Forest Condition Report in Bulgaria – 2012

The realization of the Program for large-scale monitoring of forests in Bulgaria in 2012 was implemented in 159 sample plots, with a total number of 5612 sample trees. Observations on defoliation, biotic and other stress factors were carried out on sample plots of the following coniferous tree species: *Pinus sylvestris* L., *Pinus nigra* Arn., *Picea abies* (*L.)* Karst. and *Abies alba* Mill., and the broadleaf species: *Fagus sylvatica* L., *Quercus frainetto* Ten., *Quercus petraea* (*Matt*.) Liebl., *Quercus cerris* L., *Quercus rubra* L., *Tilia platyphillos* Scop. and *Carpinus betulus* L. The total number of observed coniferous sample trees is 2406 and the number of observed broadleaf trees is 3206. The predominant part of observed trees has defoliation ranging from 25% to 67,7%. Within the interval 2 - 4 class, the percentage of medium defoliated trees is the highest – 25,2%. In comparison with the results of the observations carried out in 2011 the percentage of healthy and slightly affected by defoliation trees has decreased by 7,5%. The difference is greater in the 3rd and 4th class, where the percentages of severely defoliated and dead trees have increased respectively by 2,5% and 3,5%. **The observed broadleaf tree species are in a slightly better condition than the conifers.** 78,018% of the observed *Fagus sylvatica* L. trees up to 60 years old and 85,52% of the *Fagus sylvatica* L. trees over 60 years old have up to 25% / 0+1 class/ defoliation. Defoliation up to 25% also prevails in observed Quercus cerris L. trees (64,75% among trees up to 60 years old and 57,47% among trees over 60 years old). The defoliation of *Quercus frainetto* Ten. has increased, as in the 4th class of trees up to 60 year old, the percentage of defoliation has increased from 0,65% to 6,29%, despite the fact that the number of healthy trees has also increased – from 2,38% to 16,35%. Deterioration in the condition of the observed stands from this tree species aged above 60 years has also been observed. The highest percentage of defoliation is in the 2nd class. The condition of *Quercus*

cerris L. is also similar. In comparison with 2011 significant deterioration in the condition of *Quercus petraea* (*Matt*.) Liebl. trees has been observed – decreased number of healthy trees and greatly increased number of dead trees. Among coniferous tree species *Abies alba* Mill. is in the best condition, as 90,27 % of the observed trees are healthy and slightly defoliated (1,62 % more than in 2011). A decrease by 14,93% of defoliation in the 0 class has been observed in *Picea abies*; in all other classes the defoliation has increased. *Pinus sylvestris* L. and *Pinus nigra* Arn. are in similar condition, as the percentage of healthy and slightly defoliated trees is greater. In comparison with 2011 an increase in dead *Pinus nigra* Arn trees by 1,30% and in dead *Pinus sylvestris* L. trees by 2,93 % has been observed.

The described biotic damages and their causes have not resulted in significant changes in the condition of the studied trees.

The description of the spring aspect of grass phytocenoses, types of natural habitats of European importance and the presence of protected plant species found in the network of sample plots continued in 2012.