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An overview of industrial plantations in Turkey

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Abstract: Over the last century, population of the world quadrupled, which in return raised the demand for wood and increased the pressure on the forest resources drastically. One of the ways to deal with this pressure is to establish new forest lands through plantations, supplying raw material for the forest industry. By the end of the century, the proportion of these plantations reached more than 4 % and rose to 7 % by 2015. Their share in the round wood production is also getting higher, accounting for an average of 46 % in the world as a whole, and reaching as high as 90 % in South America. These plantations are usually even-aged monocultures, set up with fast growing exotic tree species and managed intensively for industrial wood and oil production. While this data shows how important industrial plantations are on the global scale today, it also indicates that its importance will increase in the future. In Turkey, industrial plantation activities started with eucalyptus (*Eucalyptus* spp) plantations in Tarsus in 1930s and accelerated in the 1970s with the establishment of an institute focused on fast growing species in İzmit. Nowadays, species such as poplar (*Populus* spp), eucalyptus and especially maritime pine (*Pinus pinaster* Aiton, Syn: *P. maritima* Lamarck) are the most common in these plantations. In recent years, industrial plantations have regained its popularity in Turkish forestry after General directorate of Forestry (OGM) has initiated the "Industrial Plantation Activities Action Plan (2013-2023)". According to this action plan, it is aimed to establish a total of about 165 thousand hectare plantations in fast growing species such as Turkish red pine (*Pinus brutia* Ten.), maritime pine, ash (*Fraxinus* spp.), alder (*Alnus* spp.), eucalyptus and poplar in somewhat fertile and level grounds suitable mechanical site preparation by the year 2052. The most important part of this plan belongs to Turkish red pine with approximately 145 thousand ha (88%). However, possibility of using mechanical treatments such as disking and ripping is restricted due to steep slopes and rocky, shallow soils in most parts of the Mediterranean region, where Turkish red pine grows naturally. Therefore it is difficult to find ideal sites for productive pine plantations. In some cases, even natural pine forests are converted into industrial pine plantations on suitable sites, and this practice alone creates a serious conflict among decision makers, foresters, forest industry and general public. In this paper, the importance of industrial plantations in the world and Turkey will be emphasized and the problems experienced especially in Turkish red pine plantations will be discussed.
Keywords: Intensive silviculture, Plantation forestry, Turkish red pine, Mediterranean region