VOÇOROCAS EN EL ASENTAMIENTO DOÑA ANTONIA (PARAIBA-BRASIL)

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This article speaks about a master Project whose aim is to investigate about erosions and processes related to gullies in the farmer settlements from South litoral of Paraiba (NW of Brazil). Firstly a description of two gullies was executed. After that, a hypotesis was formulated to explain the genesis of the erosion based on land uses changes. Finally we explained the recover and stabilitation process on the erosion carried out by the LEPAN (Laboratory of Spacial Analisis - Federal Universtity of Paraiba). Our area is very susceptible to gully processes due to his geomorphology, climatology and human occupation. The final aim of the research is to create cartography of natural hazards linked to gullies processes.

EROSÃO COSTEIRA E A PERCEPÇÃO DA POPULAÇÃO DE MANGUE SECO, BA

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The town of Mangue Seco is characterized especially by its natural beauty, the fruit of a complex integrated coastal ecosystems formed by estuaries, beaches, lagoons, mangroves, sandy terraces and dunes. In privileged position in the bar's office, this town witness the meeting of rivers and Real Piaui and the launch of its waters in the Atlantic Ocean. The study included specific piece of the right bank of the river channel of Real that is in contact with the town of Mangue Seco. According to the preliminary observations, the region of Mangue Seco has been changing over the years because of its size instability common areas linked by the desembocaduras river. Taking into account the degree of vulnerability of Mangue Seco, more than a century ago are experiencing significant changes in the morphology of the area, changing the local landscape (Barbosa *et al*., 2004 This article does have as a objetivo bring forward um panorama from the dynamic rib at the right margin from the River Actual , at the neighborhoods from the Borough as of Hose Dried AND register the feeling AND the perception from the community on the subject of the alterations environmental ocorridas in this district. For both, the study fundamentamos mainly in the references of Barbosa *et al*. (2004), Dominguez (2006), Souza *et al*. (2005), Caregnatto *et al.* (2006), Chauí (2000) and Stefanello (2006).

OSL SENSITIVITY OF QUARTZ AS AN INDEX OF SEDIMENTARY REWORKING

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Optically stimulated luminescence (OSL) of quartz has been widely studied for dating purposes. Many studies show that cycles of irradiation and bleaching (light exposure) increase the OSL sensitivity of quartz. In sedimentary environments, cycles of irradiation and bleaching correspond to cycles of deposition and erosion (sedimentary reworking). Pietsch et al. (2008) related the downstream increase of the OSL sensitivity of quartz grains deposited in a fluvial system with the number of cycles of deposition and erosion. However, the OSL sensitivity also depends of factors linked with quartz crystallization, which determines the type and content of chemical impurities responsible for quartz luminescence. In this study, we compare the OSL sensitivity of quartz single-grains extracted from 10 different parent rocks (granites, hydrothermal vein, volcanic tuff, blue schist, green schist, amphibolite schist and mylonite) and from 5 samples of high reworked coastal sediments (Ilha Comprida barrier, São Paulo, Brazil). This allows evaluating the primary variability of the OSL sensitivity of quartz in relation to the increase in the OSL sensitivity due to sedimentary reworking. We also present the OSL sensitivity

measured in quartz aliquots collected in sandy ridges from the Ilha Comprida barrier. These results are analyzed in relation to pathways of sediment transportation in the Ilha Comprida barrier. The OSL measurements were made on a Riso TL/OSL DA-15 reader using a green laser (532nm) for optical stimulation of quartz single-grains and a blue LEDs (470nm Δ20nm) for stimulation of quartz aliquots. The OSL measurements were performed in grains or aliquots of same volume irradiated with a constant radiation beta dose, after bleaching under the sunlight for at least 2 hours. The OSL sensitivity was obtained by integrating the total (single-grains) or the first two seconds (aliquots) of the shine down curve. The quartz grains from parent rocks presented the following OSL sensitivities (median/number of grains): 66 a.u./268 grains (granite I), 68 a.u./255 grains (granite II), 73 a.u./121 grains (deformed granite III), 73 a.u./210 grains (hydrothermal vein), 132 a.u./192 grains (volcanic tuff), 52 a.u./172 grains (blue schist), 56 a.u./182 grains (green schist), 130 a.u./215 grains (medium amphibolite schist), 106 a.u./246 grains (high amphibolite schist) and 209 a.u./229 (mylonite). The OSL sensitivities of quartz grains from coastal sands were: 212 a.u./190 grains (beach sand I), 380 a.u./285 grains (foredune sand I), 400 a.u./284 grains (beach sand II), 419 a.u./291 grains (foredune sand II) and 314 a.u./291 grains (foredune sand III). The OSL sensitivity of the coastal sediments is significantly higher than the sensitivity of quartz from all studied parent rocks. This suggests that factors related to quartz crystallization are not able to produce quartz grains with high OSL sensitivity, such as presented by the Ilha Comprida sands. Thus, the variability of the OSL sensitivity of the Ilha Comprida sands can be attributed to different degrees of sedimentary reworking. The OSL sensitivity of the quartz aliquots collected in the Ilha Comprida barrier increases alongshore, from north to south. The Ilha Comprida barrier system receives mature (high reworked) sediments from distal coastal or offshore sectors and immature (low reworked) sediments from the Ribeira de Iguape river, which reaches the coast at the northern end of the barrier. Hence, the southward increase of the OSL sensitivity can be interpreted as a result of the progressive decrease in the proportion of low reworked fluvial sands. Thus, changes in OSL sensitivity fits with pathways of sediment transportation. These results show that the OSL sensitivity of quartz can be used to describe patterns of sediment transportation as well as to discriminate sediments from different provenances regarding erosion-depostional histories.

Reference

Pietsch, T.J., Olley, J.M., Nanson, G.C. 2008. Fluvial transport as a natural luminescence sensitiser of quartz. Quaternary Geochronology, 3, 365-376.

NUEVAS ESTRUCTURAS DE DEFORMACIÓN EN LA FORMACIÓN RÍO NEGRO (MIOCENO TARDÍO-PLIOCENO TEMPRANO)

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Las estructuras de deformación (ED) en sedimentos blandos (*soft-sediments deformation structures*. SSD) comprenden las alteraciones que se producen penecontemporáneas con la sedimentación y cuyo origen se debe a las características de los sedimentos y a los procesos que causan las deformaciones, entre los que pueden mencionarse a los efectos por carga, escapes de fluidos y a las presiones dirigidas. Como objetivo de esta investigación se plantea reconocer nuevas ED en sedimentitas blandas, ubicadas en la base del Miembro superior de la Formación Río Negro, Mioceno tardío-Plioceno temprano, en el sector norte del Golfo San Matías, en inmediaciones del Faro Río Negro. Se fotografiaron los distintos sectores con deformaciones con el fin de establecer modelos comparativos. Como resultado se proponen las siguientes nomenclaturas para las ED: forma almendrada; en "S" abierta y en "Z", las cuales suelen estar acompañadas por nódulos y pseudonódulos. Sus espesores no exceden en promedio los 0,50 m de potencia; los techos y bases, que enmarcan estas estructuras, no se hallan asociadas a otros procesos de deformación.

MAPEAMENTO DO PARQUE NACIONAL DA LAGOA DO PEIXE, RS COM TÉCNICAS DE FOTOGRAMETRIA DIGITAL

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