

**ASPECTS RELATING TO THE EVALUATION OF ACCIDENTAL
WOOD PRODUCTS, IN THE PERIOD 17 09-06 11 2017, IN THE
FORESTRY DISTRICT SUDRIGIU, BIHOR FORESTRY
DEPARTMENT**

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Abstract

The exploitation of forest products, regardless of the owner and/or the manager of the forest fund, is an important activity in the forestry sector.

Forest products have a number of specific features and are classified in wood products and non-wood products.

Wood products represent the most important weight in relation to the quantity and economic value of forest products. These products result (are obtained) from the application of specific forestry works.

In this case study we will analyze the possibilities of evaluation and capitalization of the accidental wood products that resulted from the violent storm of 17.09.2017, at the Forestry District Sudrigiu, Bihor Forestry Department.

For the evaluation of accidental wood products, their inventory was carried out with qualified forestry personnel from the Forestry District Sudrigiu and other forestry units within the Bihor Forestry Department.

The determination of surfaces with accidental wood products was done on the ground, using relatively simple positioning methods, and the results were recorded (transposed) on the forest maps.

The accidental wood products that have been inventoried and evaluated are sold in the timber auctions organized by the Bihor Forestry Department.

Key words: forestry products, wood products, accidental wood products, inventory of accidental wood products, assessment of accidental wood products, use of wood products.

INTRODUCTION

Forest products are classified into two categories: wood products and non-wood products.

Wood products are the main product of the forest. They are the biomass produced by the trees and harvested, according to some rules, by exploitation (Florescu, Nicolescu, 1998; Nicolescu, 2009; Serrada, Montero, Reque, 2008).

Wood harvested in the woods is used, as a matter of fact, as working wood in various branches of the economy and as firewood.

Currently, over 10000 different wood uses are known, and the dynamics of wood consumption is constantly changing in time and space (Beldeanu, 2004; Crainic, 2017).

In the future, forestry has as its main objectives the sustained increase of wood production and the increase of its quality. These objectives are directly related to increasing, diversifying and continuously restructuring wood consumption.

The interaction between growing wood consumption and wood resources implies the need to save wood in all consuming industries.

Although wood resources are renewable, they are limited, however, in order to ensure the quantities of wood for different users, rational and superior use of harvested wood products is necessary.

Wood products can be classified according to their specificity in the following (Florescu, Nicolescu, 1998; Crainic, 2017):

- main wood products resulting from forest regeneration cuts;
- secondary (intermediate) wood products resulting from young tree felling cuts;
- accidental wood products, resulting from calamities and legally harvested deforestation;
- woody products of hygiene;
- other wood products (ornamental shrubs and shrubs, wicker, seedlings and various wood products).



Photo. 1 - Accidental products on compact surfaces in the resinous seed orchard within the Forestry District Sudrigiu (Crainic Ghiță Cristian, Sudrigiu - Bihor, 02 10 2017)

Accidental wood products may be classified in: accidental wood products dispersed and accidental wood products on compact surfaces-photo. 1.

Accidentally dispersed wood products are wood products resulting from poor/medium/strong damage to tree stands by biotic factors and/or abiotic destabilizers on the surface of a parcel or parts thereof of not more than 0.5 Ha (Regulament din 5 octombrie 2017 de valorificare a masei lemnoase din fondul forestier proprietate publică).

These products can also be obtained by destroying some stands (very strong or full), on compact surfaces of maximum 0.5 ha.

Accidental wood products on compact surfaces are obtained by the complete destruction of a stands by destabilizing factors (biotic and/or abiotic) on compact surfaces larger than 0.5 ha (Regulament din 5 octombrie 2017 de valorificare a masei lemnoase din fondul forestier proprietate publică).

In this case, all the trees on that surface will be inventoried and evaluated.

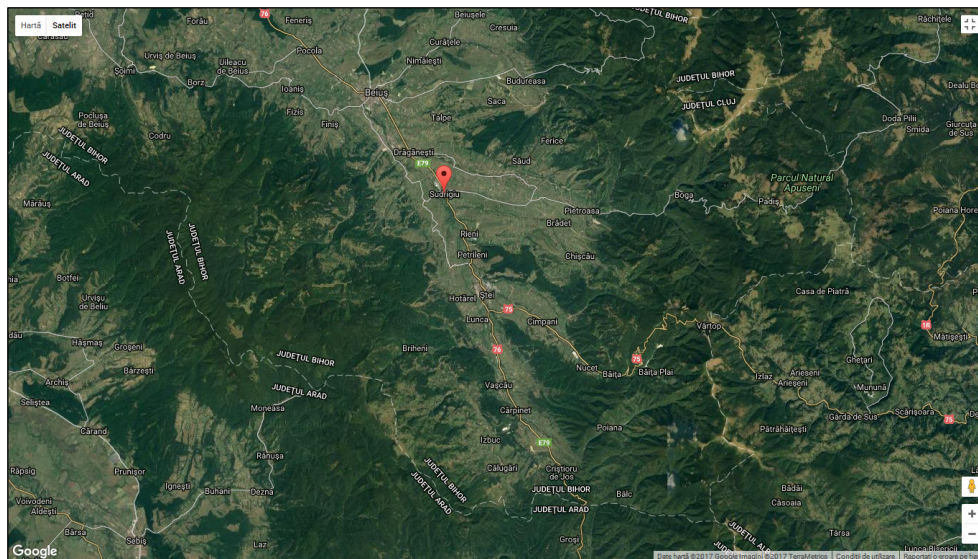


Photo. 2 - Location of the study

(<http://webcache.googleusercontent.com/search?q=cache:ZZ7wkDym8m4J:sudrigiu-bh.pe-harta.ro/+&cd=1&hl=ro&ct=clnk&gl=ro>)

MATERIAL AND METHOD

For the case study I used the following research methods:

-bibliographical documentation, observations, full inventory, experiment, comparison, simulation, digital photography.

The case study was carried out within the production units (U.P.) from the Forestry District of Sudrigiu, the Bihor Forestry Department, between September and November 2017 - photo. 2.

The case study objectives are related to the evaluation and exploitation of accidental wood products from the Forestry District of Sudrigiu, the Bihor Forestry Department, which resulted from the devastating storm of 17 September 2017.

Also, the aspects related to the regeneration of the areas where the accidental products will be extracted will be analyzed.

For the evaluation of the accidental products inventories were made in the stands affected by windthrow.

All the trees that were affected by the wind were inventoried.

During the inventory process the following elements were written:

-current number, species, breast height diameter (measured at a height of approx. 1.30 m from the ground), quality class.

Also, dry trees are measured, if any.

The diameter of the trees was measured with the caliper.

The current number in the inventory book is written on the tree, and at the base of the tree, the mark is applied and the number of marker used is printed, over which the blue paint is applied.

Table 1

The results of the work on the evaluation of accidental wood products on 06.11.2017, in the Forestry District Sudrigiu, Bihor Forestry Department

Nr. crt.	Production unit (U.P.)	Surface covered and volume evaluated			
		Public property of the state		Other owners, under contract with RNP	
		Surface covered (ha)	Volume evaluated (mc)	Surface covered (ha)	Volume evaluated (mc)
<i>0</i>	<i>I</i>	<i>9</i>	<i>10</i>	<i>12</i>	<i>13</i>
1	V	251.8	2883	-	-
2	II	181.6	6140	-	-
3	IV	151.7	1955	-	-
4	VI	171.8	714	-	-
5	VII	611.7	36649	-	-
6	III	325.9	2092	-	-
7	I	4.2	92	-	-
8	Other owners	-	-	479	10004
9	TOTAL	1698.7	50525	479	10004

RESULTS AND DISCUSSIONS

Field data was processed primarily in standardized formats. The trees on the compartment were distributed by species, diameter classes and quality classes.

The primary results were processed with the FOND program, resulting in quantitative, qualitative assessment (by assortment) and value of the inventory of wood material in the form of accidental wood products.

The results obtained from automated data processing are summarized below - table 1, fig. 1, fig. 2, fig. 3, fig.4 and photo.3.

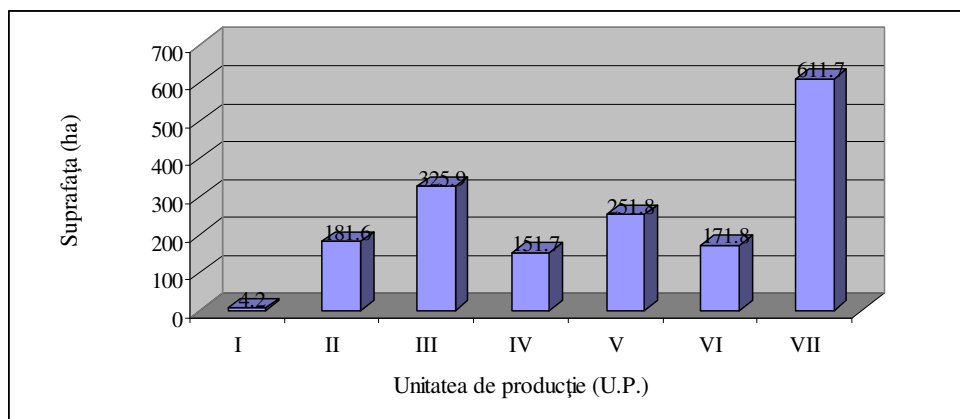


Fig.1 - Surfaces on which accidental wood products have been inventoried, on production units, until 06.11.2017, in the Forestry District of Sudrigiu, Bihor Forestry Department

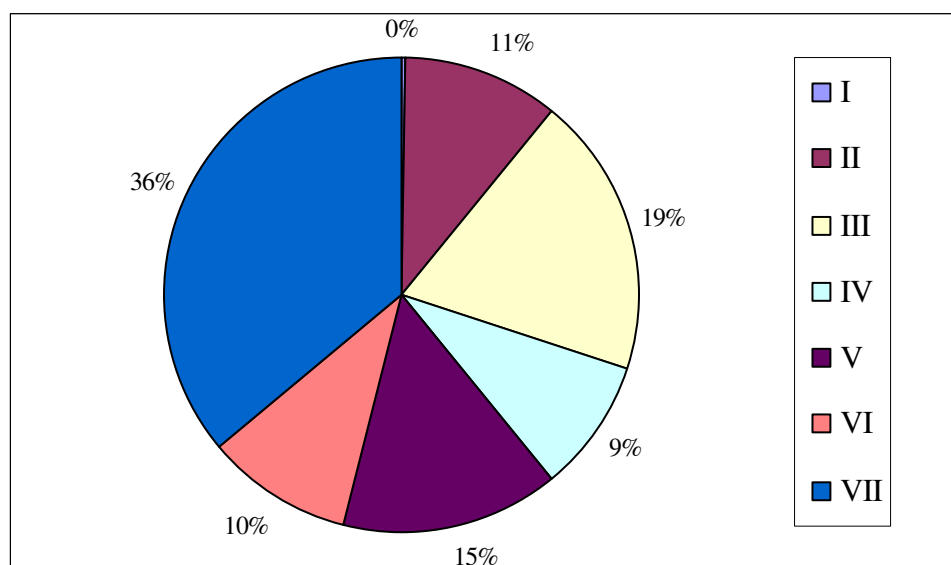


Fig.2 - Share of areas assessed by production units, related to the wind blows produced in 17 09 2017, on 06.11.2017, in the Forestry District of Sudrigiu, Bihor Forestry Department

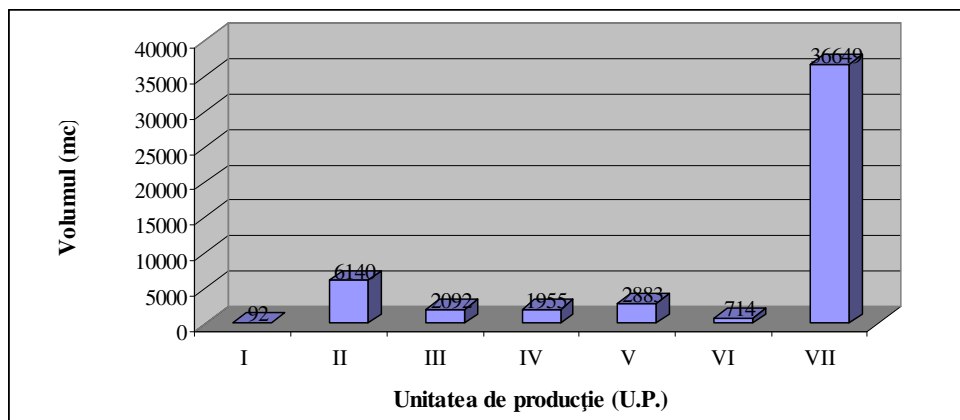


Fig.3 - Wood volume (accidental products) assessed on production units by 06.11.2017 at the Forestry District of Sudrigiu, Bihor Forestry Department



Photo. 3 - Accidental woody products on compact surfaces, in a beech tree, of production unit (U.P.) VII, Forestry District of Sudrigiu, Bihor Forestry Department

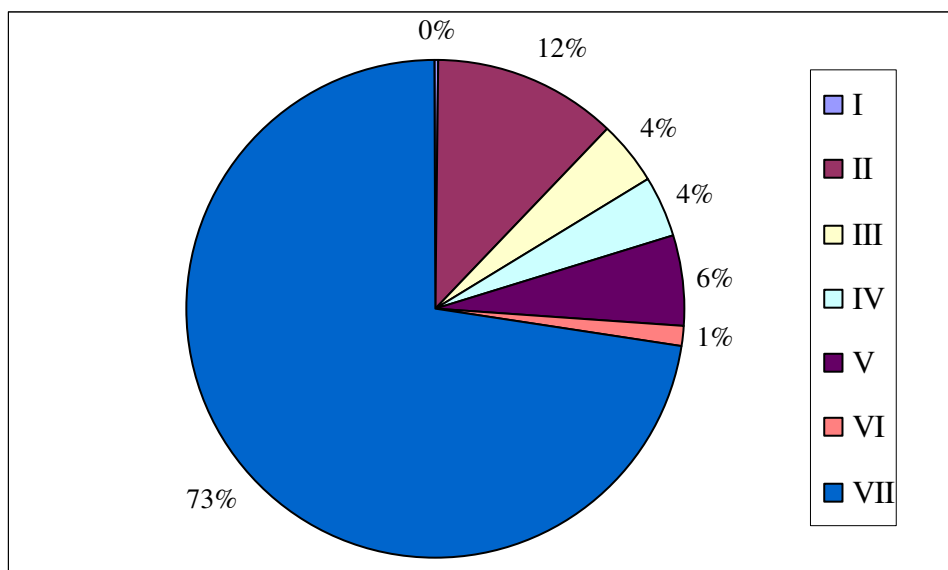


Fig. 4 - The share of the assessed wood volume by production units, related to wind blows produced on 17.09.2017, on 06.11.2017, at the Forestry District of Sudrigiu, Bihor Forestry Department

CONCLUSIONS

The analysis of the field situation shows that the areas affected by the wind blows of 17 09 2017 are higher than estimated.

Also, the volume of wood (from accidental products) assessed by inventory is much higher than the estimated wood volume.

Identified and evaluated woody products are in the largest proportion on compact surfaces.

The quality of the assessed wood (from accidental wood products) is inferior in the largest proportion because the wood is affected by rupture and/or splitting.

Stands affected by the storm of 17 September 2017, in high proportion, are relatively and / or difficult to exploit.

The areas on which the wood will be exploited (from accidental products) will be determined with precision after the process of exploiting and capitalizing inventory wood is completed.

Also, the works necessary for the reforestation of these areas will be established.

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