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#NaturaEAcasa

Monitoring the application of timber traceability rules

Tool to determine the evolution of the modus operandi and risk factors of illegal timber harvesting

Monitoring Report
May 2023

Disclaimer

The results of the monitoring included in this report are not statistically relevant to reflect the picture of illegal harvesting at national level, the figures refer only to the sample captured in this project. The results of this report are presented to illustrate the most common modus operandi in terms of illegal timber harvesting, together with the technical solutions needed to improve the legislative framework, aiming at simplicity, transparency and efficiency.

Illegally harvested timber is brought to market (the vast majority of it) in "tranches" of up to 10 m³/transport, without being backed by legal documents.

In order to avoid the sanctioning as a forestry offence of the transport of timber materials that are not accompanied by specific transport documents proving with certainty the legality of origin for the entire load, we consider that in less than 5% of the cases apprehended it was possible to exceed the aberrant threshold of 10m³/transport established by means of the Forestry Code.



The current Forestry Code still favours the theft of timber with (un)proper documents, with the mere requirement of not exceeding 10m³/transport. But what happens when we have over 3 million consignments leaving the harvest site every year!

An actual reform of the current control system is needed and the basis for the former must be laid down in the new Forestry Code. The strategic directions for action have already been established and endorsed by the Government through the National Forestry Strategy, all that is lacking is the political will to implement them appropriately.



One out of three consignments caught in the monitoring programme was carried out in violation of the rules on the origin, movement and marketing of timber.



Half of the illegal consignments identified in this way were not registered in SUMAL (i.e. shipments without a timber accompanying permit or multiple shipments under the same permit).



The main method by which illegally harvested timber is brought to market is "overloading", i.e. fraudulent declarations of quantities of timber transported. About 1 in 5 consignments registered in SUMAL are overloaded by more than 20% of the declared volume per shipment.



A radical change is needed to transform the current control system based on 'marking' and guarding trees in the forest into one focused on controlling the volumes of timber material leaving the forest (the time of placing the timber on the market - similar to making payments at the shop gate).



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Methodology

In this third round of monitoring, the network of monitoring points has been extended from 3 to 19 in order to capture as many situations as possible. The monitoring was carried out from November to December 2022 and March 2023. However, the same procedures were used for data collection and interpretation.

The choice of monitoring points has NOT been based on a monitoring protocol (which is in the works and should result from a series of repeated checks), but is mainly conditioned by the logistical requirements for testing/calibration of the procedures and technique used. Also the number of consignments captured **does not constitute a nationally representative sample.**

Therefore, the results of the current monitoring are not statistically relevant to reflect the picture of illegal harvesting at national level, but only capture some specific situations encountered during the monitoring period at the respective monitoring points!

The methodology (still under fine-tuning) proposes to monitor the movement of timber material through a **system of video surveillance cameras** placed on forest roads in certain **designated confidential locations** (N.B. judiciously sampled on the basis of a **monitoring protocol**), following the segment of **first placing on the market of timber** (including to avoid "double" reporting).

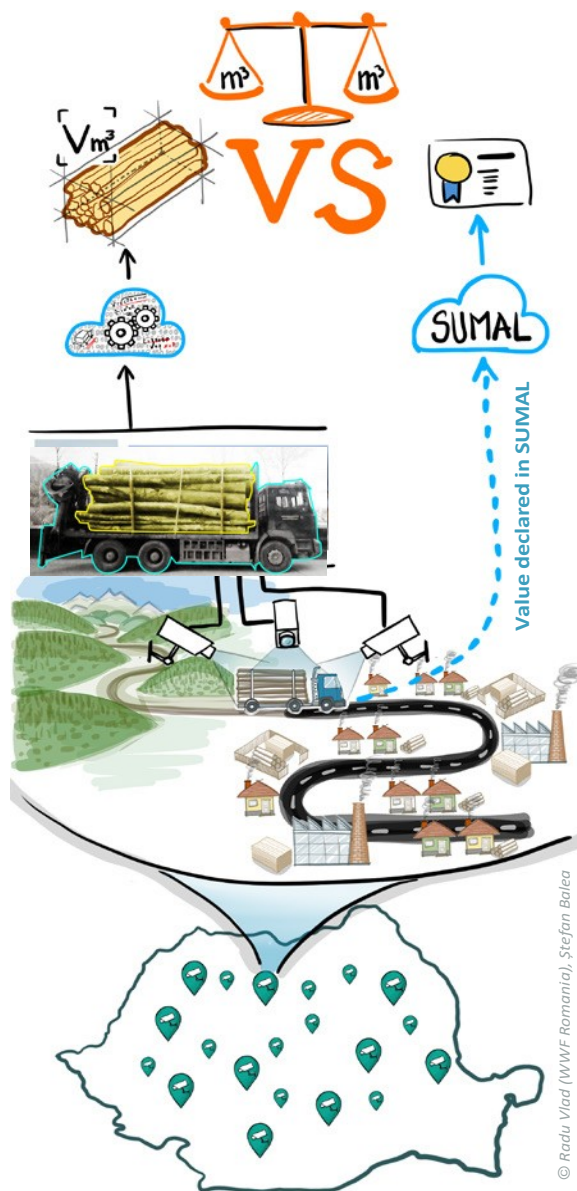
Field data collection was carried out unannounced, using a fixed point surveillance camera system.

The choice of monitoring points took into account the access network in the harvesting areas, avoiding as much as possible any potential discharge point (e.g. warehouse, processing point, households) existing between the harvesting site and the location of the monitoring system.

Timber shipments were verified exclusively using publicly available data via the Forest Inspector mobile app - SUMAL 2.0, respectively desktop version.

For the estimation of quantities, species and assortments, three independent assessments were carried out by specialists in the field (3 distinct methodologies were implemented), based on images collected by video cameras corroborated where appropriate with images uploaded to the forest inspector (where these were properly carried out).

In order to record a non-compliance, all three independent determinations had to confirm overfilling and moreover, the smallest extra difference had to exceed **20%** of the declared volume. **Interpretation of the assessments followed a cautious approach - the values presented were, in our view, minimum.**



The methodology is basically based on the **comparative analysis between the information gathered in the field** (based on the images captured by these cameras) **and the data officially recorded in SUMAL.** The aim is to identify consignments without documents proving legal origin, "multiple consignments" using the same origin documents, and overloaded consignments - where there are obvious differences between the actual volume transported and that recorded/declared in SUMAL.



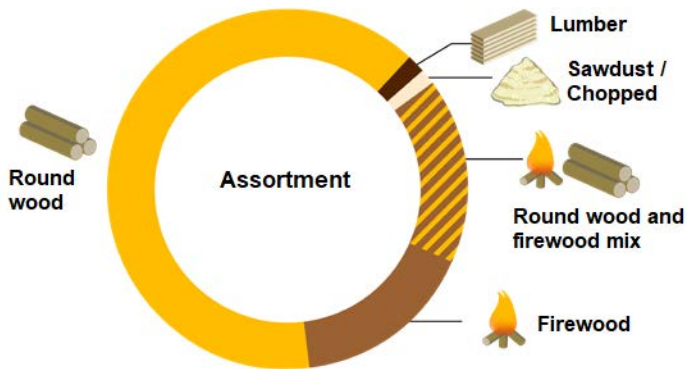
The results of this report are presented only to illustrate the potential and usefulness of this tool.



Results

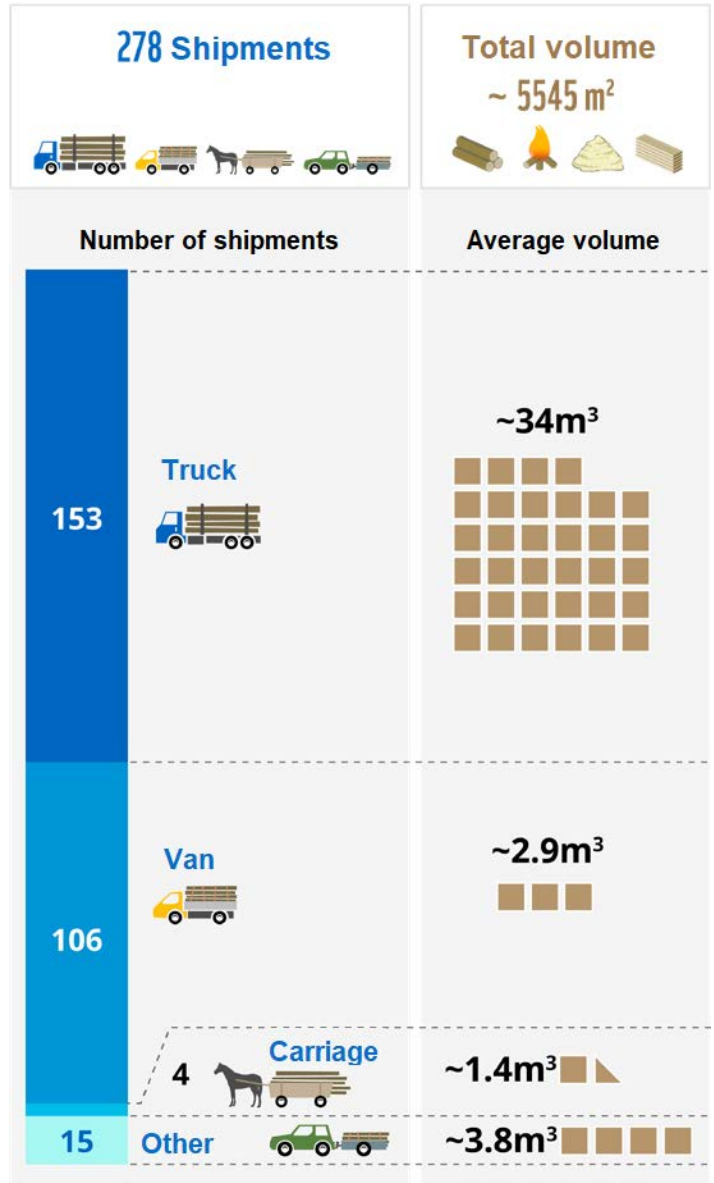
General results

Monitoring took place from 7/10 - 16/12 2022 and 14/03 - 25/03 2023 for a total of 24 monitoring days.



A number of other non-conformities were identified during the monitoring that were not statistically analysed, namely:

- Failure to comply with tonnage restrictions (load of ~40t on 8t road according to road markings);
- Identical photos (same load) used for different endorsements with different volumes and postage (APV);
- Consignments where 2 notices are issued, with different volumes, for the same load, one from the place of harvest (AP), the other from the warehouse (DA);
- Opinions with photographs taken of electronic devices.

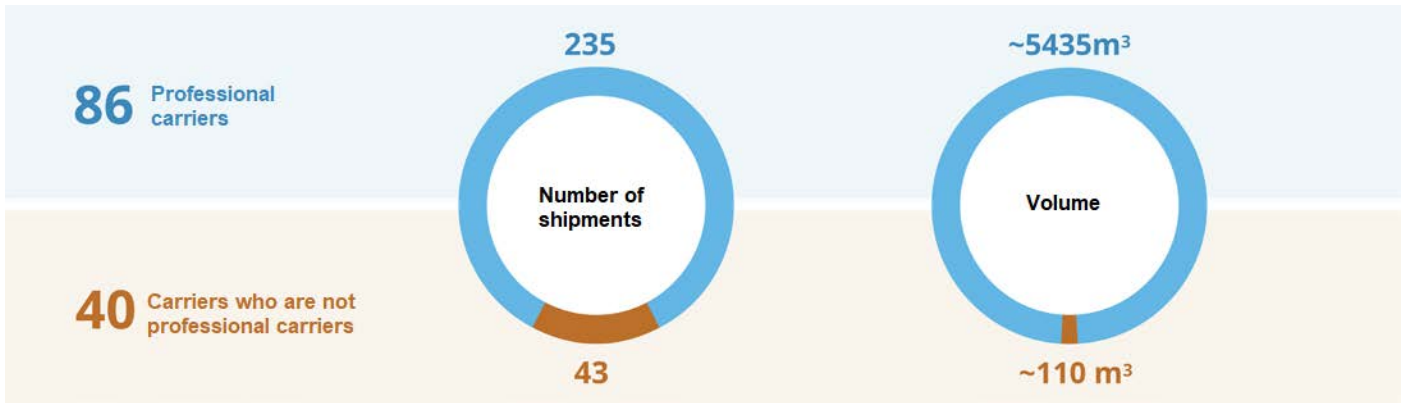


There is a high proportion of consignments without documents proving legal origin recorded in SUMAL, mainly due to the large number of consignments without documents transporting firewood (this includes the majority of consignments in the car trailer and tractor-trailer category);



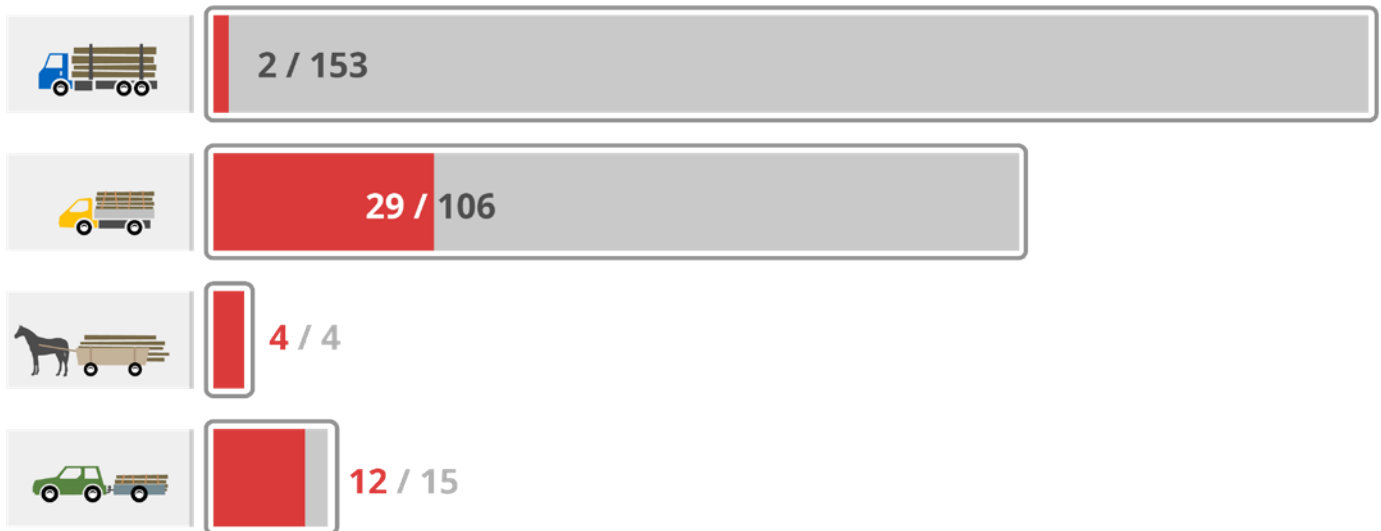
Approximately 1 out of 5 shipments caught by the monitoring programme were made without documents proving the legal origin of the timber materials registered in SUMAL.





A large number of shipments by non-professional hauliers are observed, but low in terms of volume.

SHARE OF UNDOCUMENTED CONSIGNMENTS GROUPED BY MEANS OF TRANSPORT



Recommendations:

- Closing [loopholes in SUMAL 2.0](#) by changing the way the application works;
- Development of SUMAL Owners to simplify/fluidize the legal exploitation of wood belonging to small forest owners, including forest vegetation outside the national forest fund (orchards, meadows, pastures, etc.), for own consumption (firewood, rural construction, ploughing, etc.); applicable only to small owners who are not operators and the wood does not enter the economic circuit.

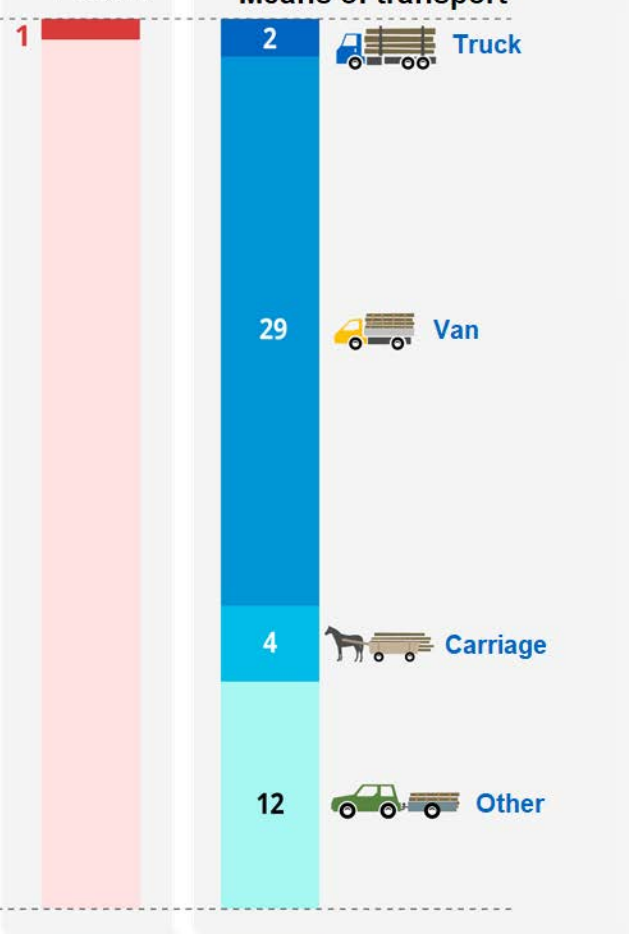


Transport without a permit

Shipments without a timber accompanying document registered in SUMAL



~ +10m³



- The majority of shipments without a timber permit / SUMAL code are trailers, car trailers and firewood trucks, most likely intended to meet the basic needs of local communities.
- **The majority of** non-professional car or trailer **transports** captured in the monitoring programme were not recorded in SUMAL 2.0 (although there is a legal obligation to do so).
- There are still loopholes in SUMAL 2.0 that allow fraudulent legal provenance. For example, when timber is shipped from outside the signal coverage area or when data traffic is stopped, accompanying endorsements and offline codes can be generated to legalize timber shipments leaving the place of harvest.

If the app is uninstalled or the cache in the app is deleted from the phone after delivery, all offline records never appear in the system again. In this way, accompanying documents generated offline only in the app installed on the operator's phone do not end up being counted in SUMAL (i.e. **the mechanism works like a "pro forma invoice" which legalises the shipments, but is no longer recorded in the accounts**). Con- According to the Minister for the Environment, Water and Forests, these practices have been repeated at some companies up to 100 times a month.

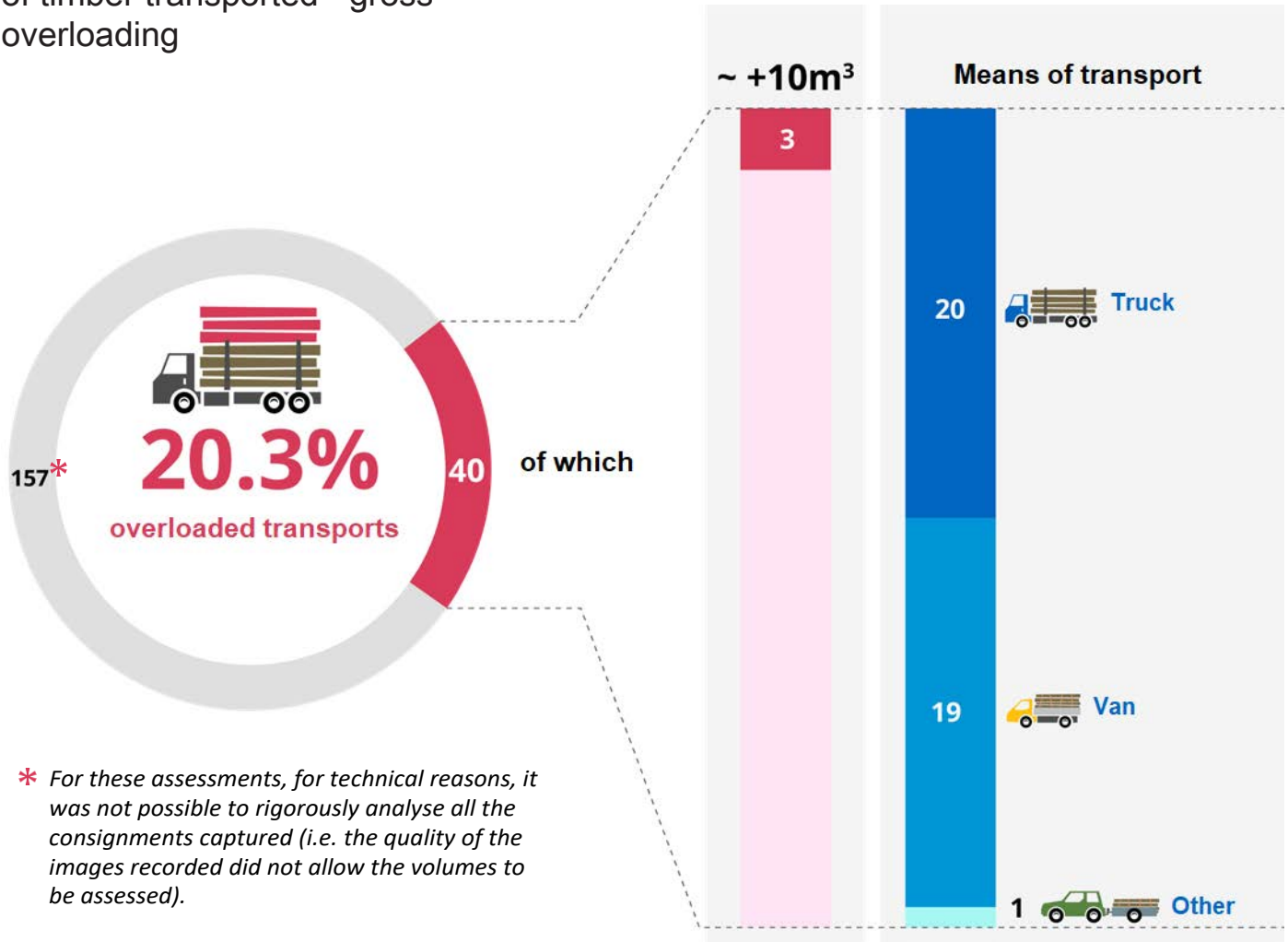


This shows that the results presented are not statistically relevant at national level (N.B. in the Forest Inspector platform these shipments have a significant weight).

Of the total number of shipments without a permit, only one shipment was suspected of exceeding the 10m³ threshold. It is noted that illegal timber shipments are mostly below this threshold, which is proving to be far too permissive.

Transport overload

Fraudulent declarations of quantities of timber transported - gross overloading



* For these assessments, for technical reasons, it was not possible to rigorously analyse all the consignments captured (i.e. the quality of the images recorded did not allow the volumes to be assessed).

- In order to interpret the results, a threshold of overloading of at least 1m³ and exceeding **20%** of the declared volume (**cumulative thresholds**) was taken into account; thus we consider that only those consignments were identified which showed a blatant overloading that could be determined by the methodology used.
- Differences of less than 20% have not been considered in this statistic even if they have been identified as clear even from the **SUMAL records made by the operators**¹.
- There have also been cases where, after the photos have been recorded in SUMAL, a few more logs have been loaded (possibly being unloaded before the consignment reaches the warehouse/destination). This is where the "transport fingerprint" can prove to be a useful tool, even in the interests of operators, to prevent "leakage en route".

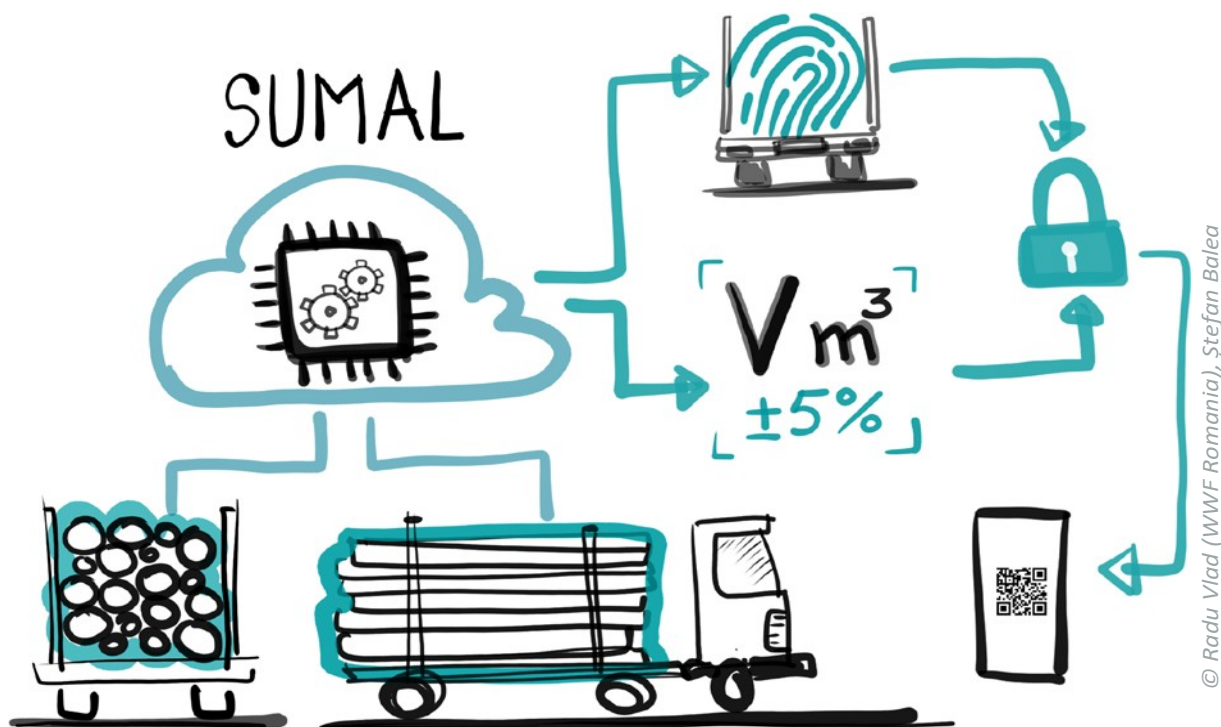
¹ In the case of the same shipment/loads (clearly identified from the pictures recorded in SUMAL), significant differences (e.g. 3-5 m³ /transport) were identified between the volumes recorded in the primary notice (i.e. shipments from the harvest site to the warehouse) and the secondary notice (i.e. shipments from the warehouse to other processing facilities). This practice is frequently used by some operators but could easily be prevented by the establishment of a "transport fingerprint".



Interpretation

- Overloading is reconfirmed to be the most common mode of operation, mainly favoured by the following factors:
 - » SUMAL 2.0 is not designed to perform a preliminary, automated verification of the data entered on declared timber quantities;
 - » the number of controls is insufficient precisely in the area of the first placing on the market of timber and the control procedures and instruments do not allow an **expedient measurement of volumes**²;
 - » the level of sanctions is not such as to discourage these practices.
- Only 3 consignments with overloads of more than 10m³ were suspected. It is highlighted that:
 - » The threshold of 10 m³ overstocked wood above which it is considered an offence is far too permissive;
 - » operators who resort to illegal timber shipments generally fall below this threshold.
- In support of thematic checks, modern technical methods must be developed to allow for expeditious volume verification by scanning the consignment and determining the volume by means of a technical code with a maximum accepted tolerance, which, together with the **graphical fingerprint**, represents the "electronic passport" for placing on the market. The traditional procedures for checking quantities should only be mandatory if tolerance overruns are thus indicated. maxims considered.

Solutions need to be developed modern techniques that to allow for expedient checking of volume²



² The legal procedures for measuring and verifying the quantities of timber transported require the same methods and instruments as in the Middle Ages: the clupa and the roulette. Thus, the legality of timber shipments must be checked in terms of volume by means of a cumbersome and costly legal procedure which nullifies any efficiency of the whole system (i.e. it can be estimated that it takes the equivalent of about 32 man-hours to check a single truckload of timber, plus the travel costs of the various factors involved, i.e. the cost of operating machinery for transporting and handling timber).

MODUS OPERANDI

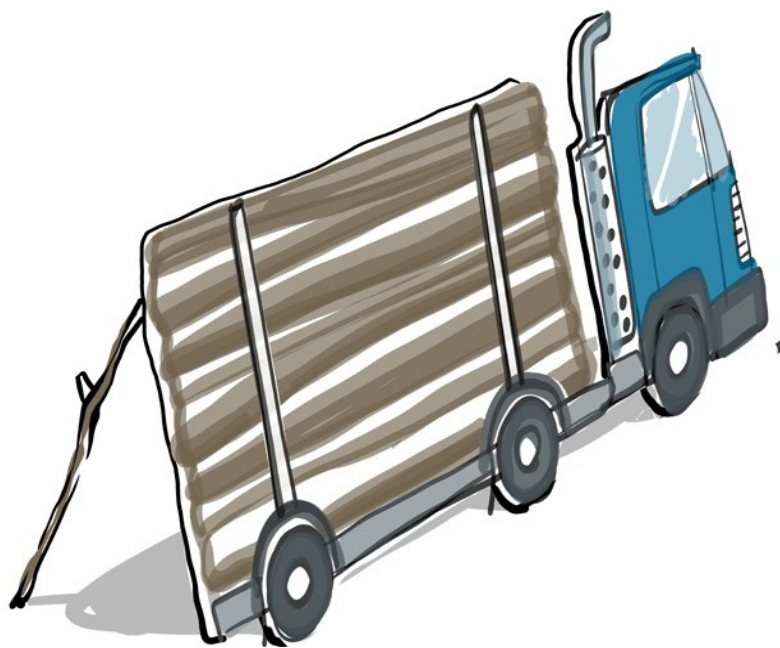
Registration of fictitious consignments in SUMAL

There were notices registered in SUMAL, without the mandatory set of photographs (N.B. although the haulier was a professional), whose corresponding volume was not identified on the means of transport. It is a solution for "adjusting" the accounting in the warehouse/processing units.

SUMAL 2.0 has claimed its **efficiency** by performing a permanent online check between the "inputs" and "outputs" of each warehouse/wood processing facility (i.e. the volume of wood material leaving a warehouse may not exceed the volume of "inputs" previously declared). In this context, these practices practically undermine the effectiveness of controls for traders.







I was drawing attention to another loophole in SUMAL that allows "manufacture of legal origin" including through possible fictitious shipments of timber from the intra-Community area (N.B. for shipments from the intra-Community area, no accompanying documents are issued and there is no obligation to transmit standardised information in SUMAL 2.0. at the entry into the country, shipments are accompanied only by intra-Community documents (e.g. a simple invoice) in printed format and the management entry is made on the basis of an entry-reception note, which the trader makes only at the entry into the warehouse).



Interpretation

The controls carried out in the case of warehouses/wood processing plants are based solely on **checking input records** vs. output records + existing stocks (which must be inventoried at all stages of processing).

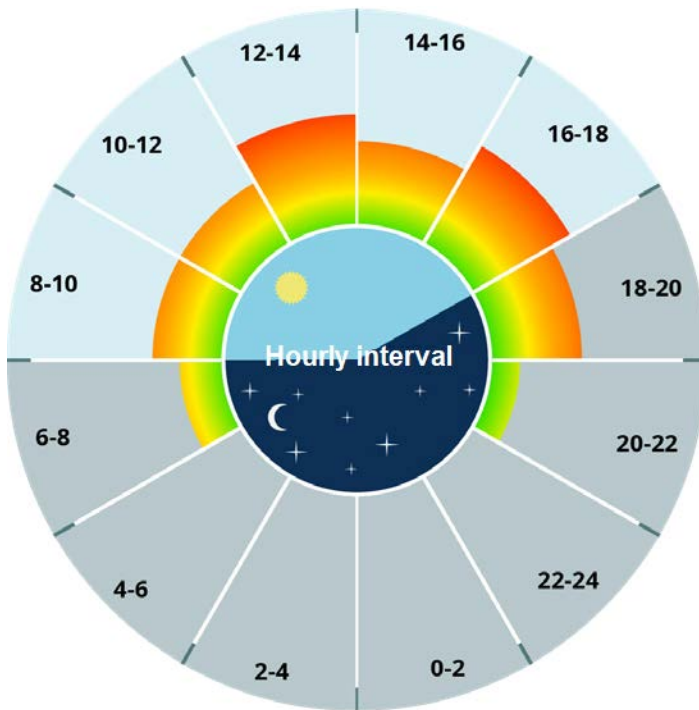
THE EFFECTIVENESS OF THESE CONTROLS IS REDUCED OR EVEN RENDERED FUTILE BY:

-  High consumption of resources to carry out controls;
-  With declared processing yields (which naturally depend on the quality of the timber material and the technical capacity to cut), significant quantities of illegally harvested timber can be "covered";
-  It is possible to "manufacture" source documents for entries (i.e. "fictitious entries") without much trouble;
-  The "inputs" and "outputs" of wood materials from timber illegally harvested, can be legalised through the loopholes in SUMAL 2.0.

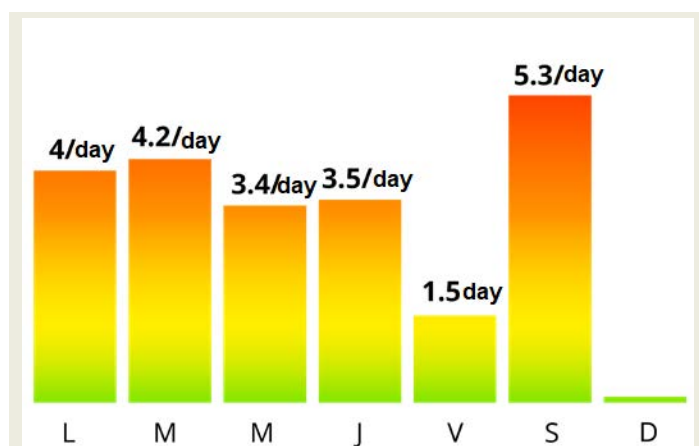


MODUS OPERANDI

Unloading of non-compliant consignments by time intervals



- It is **reconfirmed** that the frequency of non-compliant consignments peaks between 16:00 and 18:00, outside the normal working hours (08:00 - 16:00) of the structures responsible for security and control. There is also a clear correlation with the working hours in the forest (harvested timber is transported at the end of the working day).
- The share of night-time shipments, let alone non-compliant shipments, is insignificant. The appropriateness/relevance of the decision to prohibit the issue of permits to accompany timber material from the place of harvesting between 20:00 and 7:00 is therefore questionable.



It is **reconfirmed** that the highest frequency of non-compliant shipments is at the end of the week (with an obvious correlation with the working hours in the forest, i.e. the number of shipments).



It is **reconfirmed** that the majority of non-compliant consignments were carried out outside the normal working hours of the security and control structures.



It is **reconfirmed** that there are no non-compliant shipments on religious holidays.

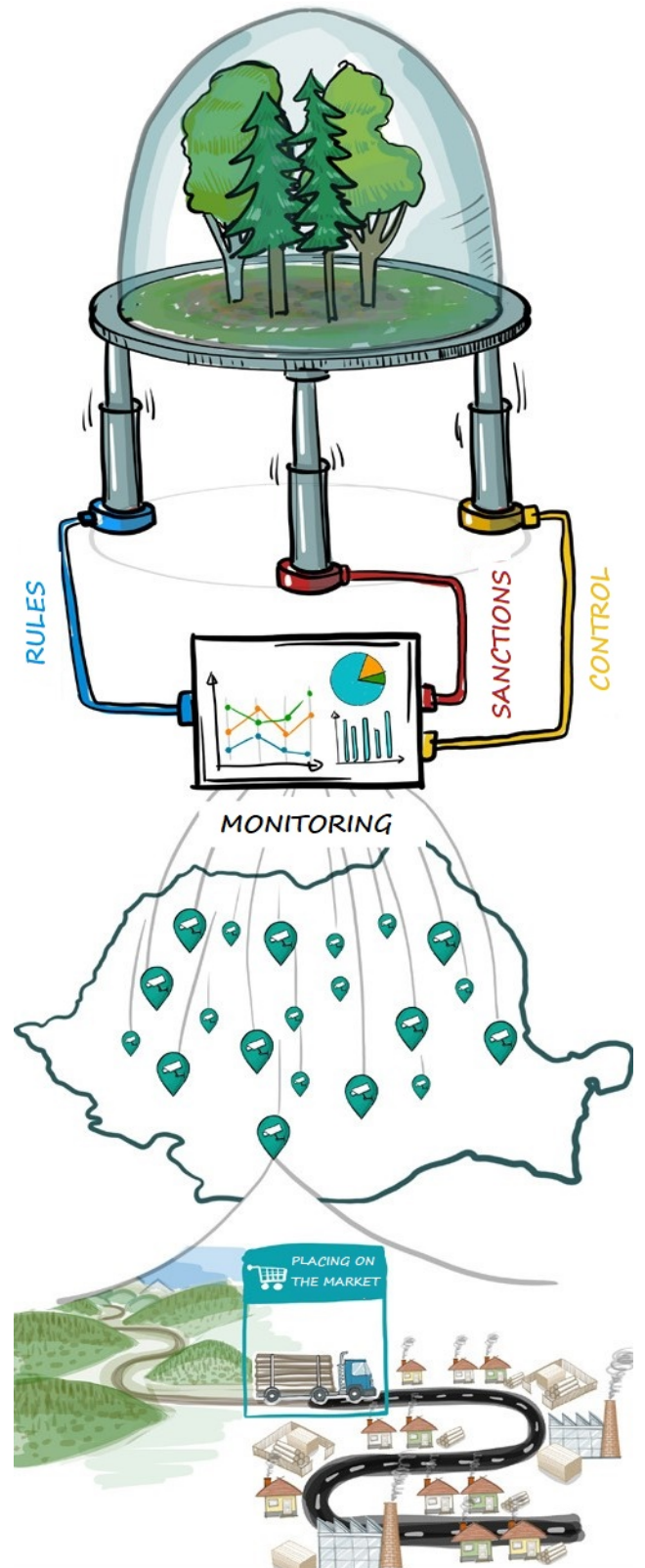


Technical solutions that must be politically taken on board by means of transposition into the **New Forestry Code (NCS)** the Strategic Directions for Action set out in the **National Forest Strategy (NFS30)**.

1

RULES THAT CAN BE EASILY MONITORED, PRODUCE CONCLUSIVE EVIDENCE AND ABOVE ALL ELIMINATE SYSTEMIC CONFLICTS OF INTEREST:

- The quantitative and qualitative estimate of wood mass per foot must remain a supporting document with the value of an estimate for the execution of logging works.
- Payments for harvested wood should be strictly related to the quantities of wood placed on the market. In order to eliminate the "grey area", the volume resulting from the VPA calculation should not be used as a commercial reference.
- The marking of trees to be harvested (i.e. tree marking) should be established as an internal monitoring tool, in terms of the correct application of forestry work. The "marking hammer" as the central element of the control system of volumes traded must be abandoned - we have already seen its effectiveness over the last 30 years!
- The assumption of the measurement of the volume of timber material harvested by operators should be operationalised through the declaration on placing on the market. Measurement of timber shall be done by qualified and specially authorised persons with liability.
- Strengthen controls on placing on the market through the introduction of the "electronic transport seal" (i.e. "digital transport footprint") and the possibility of automated volume estimation using modern IT/AI techniques.
- Transparent timber traceability system, oriented towards the assumption and monitoring of declarations made at the time of placing on the market, on the origin and quantity of timber products and the fulfilment of due diligence obligations by operators/traders.
- An integrated and transparent IT system for tracking the traceability of timber must be imposed on operators and traders until the first processing of timber material that may come from the place of harvest.



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2

FIELD CHECKS TARGETING CRITICAL AREAS OF THE TIMBER CHAIN OF CUSTODY WHERE THERE IS THE GREATEST RISK OF ILLEGALLY HARVESTED TIMBER ENTERING THE MARKET

- The planning of controls must follow a risk-based approach, based on objective criteria and transparency.
- Focus on measures to prevent/combat illegal harvesting when placing timber on the market.
- Expert control must be supported by new methods and modern tools for expeditious monitoring & verification on the ground of the quantities of timber transported and the uniqueness of shipments.
- Establishment of AI/IT solutions that can support automated and expeditious verification of data recorded in the IT system, and provide conclusive, objective evidence including in the event of overload or multiple shipments.
- Operationalisation of the automated alert system based on continuously updated algorithms, taking into account the evolution of the "modus operandi".

3

A SYSTEM OF PENALTIES PROPORTIONATE TO THE LEVEL OF DAMAGE AND FUNCTIONING AS A PREVENTIVE MECHANISM

- Reasonable thresholds, expressed cumulatively as a percentage of declared quantities (%), but also a minimum threshold in absolute value (m³), must be established for setting the legal tolerance.
- It is necessary to define the concept of "illegal exploitation/harvesting" for which the placing on the market shall be prohibited or, where appropriate, the product shall be withdrawn from the market in accordance with Reg. EUDR "Deforestation-free".
- In order for the penalties to be proportionate and dissuasive they should be expressed as a percentage (%) of the turnover of operators/traders.

4

THE OPTIMISATION OF THE SYSTEM TO COMBAT ILLEGAL HARVESTING MUST BE ACHIEVED THROUGH CONTINUOUS MONITORING

- Annual determination of the level of illegal timber harvesting at national level, highlighting the evolution of the modus operandi and specific risk factors
- The performance of the system should be regularly assessed through specific outcome indicators.
- Transparency on records of controls, indicating the nature and results of controls and any notifications of remedial action issued.