GIS BASED FOREST FIRE MANAGEMENT PLAN FOR HANTHANA PROTECTED AREA   .

A. J. N. M. Bandara

Postgraduate Institute of Science, University of Peradeniya, Peradeniya, Sri Lanka

Forest fire is an uncontrolled disaster that created due to both natural and human activities of forest areas. Because of Tropical Island, natural fires of Sri Lanka are rare. But due to the human activities directly influence on forest fire. Between 1990 and 2010, Sri Lanka lost an average of 24,500 ha or 1.04% of forest per year. Although Hanthana range defined as a protected area by the Extraordinary Gazette no 1641/28- 17th Wednesday, Feb. 2010, Hanthana has been fired annually. Encroachment, hunting, discarding cigarette butts, arcane are major causes of fire Hanthana. Due to dry weather and more wind, fire spread to the huge area with destroying biodiversity. Also it damages to the cultivations as well.

Hence, this study attempted to identify and map vulnerable area of the study area and utilized a participatory approach to fire management strategies for the identified vulnerable areas according to the fire sensitivity. Secondary data in the form of existing maps, literature information and primary data collected through field observations, in depth interviews with relevant stakeholders were used to identify and map the past and present situation of the area. Topographical maps and satellite imagery were used to improve the mapping.

According to vulnerability analysis, there were 25% of land area identified as extremely vulnerable for fire that cover with pathana/scrub, pinus plantation and adjacent areas. Majority of the vulnerability analysis was "moderate" and it covers about 50% of the total land area of HPA. 6.3% of area belongs to "high" category and "medium" category account for 17% area and 2.3% covers with "low" category. Priority concern was given to extreme area among these categories.