

TERMS OF REFERENCE (ToR)

Consultancy for the Development of a Domestic Timber Tracking Module within the Ghana Wood Tracking Decision Support System (GWT-DSS)

1. Background

Knowledge for World Conservation (KWC), in collaboration with the Forestry Commission (FC) of Ghana, is implementing activities under the project "Advancing Good Forest and Mineral Governance to Reduce the Contribution of Timber Trade and Mining to Deforestation in Ghana, Liberia, and Cameroon."

The project is funded under the Forest Governance, Markets and Climate (FGMC) Phase II Programme with support from the United Kingdom Foreign, Commonwealth and Development Office (FCDO). The project is implemented by a consortium led by the Nature and Development Foundation (NDF), with KWC serving as the principal implementing partner in Ghana.

The Forestry Commission (FC) through its Timber Industry Development Division (TIDD), Timber Validation Department (TVD), Forest Services Division (FSD), and ICT Directorate, has over the years successfully implemented the Ghana Wood Tracking Decision Support System (GWT-DSS) to monitor and verify timber legality along the export supply chain. The system has significantly strengthened Ghana's timber legality assurance system by supporting compliance with national timber legality requirements as well as international market obligations including the EU Forest Law Enforcement, Governance and Trade (FLEGT) Voluntary Partnership Agreement (VPA) and the European Union Deforestation Regulation (EUDR).

Despite these gains, significant challenges remain in tracking timber traded within Ghana's domestic market. Weak monitoring systems, inadequate documentation, fragmented information management, and limited adoption of previous digital solutions have undermined traceability and law enforcement from local timber vendors through to final consumers.

To address these challenges, Knowledge for World Conservation (KWC) in partnership with the TIDD of FC previously developed the Domestic Wood Tracking System (DWTS). Although the DWTS introduced valuable functionalities for domestic timber accounting and traceability, implementation challenges prevented full-scale adoption.

Since the development of the DWTS, several of its functionalities have been incorporated into the Ghana Wood Tracking and Decision Support System (GWT-DSS) platform. Rather than maintaining parallel systems, there is now an opportunity to review the DWTS, identify its remaining relevant components, and integrate these into the GWT-DSS through the development of a dedicated domestic timber tracking module.

The proposed module will improve traceability of timber traded on Ghana's domestic market, reduce duplication of information systems, strengthen transparency and accountability, and establish a single integrated national timber tracking platform serving respective export and domestic markets.

Accordingly, KWC seeks to engage a qualified software development firm or individual consultant to design, develop, test and support deployment of such a module.

2. Goal of the Consultancy

The overall goal of this consultancy is to design, develop and integrate a domestic timber tracking module within the Ghana Wood Tracking Decision Support System (GWT-DSS) that enables efficient accounting, monitoring and traceability of legally produced timber traded on Ghana's domestic market.

The module shall support both:

- a user-friendly front-end interface for domestic timber industry stakeholders, particularly timber vendors and consumers; and
- a secure back-end information management system for regulatory staff of the Forestry Commission, particularly the Timber Industry Development Division (TIDD) and Timber Validation Department (TVD), to administer, monitor, validate and generate reports.

3. Specific Objectives

The consultant shall:

- Review the existing DWTS, relevant documentation and current GWT-DSS architecture.
- Conduct comprehensive system requirements gathering that involves key stakeholders.
- Identify operational, policy and technological gaps affecting domestic timber traceability.
- Recommend which DWTS functionalities should be retained, modified or discontinued.
- Design and develop an integrated domestic timber tracking module within the GWT-DSS.
- Ensure interoperability with existing GWT-DSS databases and workflows.
- Develop comprehensive implementation documentation and user manuals.
- Conduct user acceptance testing and validation, capacity building and knowledge transfer for Forestry Commission Staff and timber industry users.

4. Scope of Work

The consultant shall undertake, but not be limited to, the following activities.

Task 1: Inception and system assessment

The consultant shall review the existing Domestic Wood Tracking System (DWTS) documentation, business processes, and the current GWT-DSS architecture and functionalities. The consultant shall also hold an inception meeting with five-member Steering Committee members including KWC, the Forestry Commission, and relevant stakeholders to validate the assignment approach and prepare an Inception Report outlining the methodology, work plan, stakeholder engagement strategy, and implementation schedule.

Task 2: Requirements Gathering and Gap Analysis

Conduct stakeholder consultations involving the Forestry Commission ICT Directorate, Timber Industry Development Division (TIDD), Timber Validation Department (TVD), Forest Services Division (where necessary), domestic timber vendors and timber trade associations, identifiable consumers, KWC and other relevant public and private sector stakeholders.

The consultant shall:

- Document functional and technical requirements.
- Assess current domestic timber tracking procedures.
- Identify gaps within existing policies, systems and workflows.
- Recommend improvements to enhance effectiveness, usability and compliance.

Task 3: System Design

Based on the approved requirements, the consultant shall prepare a comprehensive system design detailing the functional specifications, technical architecture, database structure, user workflows, security framework, user roles and permissions, API and integration requirements, and mobile responsiveness strategy to guide the development and deployment of the module.

Task 4: Software Development

Develop and integrate the Domestic Timber Tracking Module into the GWT-DSS.

The module should include, at minimum:

Industry Interface

Vendor registration and management	Sales and transaction recording
Timber stock management	Intuitive user experience suitable for users with relatively low literacy levels
Generation and Management of waybills (now known as the Domestic Timber Retail and Transport Certificate (DTRCT))	Notifications and alerts
Reporting dashboard	Mobile-friendly interface

Regulatory Interface

Vendor approval and management	Reporting and analytics
Inspection management	User and role management
Stock verification	System administration tools
Monitoring dashboards	Audit and compliance management

Core Functionalities

Vendor Management	Dashboard for Industry Users
Stock Management	Separate Dashboards for Regulators and Vendors
Accounting and Audit Trail	Data validation
Management of the Domestic Timber Retail and Transport Certificate (DTRCT)	Search and trace functionality
Reporting	Role-based access control
User and Account Management	Secure authentication
Offline data capture where feasible with synchronization capability	Web and mobile compatibility

Data backup and recovery mechanisms	Automated report generation
System logging and audit trails	

The consultant is encouraged to recommend and develop additional functionalities that improve domestic timber legality verification, accounting and traceability.

Task 5: Testing and Deployment

The consultant shall conduct system testing and support User Acceptance Testing (UAT), resolve identified bugs, and deploy the module within the existing GWT-DSS environment. The consultant shall also support pilot implementation to ensure smooth adoption and operational readiness of the system.

Task 6: Documentation

The consultant shall prepare comprehensive documentation for the system, including technical documentation, system administration manuals, implementation guides, user manuals, training manuals, quick reference guides, and video tutorials where appropriate to support effective use and maintenance of the module.

Task 7: Training and Skills Transfer

The consultant shall conduct practical training sessions for Forestry Commission staff, ICT administrators, the Timber Industry Development Division, the Timber Validation Department, domestic timber industry operators, and other relevant stakeholders. The training shall cover both operational use of the system and basic system administration to ensure effective adoption and long-term sustainability of the module.

5. Expected Deliverables

The consultant shall deliver:

1. Inception Report
2. Requirements Assessment and Gap Analysis Report
3. Functional and Technical System Design Document
4. Prototype/Wireframes for approval
5. Fully developed and integrated Domestic Timber Tracking Module

6. Tested and operational software
7. User Acceptance Testing Report
8. Technical Documentation, System Administration and User Manuals
9. Training Materials
10. Final Consultancy Report incorporating lessons learned and recommendations.

6. Expected Outcomes

Upon completion, the consultancy is expected to deliver:

- An integrated domestic timber tracking module within the GWT-DSS.
- Improved traceability of timber traded within Ghana's domestic market.
- Enhanced monitoring and regulatory oversight by the Forestry Commission.
- Reduced duplication of information systems.
- Improved compliance with Ghana's timber legality framework.
- Increased transparency across the domestic timber supply chains.
- Improved data availability for decision making and reporting.

7. Duration of Assignment

The consultancy shall be undertaken over **sixty (60) working days** spread within **six (6) calendar months (July to December, 2026)**.

8. Level of Effort and Remuneration

The consultant is allocated **sixty (60) working days within six (6) calendar months**.

Professional fees are attractive and negotiable.

Payments shall be made in accordance with KWC's standard contractual procedures and shall be linked to satisfactory completion and approval of agreed deliverables.

9. Qualifications and Experience

Interested consultants (individuals or firms) should demonstrate the following minimum qualifications:

- Master's degree in Computer Science, Information Technology, Software Engineering, Information Systems, Natural Resource Management, Environmental Science or a related discipline.
- Minimum of five (5) years' demonstrated experience in software design and development, preferably involving enterprise information systems, web and mobile applications, or government information systems.
- Proven experience in ICT database development, systems integration and information management.
- At least three (3) years' experience supporting natural resource governance, chain-of-custody systems, timber legality assurance systems, or related value chain accounting.
- Demonstrated understanding of Ghana's forestry sector, domestic timber market and timber sector reforms.
- Experience integrating existing software systems and databases.
- Experience conducting stakeholder consultations and requirements engineering.
- Experience designing user-centered applications suitable for diverse user groups.
- Knowledge of GIS-enabled systems, mobile applications and cloud-hosted platforms will be an advantage.
- Strong report writing, analytical and communication skills.
- Excellent written English.
- Ability to communicate effectively in English; knowledge of Akan or other widely spoken Ghanaian languages will be an added advantage.
- Demonstrated ability to work collaboratively with government institutions and development partners.

10. Reporting and Management Arrangements

The consultant shall report directly to the Executive Director of Knowledge for World Conservation (KWC). Technical oversight shall be provided jointly by KWC and the Forestry Commission through a Steering Committee established for this assignment.

KWC and the Forestry Commission shall facilitate access to relevant documentation, coordinate stakeholder consultations and provide technical guidance throughout implementation.

11. Intellectual Property and Confidentiality

All software source codes, databases, documentation, training materials and other outputs developed under this consultancy shall become the property of the Forestry Commission and Knowledge for World Conservation upon completion of the assignment.

The consultant shall maintain strict confidentiality regarding all information obtained during the course of the assignment and shall not disclose such information without prior written authorization.

12. Application Requirements

Interested consultants (individuals or firms) should submit:

- An Expression of Interest (EOI) letter.
- A technical proposal demonstrating understanding of the assignment, methodology and implementation approach.
- Detailed work plan and financial proposal with itemized budget.
- Curriculum Vitae (for individual consultants) or company profile (for firms).
- Evidence of successfully completed similar assignments.
- Contact details of at least two professional or institutional referees.

13. Evaluation Criteria

Applications will be evaluated based on:

- Demonstrated understanding of the assignment.
- Quality and practicality of the proposed methodology.
- Relevant technical experience.
- Qualifications and experience of key personnel.
- Experience on similar assignments.
- Financial proposal and value for money.
- References and past performance.

14. Submission of Applications

Applications should be submitted electronically to:

admin@kwcgh.org

with a copy to:

gustavadu@gmail.com

The subject line should read:

Consultancy – Development of Domestic Timber Tracking Module within the GWT-DSS

15. Deadline

Applications must be received **no later than 3rd August 2026**.

Late submissions will not be considered.

For enquiries, please contact:

admin@kwcgh.org

KWC is an equal opportunity organization and encourages applications from qualified consulting firms and individual consultants with demonstrated expertise in software development, information systems, forest governance and digital traceability systems.