

— FIRE MONITORING AND SPATIAL ANALYSIS FOR BRAZILIAN PANTANAL

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The use of fire for pastures management is an old and common practice in the Pantanal wetland. Large amount of organic matter accumulates mainly in areas with low cattle herbivory pressure or randomly grazed patches by cattle, working as fuel for fires in dry periods. Fires can be disastrous for local wildlife and vegetation, impacting habitats, decreasing food and shelter resources. Fire monitoring and spatial analysis can help in best practices of fire use, prevention and control. Fire data was extracted from AVHRR/NOAA 12 nocturne images and was downloaded from the National Institute for Spatial Research – INPE, Brazil, website: <http://www.dpi.inpe.br/proarco/bdqueimadas/> for July to October of each year, the period of highest fire occurrence and less detection problems, due clouds coverage. A fire density map was produced to evaluate the fire spatial distribution for the period of 15 years, from 1992 to 2006. The vegetation classes with greater absolute number of fires were Cerrado savanna (13.006), grassy savanna (6.402) and Cerradão densely forested savanna (4.743). For density (number of fires/area in Km²) the greater vegetation classes was Chaco forest (0.66), grassy Chaco (0.64) and Chaco (0.59), these ones occur mostly at the Nabileque region in south-west portion of the Pantanal. The open structure, dense herbaceous stratum, high primary productivity and strong phenology seasonality can be the main causes. The distribution of fire density in the Pantanal is heterogeneous and is associated with vegetation main classes. This work is part of the PELD Project with financial support of CNPq.

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