Ambang batas hari tanpa hujan dalam kaitan kemunculan hotspots di Provinsi Riau tahun 2005 2014 = Threshold of no rainy days in relation to the hotspot appearance in Riau Province 2005 2014

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Abstrak

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Kebakaran hutan dan lahan merupakan permasalahan kompleks yang terjadi di Provinsi Riau setiap tahun. Pemicunya berasal dari faktor alami dan akibat aktivitas manusia. Penelitian ini menggunakan variabel hotspots (titik panas) sebagai indikasi adanya kebakaran hutan dan lahan yang dihasilkan oleh sensor satelit NOAA (National Oceanic and Atmospheric Administration) akibat kenaikan suhu di atas 315° K atau 42°C pada luasan 1 km2. Hotspots yang tersebar diseluruh Provinsi Riau dianalisis kepadatannya sepanjang tahun 2005 hingga 2014 menggunakan perhitungan Kernel Density. Hasilnya pola spasial kepadatan hotspots terkonsentrasi di Kota Dumai, Kabupaten Rokan Hilir, Bengkalis dan Pelalawan. Sedangkan pola temporal menunjukkan jumlah hotspots terbanyak selama 10 tahun terjadi pada bulan Juni hingga Agustus. Kemudian sebaran kepadatan hotspots dihubungan dengan faktor-faktor pemicu terjadinya kebakaran yakni curah hujan bulanan, sebaran dan kedalaman gambut serta jenis penggunaan lahan. Hasil analisis menunjukkan jumlah hotspots terbanyak tersebar pada wilayah dengan curah hujan bulanan rendah yaitu 50 - 150 mm/bulan dan pada lahan gambut dengan kedalaman lebih dari 4 meter (sangat dalam) serta pada jenis penggunaan lahan perkebunan, hutan lahan basah sekunder dan semak belukar. Selanjutnya penentuan ambang batas hari tanpa hujan sehubungan kemunculan hotspots diperoleh melalui teknik buffering sejauh 10 km dari stasiun-stasiun pengamatan hujan setiap hari selama bulan Juni hingga Agustus. Analisis pada setiap kemunculan hotspots juga dikaitkan dengan kedalaman gambut dan jenis penggunaan lahan untuk mengetahui karakteristik setiap area buffer, hasilnya ambang batas hari tanpa hujan dalam kaitan kemunculan hotspots di Provinsi Riau adalah 3 hari.

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ABSTRACT

Land and forest fires are complex problems that occurred in the province of Riau every year. The trigger factors comes from natural and human activities. This research uses a variable hotspots as an indication of land and forest fires produced by the satellite sensors NOAA (National Oceanic and Atmospheric Administration) due to the temperature rise above 315 °K or 42° C on an area of 1 km2. The density of hotspots are scattered throughout the province of Riau 2005 to 2014 analyzed using Kernel Density calculations. The result patterns of spatial density of hotspots

concentrated in Dumai, Rokan Hilir, Bengkalis and Pelalawan. While the time pattern showed the highest number of hotspots for 10 years occurred in June until August. Then the distribution of the density of hotspots related with the factors that trigger fires such as monthly rainfall, distribution and depth of the peatland and the type of land use. The analysis showed the highest number of hotspots spread out on an area with a low monthly precipitation is 50-150 mm / month and on peatlands with a depth of more than 4 meters (very deep) as well as on the type of plantation land use, wetlands secondary forest and shrubs. Furthermore, the determination of threshold no rain day due to the hotspots appearance obtained through buffering technique as far as 10 km from rain gauge stations every day during the month of June to August. Analysis on each occurrence of hotspots is also associated with the depth of peat and types of land use to determine the characteristics of each buffer area, the result of the threshold of no rainy days in relation to the hotspot appearance in Riau Province is 3 days.;Land and forest fires are complex problems that occurred in the province of Riau every year. The trigger factors comes from natural and human activities. This research uses a variable hotspots as an indication of land and forest fires produced by the satellite sensors NOAA (National Oceanic and Atmospheric Administration) due to the temperature rise above 315 °K or 42° C on an area of 1 km2. The density of hotspots are scattered throughout the province of Riau 2005 to 2014 analyzed using Kernel Density calculations. The result patterns of spatial density of hotspots concentrated in Dumai, Rokan Hilir, Bengkalis and Pelalawan. While the time pattern showed the highest number of hotspots for 10 years occurred in June until August. Then the distribution of the density of hotspots related with the factors that trigger fires such as monthly rainfall, distribution and depth of the peatland and the type of land use. The analysis showed the highest number of hotspots spread out on an area with a low monthly precipitation is 50-150 mm / month and on peatlands with a depth of more than 4 meters (very deep) as well as on the type of plantation land use, wetlands secondary forest and shrubs. Furthermore, the determination of threshold no rain day due to the hotspots appearance obtained through buffering technique as far as 10 km from rain gauge stations every day during the month of June to August. Analysis on each occurrence of hotspots is also associated with the depth of peat and types of land use to determine the characteristics of each buffer area, the result of the threshold of no rainy days in relation to the hotspot appearance in Riau Province is 3 days.;Land and forest fires are complex problems that occurred in the province of Riau every year. The trigger factors comes from natural and human activities. This research uses a variable hotspots as an indication of land and forest fires produced by the satellite sensors NOAA (National Oceanic and Atmospheric Administration) due to the temperature rise above 315 °K or 42° C on an area of 1 km2. The density of hotspots are scattered throughout the province of Riau 2005 to 2014 analyzed using Kernel Density calculations. The result patterns of spatial density of hotspots concentrated in Dumai, Rokan Hilir, Bengkalis and Pelalawan. While the time pattern showed the highest number of hotspots for 10 years occurred in June until

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