# Accounting for volumes of timber felled from the state forest

*Is the journey of timber felled from the state forest to the purchaser transparent and controlled?*

Report of the National Audit Office of Estonia to the *Riigikogu*, Tallinn, 3 June 2011


## Summary of the results of the audit

The National Audit Office conducted an audit to verify whether the accounting of the State Forest Management Centre (RMK) for the volumes of timber felled from the state forest and sold to purchasers is transparent and controlled and whether the internal audit system of RMK ensures that all the felled timber reaches the purchaser.

The state is the biggest forest owner in Estonia, having in its ownership more than 40 percent of all Estonian forests. A dominant part of the forest owned by the state is managed by RMK. The annual turnover of RMK has increased from 1.1 billion kroons in 2006 to 1.8 billion kroons in 2010. The annual profit of RMK for the year 2010 was 418 million kroons. Revenue from forests is paid to the state budget from the profit earned by RMK; the amount of the revenue depends significantly on whether all the felled timber reaches the purchaser and whether the journey of timber to the purchaser is controlled.

A structural reform was carried out in RMK in summer 2008 that separated planning, organisation and distribution with regard to forest management work. While in the case of previous organisation of work, the forest district planned the felling and organised the felling work, the felling is planned and organised by two separate structural units in the course of the new organisation of work. Before the structural reform, it was customary that the volume of timber obtained from the felling was not precisely measured; the volume of timber from the felling stored in the storage space was specified on the basis of the measurement data of the purchaser, and thus the amount of timber that reached the purchaser was entered in the stock records of RMK. After the reform, the so-called fixed harvesters were put into practice that make possible the measurement of the volume of timber precisely in the course of the felling, and the timber obtained from felling is stored in the storage space on the basis of measurement data provided by the fixed harvesters.

**In the opinion of the National Audit Office, the new organisation of work has improved the accounting for the volumes of timber felled from the state forest, yet the journey of the felled timber from the felling area to the purchaser is still neither transparent nor controlled, and thus possible losses of timber and the reasons therefor may remain undiscovered.** The audit indicates that the relevant volume of timber obtained from felling after RMK reform has substantially increased. This refers to a possibility that a part of the timber felled from the state forest was previously not delivered to the purchaser or the volume of accepted timber by the purchasers was smaller than actual according to their data.

The implementation of fixed harvesters has increased the accuracy of measurement of the volume of timber obtained from felling; however, in the opinion of the National Audit Office, due to the insufficiency of the audit system of RMK this does not fully ensure that all the felled timber is stored in the storage space.

**Main observations**

**Use of the fixed harvesters does not completely eliminate the threat of theft of timber as it is not ensured that all information regarding the felled timber reaches RMK.** The fixed harvester

measures all the timber felled in the course of the felling, calculates the volume of felled timber by types of trees and assortment and forwards the data to RMK, who in turn stores the felled timber in the storage space based on the data. The audit indicates that RMK regularly inspects the measurement accuracy of the harvesters but does not make sure that all data received from the felling areas of RMK with regard to the volumes of felled timber is sent to RMK. Therefore, the threat of theft of timber must also be taken into account when using fixed harvesters.

**The journey of timber from the felling area to the purchaser cannot be conveniently and clearly observed** as timber may be delivered to the intermediate storage spaces from different felling areas, making it impossible to discern from which felling area a certain amount is from. If timber is loaded from various intermediate storage spaces, the inadequacies of the conveyance documents on paper and the poor quality of filling the conveyance documents makes it often impossible to discern how much and from which intermediate storage spaces a certain timber assortment reached the purchaser. The inadequacy of information regarding the source of timber is caused by the vague formal requirements for conveyance documents established by a Regulation of the Minister of the Environment pursuant to which there is no obligation to mark all specific storage spaces from which the timber is loaded on the conveyance document. The e-conveyance document system put into practice in parallel with conveyance documents on paper as of 2009 in RMK allows for improved observation of the journey of timber by assortments, but the development of the e-conveyance document system is incomplete and does not replace conveyance documents on paper for the time being. In case it is not known from which felling area or storage space a certain volume of timber is from, it is impossible to determine the origin of the loss, the reason therefor and the possible person at fault.

**The stock records and sale of timber of RMK is based on different assortment classifications; this in turn complicates comparing the felled and sold timber.** The purchasers measure the accepted timber based on their classification of timber assortments (the so-called sales articles) that is different from the one used in the stock records of RMK; therefore, comparing the volumes of timber measured in the stock records of RMK to the measurement data of the purchaser on a level of various assortments is complicated.

**The relatively increased volumes of timber received from felling after the structural reform of RMK refer to previous losses of timber.** Analysis of the volumes of timber delivered for felling work and accepted from felling indicated that the volume of timber accepted from clear cutting in the years 2006-2008 was on average about 96% of the delivered volume before the structural reform of RMK. However, an average of 113% of the volume of timber delivered for felling was accepted from clear cutting in 2009. Accordingly an average of 17% more timber is received from clear cutting after the reform, which indicates that the inspection of the accounting of the prescribed cut was worse before the structural reform and a part of the felled timber was lost in the supply chain.

**Responses of the Management Board and Supervisory Board of the State Forest Management Centre and the Minister of the Environment:**

In the opinion of the Management Board of the **State Forest Management Centre**, the insufficiencies in the audit system are not of the sort that could cause a loss of timber in the collection process. The response indicates that the use of calibrated and controlled measurement devices and the introduction of observation of working processes on the so-called four eyes principle have brought about comparability of the felled and sold volumes of timber and substantially more accurate accounting than before. In the opinion of RMK, the discrepancies arising from time to time are generally caused by the weather and calibration of the measuring devices, and in these cases the analysts and/or audit measurers of RMK will ascertain the reasons therefor. Thanks to such activities, systematic errors in the measurement systems of the clients have been discovered, and the losses arising from discrepancies in measurement have been collected. RMK is of the opinion that the loss of timber collected from the state forest as a result of the organisation of work of previous years or bad faith in causing such a situation is impossible to establish.

The Management Board of RMK deems justified the criticism of the National Audit Office with regard to the accuracy of filling the accompanying documents, i.e. conveyance documents on paper.

In the opinion of the **Supervisory Board of RMK**, the discrepancies in the volumes of standing, cut and delivered timber and sold timber arise from the inaccuracy of the methods used to determine the volumes of timber (visual judgment) as well as natural events (forest growth, windthrow, deterioration of timber, etc.). Both reasons are natural and thus do not require a special audit of the Supervisory Board in the opinion of the Supervisory Board of RMK. In the letter of reply, the Supervisory Board of RMK expresses conviction that the internal audit and internal audit systems of RMK conform to the internationally recognised standards and the audits integrated into the working processes provide the management a reasoned certainty that the risks of the organisation are managed efficiently and the objectives are met in a sustainable manner.

In the respective letter of reply, the **Minister of the Environment** recognises that the relatively increased output of the volumes of timber from felling areas has mainly been achieved by improvement of the measurement accuracy and organisation of work as a result of the structural reform of RMK in 2008. The modern technologies put into practice have brought about a situation where the overview of the volumes of timber being collected and sold is more accurate, the respective information is forwarded faster and data processing is more automated. In the opinion of the Minister, the internal audit systems put into practice create the prerequisites for the risk of loss of timber in the supply chain to be minimal.

In the opinion of the Minister of the Environment, it is impossible to ascertain the loss of timber collected in the state forest in the previous years. The Minister recognises that the current system does still not guarantee absolute protection against theft, and it should therefore be constantly improved.

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