



Vegetation fire in the savannas of the Llanos Orientales of Colombia, difference between global and regional estimates

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Stretching across the borders of Colombia and Venezuela, from the Andes to the Atlantic, the Orinoco watershed covers about 990,000 km² (63% in Venezuela and 37% in Colombia) and represents one of the most biologically rich areas of the world. Vegetation fires are widespread over the world but little attention has been paid to savanna fires in South America. At least in the Colombian part, fires are one of the most important natural and human factors associated to the expansion of the agriculture frontier in the Llanos orientales de Colombia. These ecosystems are highly threatened by this driver and this has led to the transformation and loss of many natural ecosystems and species endemic to this area. Spatial distribution of savanna fires in Los Llanos Orientales of Colombia was investigated and estimates were made of the area burned as detected from LANDSAT satellite data in the dry season when most fires occur (December 2000, march 2001). The number and size of burned scars (with a total extension of 488,235 ha) were detected in the period analysed. This burned area accounted for 5.18% of the savanna area (9,419,741 ha) and 2.87% of the total study area (17,017,854 ha). This data differs from Global estimates using other sensors (Tansey et al, 2004) and is the first local estimate of burned area in the Colombian savannas. These results might be of importance for future calculations of greenhouse and atmospheric trace gas emissions to the atmosphere from Colombia.

Keywords: vegetation fire, savannas, remote sensing, global change, local estimates