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Examples of WTS

Review of examples of national or regional WTS in diverse environments and their relevance to Armenia, Georgia and Moldova, including Ukraine's and Romania's national systems

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Regional Workshop on Wood Tracking Systems (WTS) and EU Deforestation Regulation (EUDR) Compliance: Strengthening Forest Governance in Eastern Partnership countries

Yerevan, Armenia, 22-25 October 2025

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Structure of the presentation

- Ukraine's wood tracking system(s)
- (Romania's SUMAL timber tracking system)
- Other examples of national/ regional WTS
- Key difference between NWTS and other "traceability" systems
- Why suggest a NTWS in Armenia, Georgia and Moldova to support legal production and trade
- Conclusion, Key takeaways

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Ukraine's wood tracking system(s)

A complex and evolving situation, characterized by both progress and persistent challenges

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- Purpose: Combat illegal logging, ensure traceability, and comply with EU regulations

- Key systems:

  - **Unified State Electronic System of Timber Tracking (USSEAW)**

    - Used by all state forest enterprises under the State Forest Resources Agency of Ukraine - 2013

    - Aims to provide accurate online accounting of forest resources and operations, by marking wood with barcoded labels, and using mobile electronic devices

    - Compulsory for all forest users, or timber not included in the system considered illegal

- **Electronic Timber Circulation (EOD)**

  - Pilot project within state enterprise "Forests of Ukraine": to improve the EOD system, with GPS monitoring of timber trucks and specialized vehicles in forest areas

  - This will allow tracking of routes, mileage, parking, fuel consumption, and other parameters

- **Electronic Logging Ticket System**:

  - Geolocation data and the exporter's digital office integrated into the system

- **Photo-fixation** of loaded wood on timber trucks, being introduced:

  - During registration of the consignment note, the trucks will be photographed from three angles and the photos uploaded to the EOD system

- System of mandatory **Certificates of Timber Origin**:

  - Issued by Ukraine to prevent illegal exports

- **Legislative framework:**

  - Ongoing efforts to adapt the legislative framework to support implementation of the EUDR

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Strengths of the current systems

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There is, or will be:

- Digitalization of timber extraction and sales (data, pictures)
- Improved traceability, real-time monitoring, and transparency
- GPS monitoring of specialized timber trucks, reducing illegal transport
- Geolocation data and (legal) timber origin certificates, for EUDR compliance
- Recognition as a low-risk timber exporter by the EU (July 2025)

- Pilot project with FSC, using blockchain technology to track timber movement
- Increased government crackdowns:

  - Ukrainian government stepping up efforts to stop illegal logging,

  - including investigations into cases of suspected corruption among forestry officials

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Persistent challenges: ongoing issues and weaknesses

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- Illegal logging:

  - Remains a significant problem in Ukraine

  - 2024, increased by 30%, to 40,000m3 of wood (NGO study) - “only” 0.27% of the total volume of legal logging

  - Lack of unified statistics and comprehensive official data across all forests

- Fraud and corruption:

  - Historically pervasive in the forestry sector, impacting the entire timber supply chain (NGO reports)

- Investigations have uncovered schemes involving unauthorized logging, document falsification, and bribery

- Illegal logging "with papers": abusing sanitary felling permits
- EU concerns about the legality of Ukrainian timber:

  - Ukraine's ban on exporting unprocessed wood, in breach of the EU-Ukraine Association Agreement (2020)

  - Official documents/FSC certificates, insufficient for EU compliance

- Weak monitoring, and enforcement capacity remains limited
- Impact of the war with Russia:

  - Negatively impacting the forestry economy, and decreasing the share of forest rent in the country's GDP,

  - However, has increased the economic importance of Ukraine's forests, but also the risk of illegal practices and corruption

  - Some laws prioritising the country's defence over environment protection; 30% of protected areas have been affected

  - Reduced access to forests and information, including for NGO monitoring

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Path forward: key recommendations for improvement

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- Further legislative development: strengthen EUDR implementation framework to facilitate compliance
- Integration of digital systems into a single, unified ecosystem, and synchronization with European platforms (TRACES)
- Training programs: educate businesses and civil servants on compliance and digital tools
- Enhance monitoring and transparency: systematic tracking and public reporting of forest activities

- Supply Chain Adaptation: modernize management strategies
- Prioritize investments in product and marketing innovations
- Ensure payments to State Forestry Enterprises (SFEs) are direct, transparent and traceable, to reduce the risk of tax evasion
- “Sanitize sanitary logging”: Use local NGOs to verify the need and justification of sanitary logging, with ground demarcation and (photo and inventory) documentation before and after harvest

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Romania's SUMAL timber tracking system

- Previous presentation: "Introduction to Romania's WTS "SUMAL 2", by Prof. Bogdan Popa, Transylvania University of Brașov, Romania
- Case study, from the project reports D3, D5B, D7

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Other examples of national/ regional WTS

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- The EU has signed Voluntary Partnership Agreements (VPAs) with producer countries, as part of its FLEGT Action Plan, which are based on a Timber Legality Assurance System (TLAS)

- Most TLAS models rely on a centralized, *national forest sector information, wood tracking, and compliance verification* system,
  - that monitors and analyses forest-to-port data
  obtained from both compulsory declarations and regulatory inspections, i.e.,
  a national WTS

- VPA countries with a centralised NWTS model:
  - Cameroon, Congo, Côte d'Ivoire, DRC, Ecuador, Gabon, Ghana, Guyana, Honduras, Liberia, Vietnam etc.
  - Indonesia has adopted a different TLAS model

- Providers of these NWTS in VPA countries:
  - Ata Marie Gp. Ltd (Indonesia), GFEC/FRM /Gabon Advanced Wood (Gabon), Helveta Ltd (UK), Numeris Data/IAS (France), SGS (Switzerland), System 2IS (Côte d'Ivoire)…

- Other countries/regions with WTS:

  - Brazil, Canada (province of Quebec), Romania, Russia, Tanzania, Ukraine…

- Other projects:

  - EU's Sintetic Project, of a generic WTS

  - EU TEI – UN FAO project of a digital public infrastructure to support compliance, accessible to smallholders through open-source solutions

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Supply chain / due diligence information management platforms

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- Supply chain solutions (online, electronic “platforms“) have emerged for timber businesses (EU importers) to ensure e.g., EUDR compliance
- Previous presentation: solutions to transfer geolocation information, without full traceability through every step in the chain
- Relevance: Providers have potential capacity to build a NWTS around their technology
- Examples of providers:
  - 11Foundry (FiberTrace), Deeplai (TimberID), Ekwato, ForestChain, Preferred by Nature-iOV42-Double Helix-Orbify (Timber Chain), LiveEO (TradeAware), Sourcemap, SupplyCanvas, Tilkal, Track Record Global Ltd, Xylene (an example of blockchain-enabled software-as-a-service - SaaS)

- Other providers offer integrated technology and services*:

  * Due Diligence (DD) services: DD information collection, analysis, risk assessment, and risk mitigation

- Examples:

  - CMO Tracer, Double Helix, Global Traceability Solutions (GTS), LiveEO-PEFC, Supply Logica, Track Record…

- Initiative being announced, to compare supply chain traceability platforms:

  - Preferred by Nature - WWF, with support from ISEAL (International Social and Environmental Accreditation and Labelling Alliance),

  - launching a global hub to assess and verify these digital tools for legality, sustainability, and deforestation-free sourcing

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Key difference between NWTS and other "traceability" systems

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- Only WTS, not CoC certification and not blockchain, allow itemised, step-by-step traceability through the supply chain:

  - CoC: certificate, product list and invoice passed from CoC-certified seller to CoC-certified buyer, and system audited,

  - but individual products not registered in any centralised system,
  not allowing 'track & trace' beyond first level in supply chain

  - At best: mass/volume balance checks through transactions, to ensure that no additional certified wood is "created"

- Same for blockchain: no real traceability, unless individual wood products' unique IDs are transferred from seller to buyer and all changes tracked while keeping product filiation (owner, location, shape, status…)

- FSC, responding to concerns over integrity gaps, highlighting reforms such as blockchain-based traceability and isotopic testing

- "*FSC's credibility depends on one decisive step: end-to-end, verifiable traceability. Without traceability, FSC risks becoming irrelevant*" (Earthsight's Tara Ganesh on the future of forest certification)

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Why suggest a NTWS in Armenia, Georgia and Moldova to support legal production and trade

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Why not in France, for example?

- EU's 4th most forested country, 17 Mha, 31% of territory, 40 Mm3 harvest (51% wood fuel) and €47 billion sector revenue (2022)
- High rate of private ownership (75%), so forests well controlled by their owners, and very low rate of illegal harvesting
- FM certification strong (47% of forest area), including all State forests
- Forest Management Plans obligatory for private forests (> 15 ha); smallholders can join private FM groupings

- Harvesting usually through the tendering of standing cuts (ensuring maximum valorisation),
  - following a declaration to Min. Agri & Forests (MAF) for administrative and field control (forest guards),
  - followed by a declaration to the fiscal authority, which triggers a reimbursement of VAT on timber sales (incentive)
- plus taxation system rests only on an estimated average, annual revenue per ha, then VAT and corporate profit taxes downstream,
- so no much scope for systematically tracking timber and monitoring volumes/values
- Such combination of forest policy factors prevents black market development

So, why in Armenia, Georgia and Moldova?

- Similarities with countries where a national WTS is being implemented
- In all these (VPA and other) countries (examples exist on all continents):
  - Prevalence of centralised, State-controlled forest ownership and management system (though often through forest concessions)
  - No, or rare private forests,
  - FM certification only by large concessionaires
  - Forest rent at least partially based on timber volumes/values
  - Control and enforcement are limited, GDP per capita is low
  - And, illegal logging and widespread corruption are common risks and issues

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Conclusions, Key takeaways

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- Regional or national WTS or projects, including Ukraine's wood tracking systems, and Romania's digital WTS SUMAL-2 (which supposedly accommodate a high percentage of wood fuel):
  - are relevant examples and models for Armenia, Georgia and Moldova
  - with lessons to be learned from the experience,
  - and possibly technologies and software to be accessed and reused
- Providers of supply chain solutions may be able to apply their technology
- Only NWTS allow integral forest-to-border traceability and comprehensive forest sector monitoring

- Points of attention:
  - Integration of digital systems, if NWTS not unique
  - Unified system of statistical data across all forests
  - Public transparency and monitoring of forest governance activities
- SFM, forest sector revitalisation, FM certification, EUDR implementation, and NWTS,
  all combined,
  are key success policy factors,
  to prevent illegal logging, control harvesting and local distribution of wood products including wood fuel, and foster legal production and export trade of high value wood products