

Developing a GIS-Based Management System for Rubber Plantation

Abstract

Rubber plantation forms one of the major shares in Malaysia exports. During the last ten years, there has been a structural shift in the Malaysian natural rubber (NR) industry from the estate to the smallholding sector. However, in the past, the transfer of technology to the smallholders sector has been slow and not at the desired pace. As a result, the productivity level of smallholders tend to lag behind the efficiency managed estates. RISDA as one of the committee responsible for managing rubber plantation needs a recent and up to date information of the plantation area and smallholder for more efficient and organised management approach purposes. For this purpose, a study in RISDA Tanah Merah, Kelantan was conducted to produce a digital map and create a database using computerized GIS based management information system. The main features of the database are spatial and non-spatial information comprising (i) plantation area (ii) smallholders background (iii) plantation information and iv) revenue of smallholders. ARC/INFO 3.5.2 and ARC VIEW 3.2 was used to display spatial and non-spatial data. Digital mapping was performed where the spatial and non-spatial information of the rubber plantation in Tanah Merah, Kelantan can be updated from time to time. This technique provides the manager or decision maker with an efficient means of evaluating the large amount of data required in planning and development of all plantation area.