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**Framework For Assessing Land Use Suitability For Natural Rubber Cultivation In Kerala**

Assessing crop suitability and land suitability analysis is an important step in Sustainable Agriculture development. Rubber is one of the hottest commodities in the world and has great demand in various sectors. Rubber was introduced as one of the plantation crops in Kerala in the beginning of nineteenth century. Due to its physiographic, agroclimatic and economic favourability, Rubber cultivation gained popularity among farmers which triggered the expansion of Natural Rubber cultivation in Kerala. As a plantation estate crop, it had replaced natural vegetation and forests and as a small holding crop, it led to the conversion of agricultural land. But expansion and prolonged Rubber cultivation in Kerala over the years have brought concern and raised questions among people as several studies have indicated the negative environmental implications associated with Rubber cultivation. This research was conducted to critically analyse the environmental impacts of Rubber in a micro level study and to examine the land use suitability for Rubber cultivation in Kerala. A multi-criteria decision-making framework was developed which includes a set of bio-physical factors most suitable for rubber cultivation along with an expert opinion survey. Spatial mapping was done according to the framework to assess the suitable, moderate and non-suitable Rubber growing areas in Kerala.

***Keywords:*** *Crop suitability, Natural Rubber cultivation, plantation crop, multi-criteria decision making,*