

Gully erosion and sediment delivery ratio from a semi-arid watershed

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The gullies are the major sediment sources and most impressive water erosion form, promoting landscape changes, besides being associated to sediment delivery from watersheds, what takes importance mainly in semiarid watersheds under climate change risk. Behind this context, the present work has been obtained the erosion rates of a gully from Exu Watershed River, in semi-arid of Pernambuco State, Brazil, by application of Foster and Lane model (1983), and also were determinates the gross erosion by the sum of the interrill, rill and gully erosion, as well, the sediment yield of Exu Watershed River to years between 2008 to 2015. The Lane & Foster model with help of area and hydrologic features of Exu Watershed River has calculated adequate values of erosion rates, width and depth from Exu gully. The sediment delivery ratio (SDR) from Exu Watershed River were very low to years between 2008 to 2015, with an average value of 0.00122, which is, to be expected coming from a semiarid watershed that had four years with no rain.