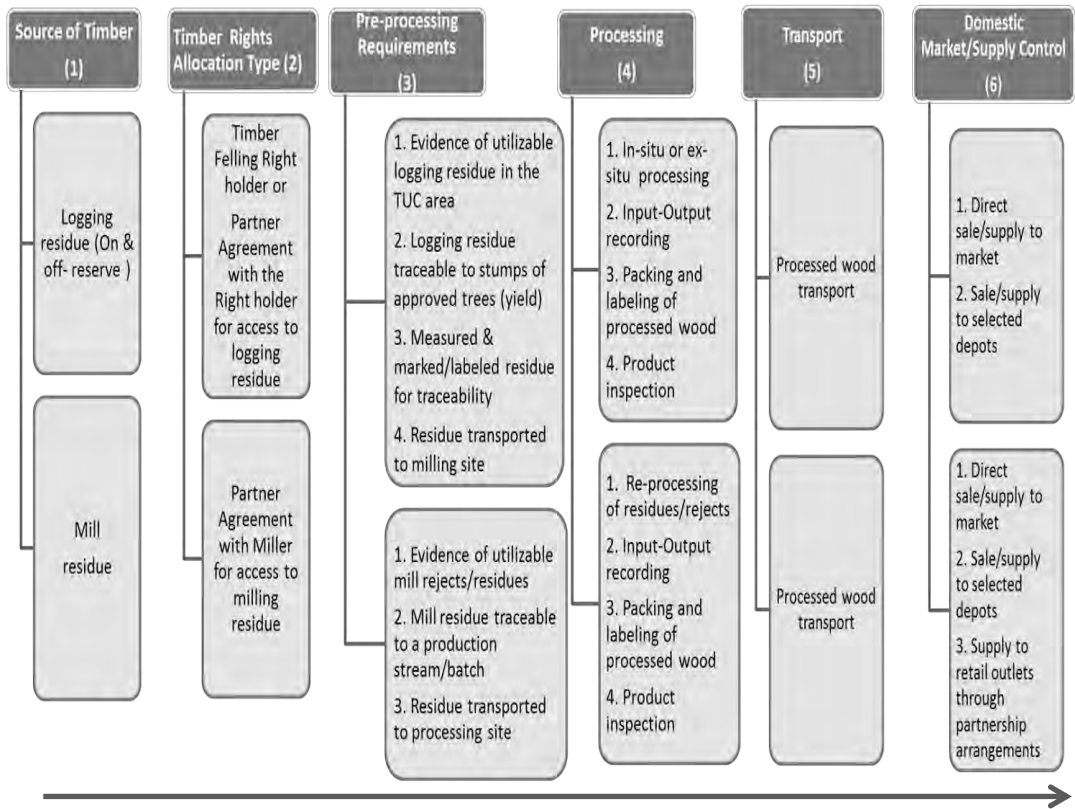


Figure 3: Logging and mill residue timber flow diagram

2.1 Timber Rights Allocation Type

2.1.1 Logging residue

Logging residue from a Timber Rights Allocation (e.g. TUC) may or may not be part of the timber resources over which allocation rights has been granted. According to section 39 of the Timber Resources Management Regulation (L.I. 1649) of 1998 where a contractor's operation ceases, or the contractor's operations have lapsed the Chief Conservator of Forests with the approval of the Forestry Commission may dispose of any standing timber or logs left over from the operations, and offcuts and branches shall be disposed of as raw wood material for the benefit of the inhabitants of the contract area. There is therefore the need for FC to clarify the administrative procedures required for accessing logging residue, pricing of logging residue and also, clarify the options available to the Timber Felling Right Holder in the disposal of logging residue.

It therefore follows that whilst the Timber Felling Right Holder is in active operation, he/she has the right to enter into a partner agreement that may allow another entity to access those logging residue. However, there are some key pre-conditions governing timber originating from logging residue in TUC areas that need to be respected. These include the following among others:

- Logging residue is sourced from a concession in a reserve or off-reserve area which has a valid Timber Allocation Right (e.g. an extant TUC).
- The Timber Felling Right Holder has the first option of utilizing the logging residue or enter into partner agreement with a legal entity for processing logging residue into dimensioned lumber for the domestic market.
- Where a partner agreement has been concluded between the Timber Felling Right Holder and other entity (ies) for the supply of dimensioned lumber to the domestic market, proof of such legal partner agreement will be required by the FC.
- The quantity and quality of logging residue generated must be certified by all parties including the FC as acceptable raw materials for the production of dimensioned lumber.
- The Timber Felling Right Holder is in good standing with FC and/or has good track record in forest operations.

2.1.2 Milling residue

This is similar to logging residue and thus the right of access to such materials resides with the Mill owner who has legally generated those residue materials through his/her milling operations. Some key pre-conditions governing wood originating from milling residue are:

- Mill residue including lumber rejects should be potentially utilizable for dimensioned lumber for the domestic market

- Miller has the right of utilizing the milling residue or enter into partner agreement with a legal entity for re-processing mill residue into dimensioned lumber for the domestic market
- Where a partner agreement has been concluded between the miller and other entity (ies) for the supply of dimensioned lumber to the domestic market, proof of such legal partner agreement will be required by the FC
- The quantity and quality of mill residue generated must be certified by all parties including the FC as acceptable raw materials for the production of dimensioned lumber

(i) FC's Responsibility

The Timber Rights Allocation Unit (TRAU) of the FC undertakes the following activities:

- Documents and keeps records of approved procedures for the acquisition of such Timber Right (on and off-reserve).
- Following the change in status of a Timber Felling Right Holder as an artisanal miller or when Timber Felling Right Holder enters into partner agreement for domestic lumber supply, TRAU of FC updates records accordingly

(ii) Timber Felling Right Holder's Responsibility

- Maintains a basic Company's address details including key contact persons as shown in Template 1a.
- Maintains a simple Timber Right Allocation register either manually or electronically as shown in Template 1b.
- Submits updated company and Timber Right Allocation register details to FC-WTS through approved procedures (manually or electronically).

(iii) Partner's Responsibility

- Partner entity registers with the Registrar general as a legal entity to conduct business in the forestry sector.
- Partner entity registers with FC and provides relevant documentation including but not limited to:
 - legal proof of agreement with TUC holder to FC in order to commence formal business
 - list of operating equipments and trained staff
 - certificate of relevant training in artisanal milling.

2.2 Pre-Processing Requirements

2.2.1 Logging residue (on or off-reserve Timber Rights Allocation)

(i) FC's Responsibility

The FSD of FC undertakes the following activities:

- Confirms the availability of utilizable logging residue in the affected Timber Rights Allocation (e.g. TUC area) through detailed field inspection report.
- Confirms that logging residue is traceable to stumps of approved trees (yield) in the case of an on-reserve TUC only.
- Where approval is granted for the removal of logging residue, the affected tree part shall be measured and marked/labeled for traceability. FSD shall jointly undertake this exercise with the Timber Rights Allocation holder and the partner entity. See Template 6A as a guide for the capture of logging residue details.
- In cases where logging residue have to be transported over a distance for ex-situ milling, FC shall prepare Logging Residue Measurement Conveyance Certificate (LRMCC) to accompany such materials in transit. See Template 7A as a guide for the preparation of LRMCC.

- Confirms that for those logging residue to be extracted, their respective approved stumpages fees have been prepared and submitted to Timber Rights Allocation holder for payment.
- Facilitates all payments between partner and the Timber Rights Allocation holder with respect to the removal of logging residue.

(ii) Timber Felling Rights Holder’s Responsibility

- Maintains a logging residue extraction register to provide indicative quantities of the approved yield used for milling to feed domestic market lumber supply. Descriptive notes on the type of logging residue should be provided (e.g. branchwood, rejected butt end, etc.).
- Ensures that logging residues are hauled to approved sites in the forest for milling in-situ (off-reserve concession) or transported to a mill outside the forest for ex-situ processing (on-reserve concession); Timber Felling Right Holder shall obtain LRMCC from FC in cases where logs have to be transported over a distance for ex-situ milling.
- Pays stumpage and applicable forest fees as prescribed by law.
- Timber Felling Right Holder shall inform FC in writing of any assigned role to a partner entity in the forest operations.

(iii) Partner’s Responsibility

- Partner entity performs assigned roles and responsibilities relating to forest operations.
- Where partnering entity is involved in forest operations, he/she must abide with FC Logging Manual and other FC administrative directives regarding logging residue removal from forests.

2.2.2 Milling residue (rejects and other waste materials)

(i) FC's Responsibility

The TIDD of FC undertakes the following activities:

- Confirms the availability of milling residue (quantity and quality) that has been ear-marked for domestic lumber production through detailed mill inspection report.
- Confirms that milling residue is traceable to FC approved/ registered contract.
- Where approval is granted for the re-use of milling residue, the identified residue shall be measured and/ or quantified and labeled appropriately for traceability. The TIDD shall jointly undertake this exercise with the mill owner and/or the partner entity as the case may apply. See Template 6B as a guide for the capture of milling residue details.
- In cases where milling residue have to be transported over a distance for ex-situ reprocessing, FC shall prepare Milling Residue Measurement Conveyance Certificate (MRMCC) to accompany such materials in transit. See Template 7B as a guide for the preparation of MRMCC.
- Facilitate all payments between partner and the mill owner in respect of milling residue supplied for artisanal milling.

(ii) Mill Owner's Responsibility

- Maintains a milling residue re-processing register to indicate quantities of milling residue reprocessed to feed domestic market lumber supply.
- Milling residue are re-processed in the mill facility or transported to an artisanal mill outside the mill facility. In situations where mill residue materials have to be transported over a distance for ex-situ reprocessing, the Mill owner shall obtain MRMCC from FC.
- Mill owner shall show proof that the stumpage fees of the parent tree and other applicable forest fees as prescribed by law have been duly paid.
- Mill owner shall inform FC in writing of any assigned role to a partner entity in the milling operations.

(iii) Partner's Responsibility

- Partner entity performs assigned roles and responsibilities relating to milling operations.
- Where partner entity is involved in mill operations, he/she must abide with FC milling operations standards and other FC administrative directives regarding reprocessing of mill residue.
- Maintains general health and safety regulations in wood processing.

2.3 Processing

2.3.1 Logging residue

(i) Timber Felling Right Holder's Responsibility

Where Timber Felling Right Holder is an artisanal miller he/she:

- Conducts in-situ or ex-situ milling of logging residue.
- Records the required details as indicated in the lumber production sheet (Template 5 in annexure) and then transmits same information to FC-WTS.
- Records information on material input and product output. Information to be recorded should include species and dimension (length, diameter and volume) of branchwood and bolts. The required information collected is then transmitted to FC-WTS.
- Packs and labels sawnwood and prepare lumber production sheet (Template 5) as prescribed by FC.
- Timber Felling Right Holder shall inform FC in writing of any assigned role to a partner entity in the forest operations.

(ii) Partner's Responsibility

- Artisanal miller conducts in-situ or ex-situ milling of logging residue.
- Records information on material input and product output. Information to be recorded should include species and dimension (length, diameter and volume) of branchwood and bolts. The required information collected is then transmitted to FC-WTS.

- Packs and labels sawnwood and prepare lumber production sheet as prescribed by FC.
- Partnering entity performs other assigned roles and responsibilities relating to log processing.

(iii) FC's Responsibility

The TIDD of FC undertakes the following activities:

- Conducts product (dimensioned lumber) inspection and issues product inspection certificate
- Performs input and output analysis
- Submits the required information to FC-WTS

2.3.2 Milling residue

(i) Mill Owner's Responsibility

- Where a wood processor doubles as artisanal miller (e.g. integrated mill), he/she conducts in-situ or ex-situ milling or re-processing of milling residue.
- Records information on material input and product output. Information to be recorded should include species and dimension (length, diameter and volume) of branchwood and bolts. The required information collected is then transmitted to FC-WTS.
- Packs and labels re-processed wood and prepares a mass balance sheet to indicate quantity of input material and quantity of output material (product) as prescribed by FC.
- Mill owner (wood processor) shall inform FC in writing of any assigned role to a partner entity in the forest operations.

(ii) Partner's Responsibility

- Artisanal miller conducts re-processing of the milling residue.
- Records information on material input and product output. Information to be recorded may include species, dimension (length, diameter and volume) of rejects (e.g. shorts, narrow, etc.).
- Packs and labels dimensioned lumber and prepare lumber production sheet where applicable.
- Partner entity performs other assigned roles and responsibilities relating to mill residue processing.

(iii) FC's Responsibility

The TIDD of FC undertakes the following activities:

- Conducts product (dimensioned lumber) inspection and issues product inspection certificate.
- Performs input and output analysis.
- Submits the required information to FC-WTS.

2.4 Transport

Transport here refers to conveyance of dimensioned lumber after in-situ or ex-situ wood processing.

(i) Mill Owner's Responsibility

- Where mill owner is an artisanal miller he/she shall complete a lumber production sheet for a parcel/pack of dimensioned lumber ready to be conveyed to the domestic lumber market.
- Labels issued by FC for traceability of dimensioned lumber shall be well kept/recorded and accounted for by the mill owner who is an artisanal miller.
- Prepares an official way bill to accompany wood products in transit.

(ii) Partner’s Responsibility

- Artisanal miller shall complete lumber production sheet for a parcel/pack of dimensioned lumber ready to be conveyed to the domestic lumber market.
- Labels issued by FC for traceability of dimensioned lumber shall be well kept/recorded and accounted for by the partner entity who is an artisanal miller.
- Prepares an official way bill to accompany wood products in transit.

(iii) FC’s Responsibility

The TIDD of FC shall undertake the following activities:

- TIDD shall prepare and make the necessary arrangement for issuance of labels for traceability of dimensioned lumber in transit.
- TIDD shall prepare and issue dimensioned lumber conveyance certificate if all the requisite transport documentation are complete and accurate.

2.5 Domestic Market and Supply Control

(i) FC’s Responsibility

The TIDD of FC undertakes the following activities

- Verifies validity of license of artisanal miller.
- Provides guidance on product grading and pricing.
- Estimates company’s product volume and value for local market annually based on the contracts fulfilled.
- Ensures that designated lumber depots and lumber retail outlets are supplied with lumber.
- Checks that all requirements including applicable tax certificate necessary for a domestic lumber vendor to operate are secured and valid.
- Facilitate the creation of lumber depots.

(ii) Artisanal Miller's Responsibility

- Artisanal miller (Timber Felling Right Holder or partner) prepares lumber sales invoices and keeps basic sales record (Template 8) for domestic market lumber supply.
- Artisanal miller (Timber Felling Right Holder or partner) informs the FC on the terms and conditions for the lumber supply to the domestic market.
- Artisanal miller (Timber Felling Right Holder or partner) who is a lumber vendor must obtain valid license from FC-TIDD to market timber on the domestic market.

(iii) TVD's Responsibility

In order to maintain the legality of timber traded on the domestic market, the TVD of FC shall undertake the following activities:

- Verify the legality of timber by conducting an audit trail of the source of timber and associated supply chain procedures using a simplified checklist.
- Conduct data reconciliation on timber quantities along the supply chain.

In situations where TVD is unable to perform the above-stated tasks due to unavailability of staff, the FC shall take the necessary steps to train suitable persons from the community or trade association to perform legality audit trail.

SECTION 3: PURCHASED AND SALVAGED TIMBER FLOW

Purchased timber

It is a common practice for Timber Felling Right Holders to purchase logs outside their holdings or trade in certain species of logs for which they do not have stocks. Although such log purchases and trading are permissible and often governed by contractual arrangements, it is the responsibility of the purchaser or trader to ascertain that such logs have been legally sourced and compliant.

Purchased or traded logs typically enter the supply chain at log landings in the forest, mill gate arrivals and log yards and also, temporal log storage point. These and other points will therefore constitute critical control points at which illegal “mixing” of logs can occur. “Middle men” usually serve as brokers for such log trading/purchasing and therefore their activities need to be carefully monitored to ensure legal conformance.

Salvaged timber

Salvaged timber sources differ markedly from on- and off- reserve TUC in their origin assessment, resource evaluation and tree/log production procedures. In practice the major source of timber for salvage permit is mainly from agricultural landscapes in off-reserve areas and hence the control procedures for timber harvesting in off-reserve areas shall apply.

However, once timber from these two sources fulfill pre-milling requirements and enter mill processing either through a TUC holder or artisanal miller they follow the same procedures as outlined in SECTION A (i.e. from 1.3 to 1.5). A possible purchased and salvaged timber flow diagram is depicted in Fig.4.

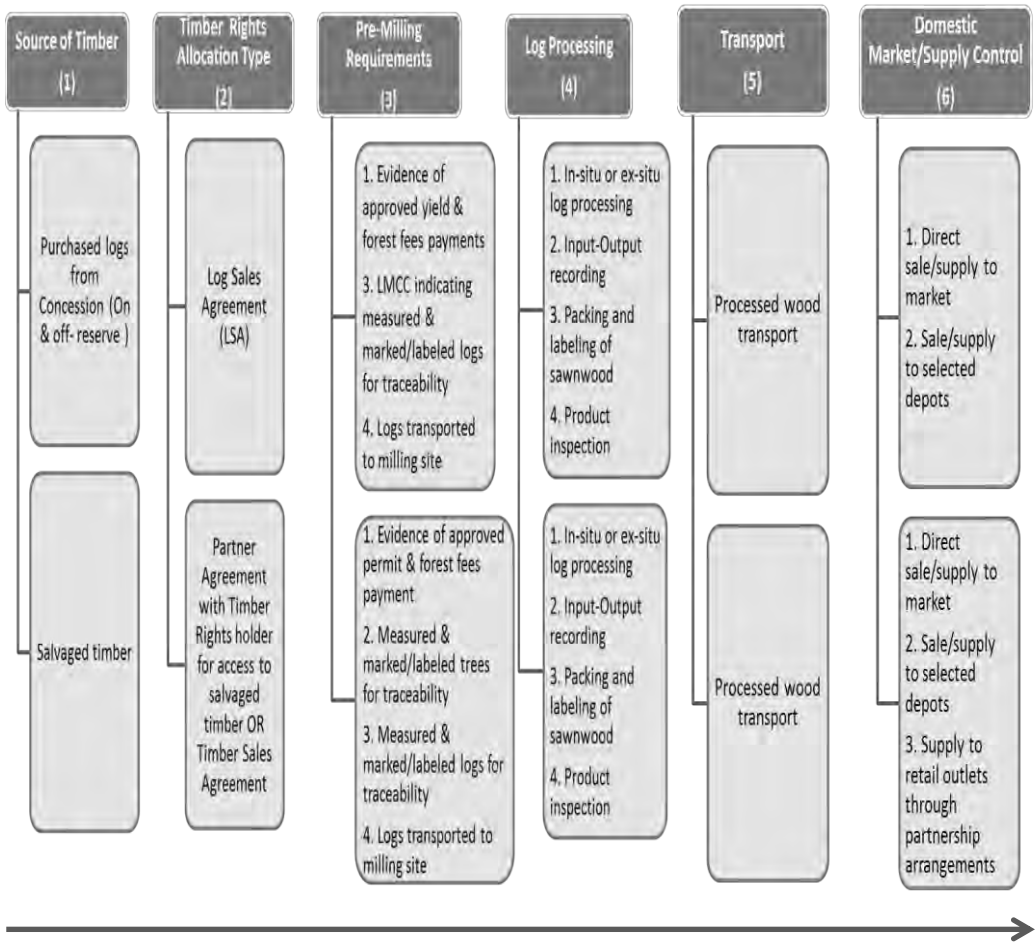


Figure 4: Purchased and salvaged timber flow diagram

3.1 Timber Rights Allocation Type

3.1.1 Purchased Timber

Purchased timber is accessed primarily through timber trading and controlled by market forces. Where such timber is sourced from a prescribed Timber Rights Allocation (e.g. TUC) by an artisanal miller, the Timber Felling Right Holder shall arrange a Log Sales Agreement (LSA) which shall be endorsed by FC. Some key pre-conditions governing timber originating from purchasing/trading activities include:

- There should be a valid timber right allocation in the form of, for example, TUC or permit from FC in order to confirm the source of timber.
- The purchaser (e.g. artisanal miller) should demand a valid property mark.
- Where middle men/agents are involved in the log purchasing, there should be a letter from FSD confirming the legal operation of the agent/middleman in the affected forest district.
- Where middle men/agents are involved in the log trading at the mills, there should be a letter from TIDD confirming the operation of the agent/middleman in the TIDD designated area.
- Where a LSA has been concluded between the Timber Felling Right Holder and other entity (ies) for the purchase of logs intended for the supply of dimensioned lumber to the domestic market, proof of such LSA will be required by the FC.
- TUC holder is in good standing with FC and/or has good track record in forest operations.

3.1.2 Salvaged Timber

Salvage permits² allow removal of trees (standing or felled) in areas designated for development of infrastructure, such as roads or buildings, or areas being converted to agriculture. They shall not be issued in respect of lands under TUC except to the holder of that TUC.

Actors' responsibilities for timber rights allocation types under the purchased and salvaged timber flows are as follows:

(i) FC's Responsibility

- For purchased logs, FSD witnesses and endorses the LSA between the Timber Felling Right Holder and the purchaser.
- For salvaged timber, FSD of FC documents and keeps information trail about procedures leading to the acquisition of salvage permit.
- TRAU of FC keeps records of approved details of salvage permit.
- Following the change in status of a Timber Felling Right Holder as an artisanal miller or when a Timber Felling Right Holder enters into LSA with an artisanal miller for domestic lumber supply, TRAU of FC updates records accordingly.

(ii) Timber Felling Right Holder's Responsibility

- Maintains a basic Company's address details including key contact persons as shown in Template 1a.
- Keeps copy of salvage permit (salvaged timber) or LSA (purchased timber) for purposes of verification by FC.
- Submits updated company details to FC-WTS through approved procedures (manually or electronically).

² Regulation on procedure for salvage timber (Act 547 section 18g); salvage of timber products LI1649 Section 38

(iii) Log Purchaser's Responsibility (Purchased timber)

Log purchasers shall be restricted to registered artisanal millers and therefore the following relevant documents among others shall be kept by the artisanal miller:

- Registration certificate from the Registrar general as a legal entity to conduct business in the forestry sector.
- Log Sales Agreement with a Timber Felling Right Holder (e.g. TUC holder).
- Where applicable submits proof of ownership of operating equipment and professional staff to FC when demanded.
- Must at all times keep in his/her possession certificate of professional training in artisanal milling.

(iv) Partner's Responsibility (Salvaged timber)

- Partner entity registers with the Registrar General as a legal entity to conduct business in the forestry sector.
- Partner entity registers with FC and provides relevant documentation including but not limited to:
 - legal proof of agreement with TUC holder to FC in order to commence formal business,
 - submits list of operating equipments and trained staff,
 - certificate of relevant training in artisanal milling.

3.2 Pre-Milling Requirements

3.2.1 Purchased timber

(i) FC's Responsibility

FSD of FC undertakes the following activities:

- Confirms that purchased logs have been acquired through the approved procedures.
- Confirms that every purchased log is traceable to stumps of approved trees (yield), especially for TUCs/concessions in on- and off-reserve.
- In cases where logs have to be transported over a distance for ex-situ milling, FSD shall prepare Log Measurement Conveyance Certificate (LMCC) and Plantation Measurement Conveyance Certificate (PLMCC) to accompany logs from natural and plantation forests, respectively.
- Confirms that for those purchased logs, their respective approved stumpage fees have been prepared and submitted to TUC holder for payment.

(ii) Timber Felling Right Holder's Responsibility

- Maintains log sales register to indicate purchased logs ear-marked for domestic market lumber supply.
- Tree stumps are marked/ labeled as prescribed by FC Logging Manual.
- Purchased logs produced from prescribed timber felling right areas shall be measured and marked/labeled as prescribed by FC manual of procedures and information details (Template 4) repatriated to FC-WTS. Purchased logs intended for domestic market lumber supply shall clearly be labeled as such and separated from the others.
- Logs are hauled to approved sites in the forest for milling in-situ (off-reserve concession) or transported to a mill outside the forest for ex-situ processing (on-reserve concession); TUC holder shall obtain

LMCC/PLMCC from FC in cases where logs have to be transported over a distance for ex-situ milling.

- Pays stumpage and applicable forest fees as prescribed by law.
- Timber Felling Right Holder shall inform FC in writing of any role played by a “middle man”/agent in log purchasing/trading activities especially at critical control points such as log dumps in the forest or temporal log storage point or mill yard.

(iii) Log Purchaser’s Responsibility (Purchased timber)

- Ensures that purchased log(s) are from legal sources and are covered with the relevant documentation (e.g. LMCC/PLMCC). Whenever in doubt, the log purchaser must contact the nearest FC district, area or regional office for verification and validation.

(iv) “Middle man”/Agent’s Responsibility

- Middle man/agent performs assigned roles and responsibilities relating to log purchasing/trading activities.

3.2.2 Salvaged timber

(i) FC’s Responsibility

The FSD of FC undertakes the following activities:

- Confirms that salvaged permits have been acquired through the approved procedures.
- Confirms that the timber is traceable to defined forest area for which approval has been granted for the salvage of timber.
- In cases where logs have to be transported over a distance for ex-situ milling, FSD shall prepare Log Measurement Conveyance Certificate (LMCC) and Plantation Measurement Conveyance Certificate (PLMCC) to accompany logs from natural and plantation forests, respectively.

Salvage permit reference shall clearly be inscribed on the LMCC or PLMCC.

- Confirms that for those salvaged timber, their respective approved stumpages fees have been prepared and submitted to TUC holder for payment.

(ii) Timber Felling Right Holder's Responsibility

- Maintains salvaged timber register to indicate salvage logs ear-marked for domestic market lumber supply.
- Tree stumps are marked/ labeled as prescribed by FC Logging Manual.
- Salvaged logs from defined forest areas shall be measured and marked/labeled as prescribed by FC manual of procedures and information details (Template 4) repatriated to FC-WTS. Salvaged logs intended for domestic market lumber supply shall clearly be labeled as such and separated from the others.
- Logs are hauled to approved sites in the forest for milling in-situ (off-reserve concession) or transported to a mill outside the forest for ex-situ processing (on-reserve concession); Timber Felling Right Holder shall obtain LMCC/PLMCC from FC in cases where logs have to be transported over a distance for ex-situ milling.
- Timber Felling Right Holder pays stumpage and applicable forest fees as prescribed by law.
- Timber Felling Right Holder shall inform FC in writing of any assigned role to a partnering entity in the forest operations.

(iii) Partner's Responsibility

- Partner entity performs assigned roles and responsibilities relating to forest operations.
- Where partner entity is involved in forest operations, he/she must abide with FC Logging Manual and other FC administrative directives regarding salvage timber.

3.3 Log Processing

3.3.1 Purchased timber

(i) Timber Felling Right Holder's Responsibility

- Where Timber Felling Right Holder is an artisanal miller he/she conducts in-situ or ex-situ milling of the purchased/traded timber.
- Records information on material input and product output. Information to be recorded may include species and bolt dimension (length, diameter and volume), log grade and defects. The required information collected is then repatriated to FC-WTS.
- Packs and labels sawnwood and prepare lumber production sheet (Template 5) as prescribed by FC.
- Timber Felling Right Holder shall inform FC in writing of any kind of role assigned to or agreed with an artisanal miller in log processing.

(ii) Artisanal Miller's Responsibility

- Where an artisanal miller has purchased logs legally he/she conducts in-situ or ex-situ milling of the purchased/traded timber.
- Records information on material input and product output. Information to be recorded may include species and bolt dimension (length, diameter and volume), log grade and defects. The required information collected is then repatriated to FC-WTS through approved procedures.
- Packs and labels sawnwood and prepare lumber production sheet (Template 5) as prescribed by FC.

(iii) FC's Responsibility

TIDD of FC undertakes the following activities:

- Conducts product (dimensioned lumber) inspection and issues product inspection certificate.
- Performs input and output analysis.
- Submits the required information to FC-WTS.

3.3.2 Salvaged timber

(i) Timber Felling Right Holder's Responsibility

- Where Timber Felling Right Holder is an artisanal miller he/she conducts in-situ or ex-situ milling of the salvaged timber.
- Records information on material input and product output. Information to be recorded may include species and bolt dimension (length, diameter and volume), log grade and defects. The required information collected is then repatriated to FC-WTS through approved procedures.
- Packs and labels sawnwood and prepare lumber production sheet (Template 5) as prescribed by FC.
- Timber Felling Right Holder shall inform FC in writing of any kind of role assigned to or agreed with an artisanal miller in log processing.

(ii) Artisanal Miller's Responsibility

- Artisanal miller conducts in-situ or ex-situ milling of the salvaged timber.
- Records information on material input and product output. Information to be recorded may include species and bolt dimension (length, diameter and volume), log grade and defects. The required information collected is then repatriated to FC-WTS through approved procedures.
- Packs and labels sawnwood and prepare lumber production sheet (Template 5) as prescribed by FC.

(iii) FC's Responsibility

The TIDD of FC undertakes the following activities:

- Conducts product (dimensioned lumber) inspection and issues product inspection certificate.
- Performs input and output analysis.
- Submits the required information to FC-WTS.

3.4 Transport

Transport here refers to conveyance of dimensioned lumber after in-situ or ex-situ wood processing. Transport requirements for processed wood acquired through log purchasing or salvaged timber are essentially the same.

(i) Timber Felling Right Holder's Responsibility

- Where Timber Felling Right Holder is an artisanal miller he/she shall complete the tally sheet for a parcel/pack of dimensioned lumber ready to be conveyed to the domestic lumber market.
- Labels issued by FC for traceability of dimensioned lumber shall be well kept/recorded and accounted for by the mill owner who is an artisanal miller.
- Prepares an official way bill to accompany wood products in transit.

(ii) Partner's Responsibility

- Where partner is an artisanal miller he/she shall complete the tally sheet for a parcel/pack of dimensioned lumber ready to be conveyed to the domestic lumber market.
- Labels issued by FC for traceability of dimensioned lumber shall be well kept/recorded and accounted for by the partner entity who is an artisanal miller.
- Prepares an official way bill to accompany wood products in transit.

(iii) FC's Responsibility

The TIDD of FC shall undertake the following activities:

- TIDD shall prepare and make the necessary arrangement for the issuance of labels for traceability of dimensioned lumber in transit.
- TIDD shall prepare and issue dimensioned lumber conveyance certificate if all the requisite transport documentation are complete and accurate.

3.5 Domestic Market and Supply Control

(i) FC's Responsibility

The TIDD of FC undertakes the following activities:

- Verifies validity of license of artisanal miller.
- Provides guidance on product grading and pricing.
- Estimates company's product volume and value for local market annually based on the contracts fulfilled.
- Ensures that designated lumber depots and lumber retail outlets are supplied with lumber.
- Checks that all requirements including applicable tax certificate necessary for a domestic lumber vendor to operate are secured and valid.
- Facilitates the creation of lumber depots.

(ii) Artisanal Miller's Responsibility

- Artisanal miller (Timber Felling Right Holder or partner) prepares lumber sales invoices and keeps basic sales record (Template 8) for domestic market lumber supply.
- Artisanal miller (Timber Felling Right Holder or partner) informs the FC on the terms and conditions for the lumber supply to the domestic market.
- Artisanal miller (Timber Felling Right Holder or partner) who is a lumber vendor must obtain valid license from FC-TIDD to market timber on the domestic market.

(iii) TVD's Responsibility

In order to maintain the legality of timber traded on the domestic market, the TVD of FC shall undertake the following activities:

- Verify the legality of timber by conducting an audit trail of the source of timber and associated supply chain procedures using a simplified checklist.
- Conduct data reconciliation on timber quantities along the supply chain.

In situations where TVD is unable to perform the above-stated tasks due to unavailability of staff, FC shall take the necessary steps to train suitable persons from the community or trade association to perform legality audit trail.

SECTION 4: OFFENCES AND SANCTIONS

Minimum listing of key offences and sanctions applicable to the domestic lumber market regulatory system identified at the time of writing this manual are indicated in Table 1. The offences and sanctions subject to regular review/update as and when circumstances change.

Table 1: Offences and sanctions governing timber operations

| Nature of Offence | Sanction(s)/ Penalty | Applicable Law |
|--|--|--|
| A company operating illegally without a Timber Allocation Right or any formal authorization from a competent authority | Any person or company who contravenes the rules shall on conviction be fined appropriate penalty points and or imprisonment term or both | Timber Resources Management Act, 1997 Act 547 |
| An operator felling trees for conversion without a property mark | Any person or company who contravenes the rules shall on conviction be fined appropriate penalty points and or imprisonment term or both | Trees and Timber Act, 1974 (NRCD 273) as amended by Trees and Timber Act, 1994 (Act 493) |
| Felling trees for export without property mark | ----as above---- | ----as above---- |

| Nature of Offence | Sanction(s)/ Penalty | Applicable Law |
|---|--|---|
| Transfer of property mark certificate without approval by the Chief Executive of FC | ----as above---- | ----as above---- |
| Refusal to mark stumps and logs | ----as above---- | ----as above---- |
| Sale or possession of logs not duly mark | ----as above---- | ----as above---- |
| Obstructing an authorized FC staff in performance of his duties | Any person or company who contravenes the rules shall on conviction be fined appropriate penalty points and or imprisonment term or both | Timber Resources Management Regulation, 1998 (LI 1649) as variously amended |
| Possession of timber not duly marked | ----as above---- | ----as above---- |
| Possession or movement of timber without LMCC/PLMCC | ----as above---- | ----as above---- |
| Failing to register chainsaw machine with District Assembly | ----as above---- | ----as above---- |

| Nature of Offence | Sanction(s)/ Penalty | Applicable Law |
|--|-----------------------------|-----------------------|
| Using unregistered chainsaw with FC for felling or sawing tree | ----as above---- | ----as above---- |
| Failure to mark trees felled | ----as above---- | ----as above---- |
| Sale of chainsaw lumber | ----as above---- | ----as above---- |
| Landowners permitting the use of registered chainsaw machines on their lands | ----as above---- | ----as above---- |
| Felling or possession of restricted timber species illegally | ----as above---- | ----as above---- |
| Declaration of false measurement by FC staff | ----as above---- | ----as above---- |
| False computation of stumpage fees by FC staff | ----as above---- | ----as above---- |
| Assisting contractors to under declare tree volumes used in stumpage fee computation | ----as above---- | ----as above---- |

| Nature of Offence | Sanction(s)/ Penalty | Applicable Law |
|---|--|---|
| A company conducting harvesting operations contrary to the provisions of the Logging Manual | Any person or company who contravenes the rules shall on conviction be fined appropriate penalty points and or imprisonment term or both | Timber Resources Management Act, 1997 Act 547; Logging Manual |
| A company that has defaulted in the payment of stumpage fees, concession rent, and other taxes/fiscal obligations including SRA commitments | Any person or company who contravenes the rules shall on conviction be fined appropriate penalty points and or imprisonment term or both | Timber Resources Management Act, 1997 Act 547; LI 1649 |
| Operating vehicle to carry/haul/convey/transport timber harvested illegally | Any person or company who contravenes the rules shall on conviction be fined appropriate penalty points and or imprisonment term or both | Timber Resources Management Act, 1997 Act 547 and Amendment Act, 2002 (Act 617) |
| Sale or purchase of illegally harvested timber | Any person or company who contravenes the rules shall on conviction be fined appropriate penalty points and or imprisonment term or both | Timber Resources Management Act, 1997 Act 547 |

| Nature of Offence | Sanction(s)/ Penalty | Applicable Law |
|--|--|--|
| Company operating without a valid registration as a business | Any person or company who contravenes the rules shall on conviction be fined appropriate penalty points and or imprisonment term or both | Company Act, 1961 (Act 179) |
| Vendor operating without a valid license or permit to market timber | ----as above----- | Forestry Commission Act, 1999 (Act, 571) |
| An artisanal miller operating without the required qualified staff as approved by FC | The competent Forestry Authority in FC shall suspend operation until the required qualified staff are employed | Proposed administrative measure |
| In the case where an artisanal miller fails to meet the terms and conditions for the supply of lumber to the domestic market | The competent Forestry Authority in FC shall suspend artisanal miller's operation until corrective measures are in place and followed strictly | Proposed administrative measure |

ANNEXURE- SAMPLE DATA RECORDING TEMPLATES

Template 1a. Example of TUC /Plantation Permit Holder's contact details

| Company's Name | Managing Director | Property Mark | Company Type ³ | Postal Address | Physical Location | Contacts (Telephone/ FAX nos./ e-mail) |
|----------------|-------------------|---------------|--|-------------------------------|--------------------------------------|--|
| ABC Company | | ABC | Primary & secondary processor and domestic market supplier | P.O.BOX B190, Ahinsan, Kumasi | No. 1 Kufuor Street, Ahinsan, Kumasi | |

Template 1b. Example of TUC/Plantation Permit Register

| Reserve Name/Off-Reserve Name | MLNR Approval Reference | TUC/ Plantation Permit Size (Km ²) | Forest District | Stool Land | Traditional Authority | Date Issued | Date Ending | Partner Agreement Ref. No. (Domestic market) |
|-------------------------------|------------------------------|--|-----------------|--------------|-----------------------|-------------|-------------|--|
| Suhuma F/R | SCR/FA47/240/01 G of 24/3/03 | 36.26 | Sefwi-Wiawso | Sefwi-Wiawso | Sefwi-Wiawso | 9-Apr-2003 | 8-Apr-2033 | |

³ Type refers to Company's operations which may be primary producer/ secondary producer/ tertiary processor/exporter/local market supplier or a combination of them

Template 2- Yield balance Summary Sheet (Unremoved Yield for Domestic Market Lumber Supply)

| | | | Yield Balances | | | | |
|--------------------------|---|---------------------|----------------|-------------|---|---------------------------------------|-------------------------|
| Date of Yield Allocation | Forest Reserve/Off-Reserve TUC Area or Plantation Permit Area | Compt.#/ Coupe Area | Tree Spp. | FC #/ label | Total Number of trees allocated by spp. (yield) | Total Number of trees removed by spp. | Unremoved yield by spp. |
| | | | | | | | |

Template 3 Harvesting Details (Tree Information Form- (TIF))

| | Region | District | Forest Reserve /OFR Area | Timber Rights Allocation Reference No. | Timber Felling Right Holder | | | | | |
|--------------------------|--|-------------------|--------------------------|--|------------------------------------|---|-----|-----|-----|-----|
| | Compt. # / Location | Property Mark | Stool Landowner | District Assembly | Locality Mark | | | | | |
| | | | | | | Primary Log (felled tree) Dimensions | | | | |
| GPS Reading (Lat & Long) | Species code | FC Stock survey # | Tree Barcode | Contractor # | Primary log label (e.g. Stump tag) | L | Db1 | Db2 | Dt1 | Dt2 |
| Total # of Trees felled | | | | | | | | | | |
| | Name of Range Supervisor:..... Signature:..... Date:..... | | | | | | | | | |

Template 4a (Natural forest): Log Information Form (LIF)/ Log production details

| | | | | | | | | | |
|--------------------------------|--|--------------------------|--|-----------------------------|---|-----|-----|-----|-----|
| Region | District | Forest Reserve /OFR Area | Timber Rights Allocation Type & Ref. No. | Timber Felling Right Holder | Partner Agreement Reference No. | | | | |
| Compartment # / Location | Property Mark | Stool Landowner | District Assembly | Locality Mark | | | | | |
| | | | | | Log Dimensions | | | | |
| Species code | Primary log label (felled tree tag on stump) | Contractor Primary log # | Secondary log label (tag) | Contractor Secondary log # | L | Db1 | Db2 | Dt1 | Dt2 |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| Total # of logs produced | | | | | | | | | |
| Name of Range Supervisor:..... | | | | | Name of Timber Felling Right Holder's Rep:..... | | | | |
| Signature:..... | | | | | Signature..... | | | | |
| Date:..... | | | | | Date:..... | | | | |

Template 4b (Plantation forest): Sample Plantation Production Certificate

| PLANTATION PRODUCTION CERTIFICATE | | | | | |
|-----------------------------------|-------------------|-----------|-----------------------------|-------------------------|--------------------------|
| Company Name (Logger)..... | | | Property Mark..... | | |
| Region..... | | | District..... | | |
| Reserve Code | Compt. No./Series | Species | Number of logs | Contract Ref. Number | |
| | | | | | |
| LOG DETAILS | | | | | |
| Stump label | Log No. | Log label | Length (m) | Mid-Point Diameter (cm) | Volume (m ³) |
| | 1 | | 5.26 | 22 | 0.190 |
| | 2 | | 5.12 | 24 | 0.226 |
| | 3 | | 6.45 | 22 | 0.228 |
| Total Volume | | | | | |
| Name of FSD Authorized Official: | | | Name of Company Rep./Agent: | | |
| Signature: | | | Signature: | | |
| Rank: | | | Rank: | | |
| Date: | | | Date: | | |

Template 5- Lumber Production Sheet

| | |
|---|--|
| Company/Artisanal Miller..... | Property Mark..... |
| Location | Forest Compartment/Block/Coupe/Area |
| Felled Tree Information Reference No..... | |

| | | |
|-----------------|-----------------|-------------------|
| Forest District | Stool Landowner | District Assembly |
| | | |

| Type of Timber Permit | FC Tree Stock No. | Company No. | Tree Species | Log ⁴ No. | Log Dimension (Length & Avg. Diameter) | Log Volume (m ³) | Lumber Details & Tally | | |
|-----------------------|-------------------|-------------|--------------|----------------------|--|------------------------------|------------------------|---------------|-------|
| | | | | | | | Dimension | Qty. (pieces) | Grade |
| | | | | | | | | | |
| | | | | | | | | | |

Forestry Officer's Name..... Total no. of Lumber Recorded.....

Signature.....

Estimated Total Lumber Volume (m³).....

Date.....

Contractor's Representative Name.....

Signature.....

Date.....

THIS IS NOT A PERMIT TO FELL TREES OR TRANSPORT TIMBER PRODUCTS

⁴ Log refers to any utilizable portion of the tree (e.g. stem, branch wood, butt-end log, etc.)

Template 6a- Logging Residue Details

| | | | | | | | | | |
|--------------------------------|--|--|--|---|---|-----|-----|-----|-----|
| Region | District | Forest Reserve /OFR Area | Timber Rights Allocation Type & Ref. No. | Timber Felling Right Holder | Partner Agreement Reference No. | | | | |
| Compartment # / Location | Property Mark | Stool Landowner | District Assembly | Locality Mark | | | | | |
| | | | | | Log Dimensions (If measurable) | | | | |
| Species code | Primary log label (felled tree tag on stump) | Logging residue description ⁵ | Logging residue label (tag) | TUC holder/ Artisanal miller serial log # | L | Db1 | Db2 | Dt1 | Dt2 |
| | | | | | | | | | |
| Remarks | | | | | | | | | |
| Name of Range Supervisor:..... | | | | | Name of Timber Felling Right Holder's Rep:..... | | | | |
| Signature:..... | | | | | Signature..... | | | | |
| Date:..... | | | | | Date:..... | | | | |

⁵ Waste refers to any potentially utilizable portion of the tree (e.g. stem, branch wood, butt-end log, etc.) that has been left on the forest floor as a result of logging damage, poor wood quality, defects, etc.)

Template 6b- Milling Residue Details

| | | | | | | | | | |
|-------------------------------|--|---|---|--|-----------------------------|---|---|-----|------|
| Region | Location of wood processing facility | Type of wood processing facility <input type="checkbox"/> Sawmill <input type="checkbox"/> Plymill <input type="checkbox"/> Veneer mill <input type="checkbox"/> Other (describe) | Name of Company | Partner Agreement Ref. No. for Domestic market lumber supply | | | | | |
| | | | | Mill Residue Dimensions (If measurable) | | | | | |
| Species description | Contract specification (source of cut) | Wood residue description ⁶ | Milling residue label (tag)/ identifier | TUC holder/ Artisanal miller log # | L | W | T | Qty | Vol. |
| | | | | | | | | | |
| Name of Mill Supervisor:..... | | | | | Name of TIDD Inspector..... | | | | |
| Signature..... | | | | | Signature..... | | | | |
| Date..... | | | | | Date..... | | | | |

Template 7a Logging Residue Measurement Conveyance Certificate

Company..... Property Mark.....
 Origin..... Destination.....
 Log Information Form Ref.#..... Forest District.....
 Driver's Name..... Vehicle Registration No.....

⁶ Waste refers to any potentially utilizable material generated after the milling timber (e.g. shorts, thins and narrows, and rejects which do not meet export quality requirements)

| Type of Timber Right Allocation | Reserve/Off Reserve Area | FC Tree Stock No. | Tree Species | Logging Residue Description | Logging Residue Label | Logging Residue Dimension (if measurable) |
|--|--------------------------|-------------------|--------------|-----------------------------|-----------------------|---|
| | | | | | | |
| | | | | | | |
| | | | | | | |
| Total number of pieces/estimated wood volume (m ³) | | | | | | |
| | | | | | | |

These logging residue have been inspected by a representative of the Forestry Division and approval to transport them is hereby granted

Title of Approving Authority.....

Date of Issue

Signature.....

Date of Expiry.....

Name of Authorizing Officer.....

Timber Transport Fee Receipt No. (Attach copy of receipt).....

Template 7b Milling Residue Measurement Conveyance Certificate

Company (Miller)..... Property Mark.....
 Origin (Mill location)..... Destination (Artisanal miller).....
 Log Information Form Ref.#..... Forest District/TIDD Nearest Office.....
 Driver's Name..... Vehicle Registration No.....

| Type of Timber Right Allocation | Reserve/Off Reserve Area | Contract Specs. (source of cut) | Tree Species | Milling Residue Description | Milling Residue Label | Milling Residue Dimension (if measurable) |
|--|--------------------------|---------------------------------|--------------|-----------------------------|-----------------------|---|
| | | | | | | |
| Total number of pieces/estimated wood volume (m ³) | | | | | | |
| | | | | | | |

These milling residue have been inspected by a representative of the Timber Industry Development Division and approval to transport them is hereby granted

Title of Approving Authority..... Date of Issue

Signature..... Date of Expiry.....

Name of Authorizing Officer..... Timber Transport Fee Receipt No. (Attach copy of receipt).....

Template 8 Sales Register

Artisanal miller/Company.....
 Contact Address.....
 Contact Telephone #.....

Property Mark.....
 Contact Person.....

| Sales Invoice No. | Date | Sales Order No. | Item No. | Product Code | Description | Quantity | Unit | Unit Price | Total Amount |
|------------------------------------|------|-----------------|----------|--------------|-------------|----------|------|------------|--------------|
| | | | | | | | | | |
| Amount Excluding VAT | | | | | | | | | |
| VAT | | | | | | | | | |
| Total Amount | | | | | | | | | |
| DELIVERY INFORMATION | | | | | | | | | |
| Date of supply to Domestic Market: | | | | | | | | | |
| Lumber Depot Point/ Agent: | | | | | | | | | |
| Lumber Retail Point/Agent: | | | | | | | | | |
| | | | | | | | | | |

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