



## **Climate and fires in New Caledonia : diagnostic approach and potential predictability**

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The relationships between fires detected by ATSR (Along Track Scanning Radiometer) and MODIS (MODerate resolution Imaging Spectrometer) satellites and local-scale atmospheric conditions in New Caledonia (SW Pacific  $\sim 165.5^{\circ}\text{E}$ ,  $21.5^{\circ}\text{S}$ ) are analyzed from 1996 to 2009. The annual of fires peaks around the transition between the dry/cool season and the wet/warm season from September to December ( $> 80\%$ ). The rainfall anomalies recorded at the closest rain gauge usually less than 10 km apart, is always strongly negative at least 3 months before the fire. Long-term and medium-term droughts are thus related with an higher prevalence of fires. The interannual variability of fires and related rainfall anomalies is partly related to El Niño Southern Oscillation (ENSO). The potential predictability of fire and seasonal rainfall anomalies is analyzed through various approaches (canonical correlation analysis, analog, regression).