

CHINESE FIRE DISTRIBUTION PATTERN MONITORING USING MODIS DATA

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ABSTRACT: Fires are a prominent global phenomenon, which not only destroy natural vegetation, but also pose enormous danger to wildlife as well as to human life and property. Spatial and temporal distribution pattern of fire is very important to know the energy release, and protect environment and resources. In the past, people usually study on the pattern of forest or grass fires according to the number, burned area and on fire time by using the forestry statistic report data in China. Because the forestry statistical report data usually doesn't include the information of longitude and latitude of forest or grass fires. At the same times, there are many farming fires which didn't included in the report in China every year. So, the analysis results just show the pattern of forest or grass fires from number, area and burning time by using the forestry statistical report data. They couldn't show the spatial and temporal distribution pattern of

fire in China. To get the spatial and temporal distribution pattern of fires in nearly ten years in China, the 1km spatial resolution fire production data from MODerate resolution Imaging Spectroradiometer (MODIS), NOAA-AVHRR and FY orbit satellite images had been selected. The statistic analysis and GIS spatial analysis method had been used. The results showed there are three high density fire regions in China. One is Daxing'anling forest region, where had taken place many large forest fires during Apr. 15 to June 1 or Sep. 20 to Oct. 20 in past ten years. One is Guangdong province in south of China, most of fires belong to farming fire during Nov. 1 to Mar. 30. The other is Yunnan province, which in southwest of China, there are many small forest fires during Nov. 1 to March 15 next year.