

***PINUS HALEPENSIS* FORESTS FOR BIOENERGY EXPLOITATION IN NORTHERN GREECE**

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ABSTRACT: The aim of this work is to assess the available and economical biomass of *Pinus halepensis* forests on Kassadra Peninsula (Northern Greece). These forests typically consist of evergreen broadleaved understory shrubs and are often threatened by natural and human-caused fires. Basic management purpose of these forests has to take aesthetics as well as soil erosion protection, adjustment of water flow, honey production, wood and resin production into account. Annual thinning of the understory and overstory vegetation creates favorable conditions for fire protection, wood productivity and pine regeneration. A stratified random sampling was used clear to establish plots for felling of the understory vegetation and logging of the selected pines in order to estimate the available biomass. The removable biomass (understory plus overstory), fresh and dry matter ranged from 5.08 to 64.04 ton/ha and 4.11 to 35.94 ton/ha respectively. The average cost per productive factor for harvesting and handling of the removable biomass was estimated at 68.43 EURO/t, 14.83 EURO/t and 11.23 EURO/t for labor, machinery and variable costs respectively. The money saved would support favorable forest management plans for the protection of the pines forests promoting energy schemes in Greece.

Keywords: biomass production, forestry, costs, thinning, yields.