LESSON LEARNT THE FOREST/LAND FIRE OCCURRENCES IN RIAU PROVINCE TO ENHANCE THE MONITORING METHODOLOGY

M. Rokhis Khomarudin, Yenni Vetrita, Any Zubaidah, and Suwarsono

Remote Sensing Application Center – LAPAN
Jl. Kalisari LAPAN No. 8 Pekayon Pasar Rebo Jakarta Timur 13710, masrokhis@gmail.com

Abstract: Almost every year, Indonesia has a problem on forest/land fires which are occurred during dry season in the eight prone provinces. This year, in the middle of July, big fires happened in the Riau provinces. Thousands hectares of land in that area was burnt for plantations. Fires in the peat land occurred haze which fly cross the boundary until the neighbor country; Singapore and Malaysia. This paper shows the study of using remote sensing to learn the forest/land fires occurrence in the Riau Province. Finally, the result of the study can be used to develop and enhance the monitoring methodology. As we know, the remote sensing data can be utilized for hotspot detection, haze monitoring, and the burned area mapping. This lesson learnt could increase the accuracy of those methodologies. The step of this study is started with the study of hotspot characteristics from Terra/Aqua MODIS, field survey, haze detection, and the burnt area mapping. Base on this lesson learnt activities (including the field survey), the fires spot (real forest/land fires) can be analyzed by the hotspot characteristics and the haze detection. The overlay of both can be utilized to enhance the fire spot monitoring. Finally the burnt area mapping methodology can be enhanced by using the hotspot characteristic and also from the haze detection. The combination of hotspot monitoring and the haze detection from the Terra/Aqua MODIS data is useful to detect the real forest/land fires occurrences in the field.

Keywords: Lesson learnt, Forest/land fire, MODIS, hotspot, burnt area