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Título do Trabalho: GENESIS AND DEVELOPMENT OF THE NEGRO RIA, AMAZON RIVER BASIN

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Resumo do trabalho:

Fluvial rias are striking lake-like features of the Amazon Basin landscape. Formed during the inundation of river valleys by rising sea levels during interglacial periods, they register and offer key insights into environmental changes of the last millennia. Discussions about Amazonian fluvial rias often focus on the influence of sea-level change and tectonics in their formation, as well as on aspects related to their morphology and sedimentation patterns. However, few comprehensive efforts have aimed at understanding how major changes in the Amazon River discharge may have affected sedimentation in fluvial rias. In this study, we compared the chronology and major elements distribution of three sediment cores obtained from the Negro Ria to investigate factors contributing to major sedimentary changes at the lowermost Negro River. Results were interpreted with the aid of endmember unmixing models and principal component analysis and compared to data from other Amazonian fluvial rias and floodplain lakes. Si/Al and Ti/Fe ratios show a significant and synchronous decrease in grain size in the studied area after approximately 5.5 ka. We interpret this as the onset of the low-energy environment in the lower Negro River that we observe today. Multivariate analysis and literature data suggest that this shift may not necessarily be driven solely by environmental changes in the Negro River Basin itself. Instead, it may primarily respond to broader regional factors, possibly related to changes in Amazon River discharge linked to precipitation in the western Amazon Basin. By integrating our results with the chronology and geochemical profiles of other sediment records, as well as with paleoclimate reconstructions, we aim to identify major regional factors influencing fluvial rias across the Amazon Basin.

Palavras-Chave do trabalho: Fluvial Rias; Holocene; Negro River;