

# Developing Internal Wood Control System for Small-Medium Forest Enterprises in Ghana



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# Kumasi Wood Cluster Association (KWC)

- KWC as a service provider is supporting SMFEs to develop capacities for Internal Wood Control documentation requirements and to implement procedures to track materials and products in relation to Lacey Act Amendment, EU Timber regulations and Ghana's Wood Tracking System (to be launched)



# ITTO Sponsored Project

- Objective
- Improve stakeholders (Small-Medium Forest Enterprises, Government agencies, Forestry Educational Institutions, Professional Bodies, etc) understanding for INTERNAL WOOD CONTROL SYSTEMS requirements related to legal and sustainable timber trade.
- Develop standard guides and brochures for implementing INTERNAL WOOD CONTROL SYSTEMS in SMALL-MEDIUM FOREST ENTERPRISES
- Develop computerized wood tracking software for SMALL-MEDIUM FOREST ENTERPRISES to link with the WTS infrastructure to be adopted under the VPA.
- Support 10 Small-Medium Forest Enterprises to obtain FLEGT licenses / Chain of Custody Certificate.

# Project Methodology

- Analyse the present system.
- Identify weaknesses
- Identify inefficiencies
- Make suggestions and recommendations about a secure system suitable for small and medium companies.



# Key Activities

- Developed templates & trained 15 future trainers (FTs) on information capturing and record storage (tree data, log data, finished goods warehousing, sales documentation)
- Created awareness on INTERNAL WOOD CONTROL SYSTEMS/WTS tools for stakeholders, including KWC, NWG, GTMO and Industry.
- Training on implementation of INTERNAL WOOD CONTROL SYSTEMS (WTS, CoC, Data analysis, etc.)
- To develop INTERNAL WOOD CONTROL SYSTEMS software(s) for electronic data processing based on data capturing templates developed.
- Train on the use of ICT in INTERNAL WOOD CONTROL SYSTEMS [MS Word, MS Excel, Access, WTS Software(s)]
- Developed harmonised brochures for WTS (legality) & CoC (certification)
- Developed guide/manual for WTS and CoC implementation.
- To carry out internal monitoring, evaluation, sharing of knowledge and experience with stakeholders

# Current Chain of Custody in Ghana

- Paper based system
  - From standing tree in the forest to mill log yard
- Records of standing stock
- Felling records
- Transport records
- Mill gate arrivals (company records)
- Post harvest monitoring
- During harvest monitoring
- Transport monitoring

# Weaknesses of the current system

- Inaccuracies in stock survey
  - Low intensity of post harvest verification
- Forest Services Division not present at moment of felling
- Timber Information Form based on company data
- FSD fail to verify load during issue of LMCC
- TIDD fail to measure logs on trucks
- Companies understate volumes
- Companies harvest out of yield
- No control of mill inputs and outputs
- Unregistered log trading

# The Problem

- The existing system does not work.
  - It allows illegally harvested trees to enter the production stream.
  - It allows significant unpaid for volumes (hence illegal) to enter the stream.
  - It does not give COC assurance to legal trees traded between companies.



# Origins of the problem

- The system is not properly applied.
  - FSD staff not present in the forest.
  - FSD staff do not check measurements.
  - Checkpoints in transport do not check information properly.
  - Post harvest checks in forest are not effective.
  - Document not stored in secure conditions.
  - Documents not recorded in filing system.

# Key Issues

- The present system is too bureaucratic with too many documents and too many people involved.
- The system slows down log movements significantly.
- Physical COC is lost in the forest since logs are not matched to stumps and some logs are known to be illegal
- COC of the paper evidence is lost at many places.
  - Information is not filled in by the correct person.
  - Information is not checked against reality
  - Some documents are not present at the right time.
    - LIF, Waybills etc.
- Log sales between companies are not accompanied by LMCC information which is required to verify legality.

# Problem of Trust

- Chain of supply from the forest to the mill cannot be said to be trustworthy.
- Companies are liable to understate their volumes.
- Regulatory officials are vulnerable to compromise their oversight roles
- Control systems must overcome the problem of trust.

# Proposed Solution

- Improve on Pre-harvest Stock Survey
- Use efficient Log Labelling/Tagging
- Consider Independent Measurement of Volumes by Trusted Partner.
- Enforce Post – harvest Stock Survey.



# Alternative

- Adopt the full WTS technology of the TVD.
- Final form still in doubt
- Barcode identification of timber
- Possible use of electronic system for collection of data.
- Electronic system for control and verification of data
- Critical control points still in some doubt



# Probable critical control points

- Pre harvest survey
- Post harvest survey
- Point of Harvest
- Forest landing
- Forest gate or equivalent
- Intermediate landing
- Mill gate in
- Mill gate out
- Export harbour in
- Export harbour out

# Role of the FC

- FC
  - Allocation of TUCs
- RMSC
  - Pre and post harvest survey
- FSD
  - Felling (TIF), Measurement control, Transport control (LMCC)
- TIDD
  - Mill gate in and out
  - Issuing of FLEGT Licences and export permits
- TVD
  - Recording and verification of WTS information
  - Auditing of exporters for issue of FLEGT Licences
- TVC
  - Political control of TVD and WTS

# Role of the Industry WTS Data Capturing Templates

KWC Wood Tracking Manual...



# Felling

- Information of Compartment and operator recorded.
- Stock number and Barcode attached to stump area during stock survey.
- At moment of felling Barcode attached to Primary Log
- Dimensions of Primary Log measured and recorded
- Contractor Number allocated to Tree.
- Basic information of tree recorded for TIF
  - Stock Number, Stump Barcode, Log Barcode, Contractor Number Db, Dt, Length, Date of Felling

## Form # 1.2: Yield Summary

Compt. No./Coupe Area		Property mark		Year of Yield Allocation
Compt. Area	153.43	Locality mark		

[illegible]

**Form # 1.3: Yield Balances**

Compt. No		Year of Yield Allocation	
Compt. Area (Hectares)	153.43	MLNR Approval Ref	
Duration		Date of Last Harvest	
Date of first harvest			

SPECIES	NO. OF TREES ALLOCATED	NO. OF TREES REMOVED	TREE BALANCES
Ceiba	4	2	2
Dahoma	3	2	1
Wawa	4	0	4
Odum	6	1	5
Ofram	3	0	3
Celtis	3	0	3
<b>TOTAL</b>	<b>23</b>	<b>5</b>	<b>18</b>
No. of Trees Removed per Hectare			0.117317343

## Form # 2.2 : Primary Lof (TIF)

**Property Mark**

### Locality Mark

[illegible]

# Cross Cutting

- Measuring of Secondary Logs
- Attachment of Bar Code to Secondary Logs (Butt Log retains Primary Log Barcode)
- Allocation of Contractor Log No.
- Recording of Secondary Log Details
  - Dt, Db, L, Contractor Log No. TIF No. Stock No. Log Barcode No.

### Form # 2.3: Secondary Logs

[illegible]

# Loading

- Completion of LIF
- Completion of Waybill
- Recording of LIF number
- Calculation of Log Volume
- Verification of Load with FSD
  - Forest Gate or FSD Checkpoint?
  - LMCC Issue

[illegible][illegible]



# Transport

- Recording of Waybill Information
- Recording of LMCC Information

	Company Name			Bibiani Logging and Lumber Limited		Origin	Bia Tributaries North Forest Reserve
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[illegible]

# Mill Gate Reception

- Verify Stock Numbers on LMCC against Physical Stock Numbers on Logs
- Verify Stock Numbers against Yield
- Record Stock Numbers against Yield (Log by Log)
- Check Barcodes Intact
- Record No of Logs
- Record Arrival Information
  - Date in, Time in, Vehicle, Driver, Origin
- Record document Nos.
  - LMCC, Waybill
- Execute Irregularity Procedure if Necessary
  - Tree out of Yield, Log without Barcode

[illegible][illegible]

# Logyard

- Unload Logs
- Read and Record Log Barcodes
- Read and Record Contractor Log No.
- Re-measure Logs
- Record Basic Log Details
- Report log irregularities to FSD
  - Under-measures
- Re-manufacture log/bolts for milling
- Re-measure bolts

**Form # 4.2: Log Yard**

[illegible]

# Sawmill/Veneer/Plymill

- Specify contract/batch production
- Select bolts to make products within a contract/batch
- Record cumulated volume of in-put (bolts)
- Record volume out- put of product
- Estimate yield of product

Form # 6.1: Sawmill Input-Output Relationship

[illegible]



# Comments

- Too Many Documents
- Ineffective Control
- Primary Control Point to be at Forest Gate
  - Manned by FSD and under FSD control
- Single Document to Replace TIF and LMCC for revenue collection and transport.
- Primary Control Point at Mill Gate
  - Constantly manned for mills over 500m<sup>3</sup>/month
  - Inspected by TIDD daily for Mills of over 100m<sup>3</sup> per month
  - otherwise weekly

# Comments

- Initiated a software development process
- Customized to be SMFE user friendly
- Built in functionalities, including;
  - Easy accessibility
  - Data security
  - Flexibility- configurable to suit other functions including National WTS (LAS compliant)
  - Simple Analysis, Reporting and documentation

# Thank You

