

Supplementary Table S1 Characteristics of the defined ecoregions within each forest type: main species composition, elevation range, soil attributes and main natural disturbances affecting the ecoregion. Disturbances: It: *I. typografus*; Id: *I. duplicatus*; Ha: *H. abietis*)

Forest Type	Ecoregion	Main Species	Elevation (m)	Soil Type ^a	Soil Depth ^a	Soil Drainage ^a	Disturbances
<i>Picea</i>	Picea.1Ips	<i>P. abies</i>	> 1450	Sandy-loam	shallow	high	Windthrows; Insects (It)
<i>Picea</i>	Picea.1	<i>P. abies</i>	> 1450	Sandy-loam	intermediate	high	Windthrows; Insects (It)
<i>Picea</i>	Picea.2	<i>P. abies</i>	1200-1450	Loam	intermediate	high	Windthrows; Insects (It)
Mixed <i>Fagus</i> -conifers	Picea-Fagus	<i>F. sylvatica</i> , <i>P. abies</i>	1200-1450	Sandy-loam	intermediate	low	Windthrows; Insects (It, Id)
Mixed <i>Fagus</i> -conifers	Fagus-Picea	<i>F. sylvatica</i> , <i>P. abies</i>	900-1200	Loam	intermediate	low	Windthrows; Insects (Id)
Mixed <i>Fagus</i> -conifers	Fagus-Abies	<i>A. alba</i> , <i>F. sylvatica</i> , <i>P. abies</i>	900-1200	Loam	deep	intermediate	Windthrows; Insects (It, Ha)
<i>Fagus</i>	Fagus.1	<i>F. sylvatica</i>	1200-1450	Loam	deep	intermediate	
<i>Fagus</i>	Fagus.2	<i>F. sylvatica</i>	900-1200	Loam	deep	low	
<i>Fagus</i>	Fagus.3	<i>F. sylvatica</i>	500 - 900	Loam	deep	low	
<i>Fagus</i>	Fagus.4	<i>F. sylvatica</i>	500 - 900	Clay-loam	deep	low-intermediate	
Mixed broadleaves	Fagus-Carpinus	<i>C. betulus</i> , <i>F. sylvatica</i>	< 500	Loam	deep	low	
Mixed broadleaves	Fagus-Quercus	<i>F. sylvatica</i> , <i>Q. petraea</i>	< 500	Clay-loam	deep	low-intermediate	
Mixed broadleaves	Quercus-Carpinus	<i>C. betulus</i> , <i>Q. petraea</i>	< 500	Clay-loam	deep	low	
<i>Quercus</i>	Quercus	<i>Q. petraea</i> , <i>Q. robur</i> , <i>Q. frainetto</i> , <i>Q. cerris</i>	< 500	Clay-loam	deep	low	

^a Soil type based on USDA textural soil class. Soil type, depth and attributes derived from the "Harta Solurilor României la scara 1:200 000" [34] and, particularly, Soilgrids database (<https://www.isric.org/explore/soilgrids>) [35,111,112].