

Fire Prediction and Management in Sumatra, Indonesia during the 2015 El-Nino

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Indonesia has experiences of land and forest fire for almost every year, particularly during long and dry season. It usually occurred in the two main islands namely Sumatra and Kalimantan. The 2015 fire season which had been dramatically exacerbated by the El Nino phenomenon, triggering severe weather in Sumatra which burnt the area of 832,999 ha including 267,974 ha of peat land and 565,025 non-peat land. The fires burned at 8 provinces in Sumatra where 3 provinces of it could be categorized as the most fire prone area: Riau, Jambi and South Sumatra. This paper try to describe the analysis of fire prediction and management in 2015 especially in Sumatra.

During 2015 fires, there was about 47,867 hotspot detected in Sumatra, it was the highest fire hotspot during the last 10 years. Land and forest fire in Sumatra, was dominated by peat fires (57%) that mostly occurred in Riau, Jambi and South Sumatra provinces. Based on data analysis it had been found that there were significant correlation between fire hotspot and rainfall whilst visibility decreasing to less than 500 m during peak fire season.

To control land and forest fire in Sumatra, 18 fire brigades office including 60 groups of 897 fire fighters deployed. Those fire brigades supported by police, army, national disaster management authority, companies and local community. Fire-fighting aerial water bombers were also deployed. However, the fire occurrences ended due to heavy rainfall at the end of October 2015 where the rain season began.