

Assessment of deforestation drivers in Sri Lanka

A.W.M. Iffam, T.P.S.R. Guruge*, K.G.M. Gamage and J.M.M. Udugama

Department of Agribusiness Management, Faculty of Agriculture and Plantation Management, Wayamba University of Sri Lanka, Makandura, Gonawila (NWP), Sri Lanka

Abstract

Sri Lanka has a striking variety of forest types brought about by spatial variations that can be simply classified as tropical rain forests. Deforestation is an incidence of removal of trees and the conversion from forest vegetation into non-forest vegetation and other land uses, which is responsible for 17–25% of annual greenhouse gas emissions that are a principal factor in global warming. State of deforestation in Sri Lanka is controversial in both scope and quantity and understanding drivers of deforestation is fundamental to the development of policies and measures that can incorporate to amend current status of deforestation activities toward more favourable environment-friendly outcome. Aim of this study was to assess the determinants of deforestation to better understand patterns and intensity of deforestation in Sri Lanka during the past three decades. Data were taken through two secondary sources; Food Agriculture Organization of the United Nation (FAO) and Department of Census and Statistics for the period from 1990 to 2016. A structural model was used to approximate the causes of deforestation and burnt forest area. Results revealed that the forest area has been decreased from 1990 to 2010 and began to remains nearly at a steady level which shows the success of some national wide reforestation and afforestation programmes. Interestingly, income, agricultural gross domestic products, crop production, crop production area, poverty, population, literacy rate, agricultural labour force and agricultural land area has significant impact (at 95% confidence level) on the forest cover change while none of the factors make any significant impact towards burnt tropical forest cover. Country's tropical forest cover is still in danger due to some other reasons that could not reveal through this study and yet to be studied in future.

Keywords: Deforestation, Drivers of deforestation Structural model, Tropical forests

**Corresponding Author:* guruge84@yahoo.com