

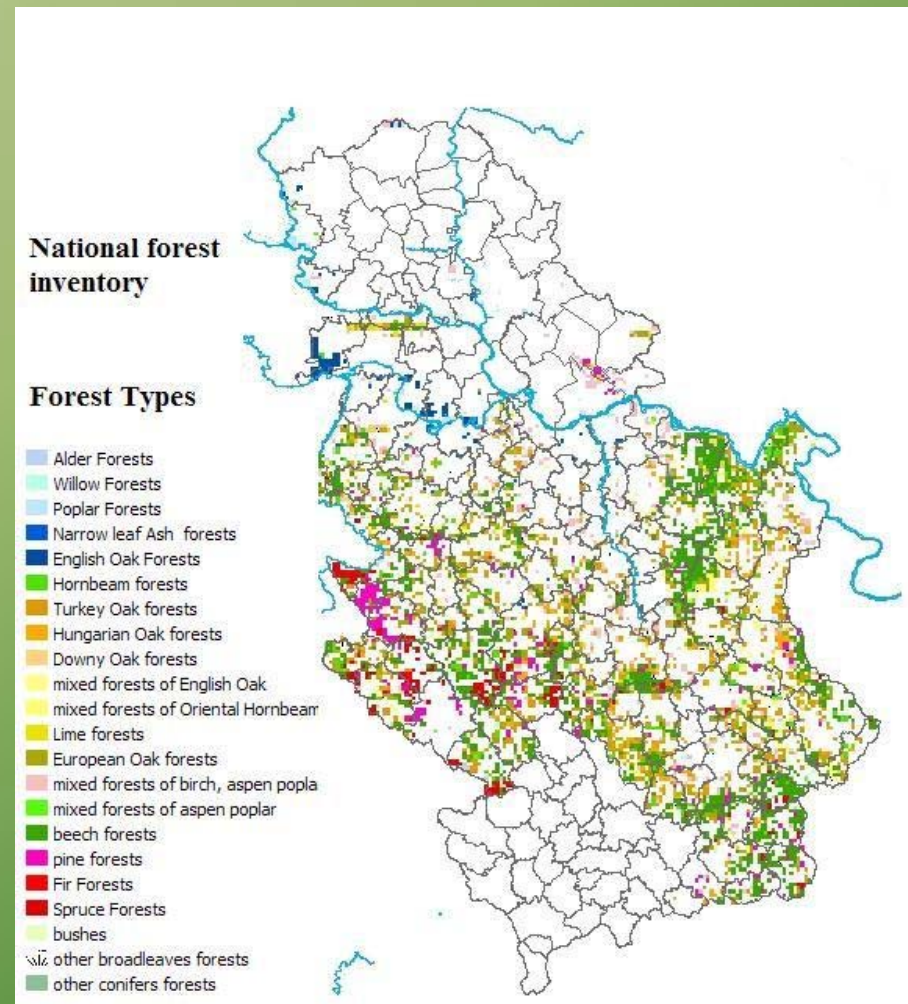
THE CONDITION OF  
TREE CROWNS AT THE  
SAMPLE PLOTS OF LEVEL I  
- RELIABLE OR UNRELIABLE  
INDICATORS OF THE VITALITY OF  
MAIN CONIFER SPECIES IN SERBIA

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# Serbia forest complex cover

- 2.4 million hectares (29% of the total area)
- timber volume: 235 million m<sup>3</sup>
- volume increment: 2.7 m<sup>3</sup>/ha



In the forests of Serbia the most frequent conifer species is spruce. On the second place are Austrian and Scots pines and fir.

The total volume of the four species is 43,549,928 m<sup>3</sup>, which accounts for 12% of the total volume of all species of forest trees in Serbia.

The epidemic desiccation of mainly conifer autochthonous species of forest trees, as the modern phenomenon, is present in the most countries of Southeastern and Central Europe, and in Republic of Serbia it acquires the unprecedented dimensions.





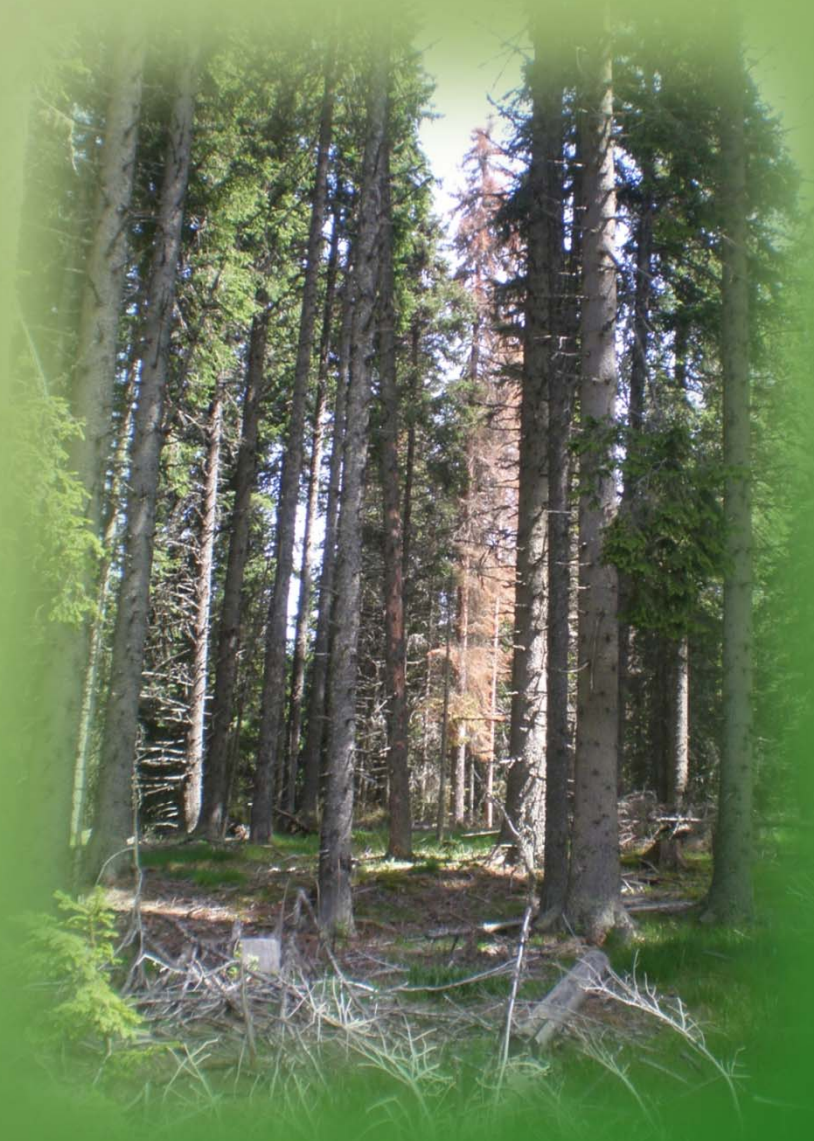
The massive desiccation of individual or groups of trees in 2013 was reported in all areas of Serbia.



It was most intense in the spruce and fir, and about eight-fold less intense in the Austrian and Scots pines.



The intensity of desiccation is expressed by the timber volume marked for the sanitation felling and in the case of spruce and fir it is 103,239 m<sup>3</sup> (0.38% of the total volume of the two species)  
In the case of pines it is 13,051 m<sup>3</sup> (0.08% of the total volume).







On the territory of the Republic of Serbia monitoring of the forest condition in 2013 was performed on the 17 sample plots with main conifer trees:

- Picea abies - 146 trees
- Abies alba - 69 trees
- Pinus silvestris - 56 trees
- Pinus nigra 56 trees



During the monitoring of the crown condition in the period June - September, no desiccated tree of spruce, fir or Scots pine was reported, and in the case of the Austrian pine it accounts for only 1.5% of the trees which were assessed.



The reasons for a great divergence of the above results lie in the fact that the density of the sample plots in the rectangular grid 16x16 km is too sparse for the monitoring of the desiccation phenomenon of the individual and groups of trees, and, consequently, for acquiring the real picture of the process.

The grid of sample plots



The statistical sample (the number of trees of some species) is not representative and is too small.

It is not possible to apply the result of the monitoring of the crown condition of, for instance, 146 spruce trees, to the 57,532,098 individuals of this species, that are present in the forests of Serbia.



There is the following answer to the question stated in the title of this paper:

The results of the monitoring of the vitality of forest conifer tree species at the sample plots of level I can not be taken as the indicators of the condition in the wider area, such as the territory of the Republic of Serbia.

