

Yves TARDY

Carbon and Water Cycles Amazon River Basin Applied Biogeochemistry

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Climate and Hydrology. Factors of Lithology.
Weathering, Erosion and Soil dynamics.
Aquatic Pedology, Soil Physiology, and Plant-Soil-River Systems.
Stable Isotope Modelling. Organic Matter Turnover.
Total Balance of Mineral and Organic Carbon.
Climatic Change Modelling and Environmental Impacts.



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The Amazon River Basin



Station	River	Area (10 ³ km ²)	Discharge (mm a ⁻¹)
1 - Vargem Grande	Rio Solimões	987	1502
2 - São Antonio do Iça	Rio Iça	148	1559
3 - Xibeco	Rio Jutai	74	1461
4 - Tupe	Rio Juruá	217	544
5 - Jutica	Rio Japurá	289	1747
6 - Anori	Rio Purus	372	1006
7 - Manacapuru	Rio Negro	755	1210
8 - São José do Amajari	Rio Madeira	1380	623
9 - Obidos	Amazon river	4619	1127

References: Picture composition based on HydroSHEDS and Natural Earth images provided at <http://hydrosheds.cr.usgs.gov/images/> and <http://www.shadedrelief.com/natural/>. Stations of the CAMREX PROJECT, after Richey et al. (1989).

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GLOSSARY OF SYMBOLS

488 pages, 115 tables, 90 Figures, in the text.

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All data are published. Natural coherence within the huge Amazon system is tested. Some classical concepts are revisited. This work answers to the question: *what are the optimal climatic conditions, insuring the maximal efficiency, for forests, soils and rivers, to control our Global Environment ?*

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