

Publication MIO : Chloé Martias (MIO), Marc Tedetti (MIO), François Lantoiné , Léocadie Jamet, Cécile Dupouy (MIO) -Characterization and sources of colored dissolved organic matter in a coral reef ecosystem subject to ultramafic erosion pressure (New Caledonia, Southwest Pacific)

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Beau doublé pour les 3 campagnes Alis CALIOPE que Cécile Dupouy (MIO) avait organisé entre 2011 et 2016 dans le cadre du projet EC2CO TREMOLO sur la Cote Est de la Nouvelle-Caledonie,

Ces deux articles ont été élaborés par des étudiantes, Luciane Favareto qui avait participé à la campagne CALIOPE 02 et Chloé Martias qui avait participé à CALIOPE 03.



Abstract

The eastern lagoon of New Caledonia (NC, Southwest Pacific), listed as a UNESCO World Heritage site, hosts the world's second longest double-barrier coral reef. This lagoon receives river inputs, oceanic water arrivals, and erosion pressure from ultramafic rocks, enriched in nickel (Ni) and cobalt (Co). The aim of this study was to characterize colored dissolved organic matter (CDOM), as well as to determine its main sources and its possible relationships (through the use of Pearson correlation coefficients, r) with biogeochemical parameters, plankton communities and trace metals in the NC eastern lagoon. Water samples were collected in March 2016 along a series of river/lagoon/open-ocean transects. The absorption coefficient at 350 nm (a_{350}) revealed the influence of river inputs on the CDOM distribution. The high values of spectral slope ($S_{275-295}$, $> 0.03 \text{ m}^{-1}$) and the low values of specific ultraviolet absorbance ($SUVA_{254}$,

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