

## **GIS BASED ASSESSMENT ON APPLICABILITY OF BOUNDARY DEMARCATION FOR HANTHANA PROTECTED AREA**

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Hanthana range has been declared as an “Environmental Protected Area (EPA)” by the Extraordinary Gazette (no 1641/28 on 17<sup>th</sup> Wednesday, Feb. 2010). According to the Gazette, the total extent is 38 sq.km. The boundary defined by the Gazette is lying along the existing major road network which is highly populated. However, there are several issues arising due to this boundary demarcation; especially the northern corner of the Hanthana EPA almost reaches the Centre of the Kandy City.

Currently, the City is rapidly expanding towards Peradeniya along the “William Gopallawa” and Sirimavo Bandaranayake” roads. Therefore, the settlements are increasing in “Deiyanne Wela”, “Heerassagala”, “Bowala”, “Katukele”...etc” areas which fall into this protected area. Almost all lands of these semi urban areas are occupied by the residences and hotels. Prior to the land demarcation as a protected area, there was no any conservation strategy within the last two decades in Hanthana except upper Mahaweli catchment soil conservation programme in 1980s. Therefore, most of the lands belonging to the Land Reclamation Commission (LRC) were encroached, donated or sold to the investors by the Government. Due to increased population in this area, lands are fragmented into a few perches. So the environment of this area is artificially developed and the natural environment cannot be identified up to some height of the Hanthana range towards the Kandy City.

In this study, we studied the problems that arose due to present boundary demarcation for the Hanthana EPA and defined a new appropriate boundary to minimize identified problems. Using GIS facilities the study produced most suitable boundary map based on land use, settlement and road data, building density maps, slope maps and the percentage of green cover of the area. Finally, with field verification the boundary map will be developed with minimum disturbance to the human society and maximum protection for existing natural environment.