

# Identification and Mapping Land use Changes in Cinnamon Cultivation in the Part of Southern Province

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## *Abstract*

Cinnamon is a very important crop to Sri Lanka because of its nativity. Due to the highest demand for Sri Lankan true cinnamon, the highest export agricultural income can be earned from cinnamon than all the other crops. Land use information is very much important in decision making to utilize the lands optimally in agricultural development process. This research was conducted to identify and analysis the land use change of cinnamon cultivation in selected GramaNiladhari Divisions in Kamburupitiya, Thihagoda and Malimbada DS and to map the land use changes using Geographic Information System(GIS) and Remote Sensing(RS) techniques and finally to find the reasons for the changes and then to suggest solutions. Aerial photographs in 1970's and 1990's and satellite image in 2011 were used to get the information of the cinnamon lands. Geographic Positioning System(GPS) records which were collected from existing cinnamon lands were used. Aerial photographs and satellite image were geo-referenced and then overlaying was done using ArcView GIS 3.2a soft ware. The specific pattern of the cinnamon lands were denoted by GPS records in aerial photographs and satellite images. Mapping was done by marking identified boundaries of the cinnamon lands which were identified according to the specific pattern. Finally cinnamon land extent was calculated using 'X' tools extension in ArcView GIS 3.2a soft ware. The cinnamon land area of the study area has reduced over the past 40 years due to the urbanization, increase of the population, and land fragmentation. Government subsidies are important in improvement of the cinnamon cultivation. Also extension services and the training programs will be helpful to develop cinnamon cultivation in Sri Lanka.