Journal of Sustainable Forestry

ISSN: 1054-9811 (Print) 1540-756X (Online) Journal homepage: https://www.tandfonline.com/loi/wjsf20

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To cite this article: Gökçe Gençay, Üstüner Birben & Birsen Durkaya (2018) Effects of legal regulations on land use change: 2/B applications in Turkish forest law, Journal of Sustainable Forestry, 37:8, 804-819, DOI: 10.1080/10549811.2018.1486717

To link to this article: https://doi.org/10.1080/10549811.2018.1486717

Published online: 21 Jun 2018.

JOURNAL OF SUSTAINABLE FORESTRY
2018, VOL. 37, NO. 8, 804–819
https://doi.org/10.1080/10549811.2018.1486717

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Effects of legal regulations on land use change: 2/B applications in Turkish forest law

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ABSTRACT

For the countries struggling with climate change, sustainable forestry is one of the greatest challenges and is difficult to define, implement, and to measure. According to the scientific community's consensus on climate change, forests are one of the major sinks and sustainable forest management (SFM) is needed to prevent deforestation and its negative effects on natural ecosystems. Despite being a party to many international treaties/agreements related to land use policies (LUP) that are promoting SFM to protect and develop forest resources, the 2/B application in Turkish forest legislation has been causing deforestation in Turkey since the 1970s.

In this study, 2/B applications–political and legal process–causing deforestation by land use change (LUC) are investigated by carrying out a legal analysis. About 500.000 ha of forests have been lost due to the 2/B application and as a LUP directly affects SFM, carbon sequestration capacities (CSC), and therefore, climate change. To exemplify this pre and post-LUC change and effect, the amount of carbon that was prevented from being absorbed as 176,7 tonnes/ha on average in a given forest area for the year 2016. There is a vital need to address the negative effects of ill-defined forest legislation to achieve SFM.

KEYWORDS

Forest; sustainability; land use change; 2/B; Turkey

Introduction

The debate over the sustainability of natural resources, in general, is very much conditioned by concern for the supply of non-renewable resources (Sarkar, 1998). The promise of sustainability is rooted in the two premises; first, that ecosystems have the potential to renew themselves and, second, that economic activities and social perceptions or values that define human interaction with the environment are choices that can be modified to ensure the long-term productivity and health of the ecosystem (MacDicken et al., 2015). The industrial revolution and urbanization of the Western world in the 19th and 20th centuries has had dramatic environmental impacts (Marsh, 1874; Perlin, 1989). With anticipated population and income growth, such dynamics could hold important implications for the conditions of forests and environmental benefits (Alig, Kline, & Lichtenstein, 2004). As sustainability is a complex concept, no single assessment of sustainability is to be globally accepted (Ness, Urbel-Piirsalu, Anderberg, & Olsson, 2007; Reynolds et al., 2007).

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