

## DISSOLVED CARBON IN AN URBAN AREA OF THE ACRE RIVER, BRAZIL

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The main objective of this study was to evaluate dissolved organic and inorganic carbon dynamics along a stretch of the Acre River under the influence of Rio Branco city urban area. DOC concentrations in Acre River were significantly higher in the high water period, with averages ranging from  $384.9 \pm 160.3$  to  $430.4 \pm 130.8$   $\mu\text{M}$  with no statistically significant differences along the river. DIC showed an inverse pattern, with higher concentrations in the dry season, ranging from  $816.31 \pm 214.8$  to  $998.52 \pm 754.5$   $\mu\text{M}$ . Along the river, DIC concentrations also presented no statistically significant differences among sites. Bicarbonate was the dominant DIC fraction, mainly in the dry season. Consequently,  $\text{CO}_2$  partial pressure ( $p\text{CO}_2$ ) in the Acre River was higher in the wet season, with values ranging from  $4,567 \pm 1,813$  to  $4,893 \pm 837$  ppm. Our results indicate that, although crossing a relatively large city where sewage inputs are considerable, in this stretch of the river dissolved carbon dynamics are still controlled by seasonal hydrological changes in river function.

KEY WORDS: dissolved carbon, Acre River, Amazon

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