

Deforestation of Veppal & Marichchukkaddi forest reserves in Sri Lanka

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Abstract

The unprecedented increase of human population makes the pressure on native forests and it has been caused to increase of deforestation in worldwide. Global warming is a one of the critical impacts that arise due to deforestation and it affects on all organisms. Thus majority of the world community has been paid a significant attention to protect the green cover of the earth to mitigate the impacts of global warming. This research is focused on recently reported biggest deforestation incident in Sri Lanka that Veppal and Marichchukkaddi deforestation happens North-West direction from the Wilpattu National Park. Total land extent of these forests is 16,437.74 hectares(ha) and these are the reserved forests that conserve under the Department of Forest Conservation (DFC). This research studied the legality of this deforestation, extent of deforestation, present situation and its impacts to the environment. This was done by using change detection analysis from years 1963 to 2016 of the Veppal and Marichchukkaddi forest reserves. The topographic map data and satellite imageries were used to derive the deforestation of the study area, and recent changes and impacts were observed by a field visit. Analysis was done using GIS and Remote Sensing techniques such as spatial analysis, image classifications and statistical analysis. Relevant gazettes and other legal documents were referred as secondary data to verify the legal situation.

The results show an illegal deforestation in the study area from the mid of the year 2010 to 2015. Secondary information shows the granted legal permission in 2013 to clear the land of 250m beside the Puttalam-Kondaichchi Road (B379) between 23–29 kilometer posts. According to the analysis, the total extent of this permitted zone is 248 ha. However, the beginning of the year 2011 deforested land extent was 245.35 ha (1.49% of total forest area). Then in 2013 this deforested extent expanded to 470.78 ha (2.86%) and in 2015 this extent was the 556.79 ha (3.38%). At the field survey, it was observed that DFC has made their new forest

boundary with a large loss and such settlements that are located in the middle of the forest will be a big threat to the existing forest cover as well as wild habitats in the forest. Outputs of this research are very important for the general public to be aware of illegal deforestation in the country, as well as for policy makers to know about the inadequacy of available conservation activities.

Keywords: Deforestation, DFC, global warming, Wilpattu, Sri Lanka