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## Land degradation by soil erosion and sedimentation within Sarata catchment, Republic of Moldova

**Silvia Vacula**, Lilian Niacsu, Cristian Secu, and Ionut Vasiliniuc

Alexandru Ioan Cuza" University of IASI, , Faculty of Geography and Geology, Romania (silviana7@yahoo.com)

Land degradation by geomorphological processes (soil erosion, gully erosion, landslides and sedimentation) represents an important environmental threat all over the Republic of Moldova. The main causes are related to the favourable natural conditions such as friable lithology, typically hilly fragmentation or climatic aggressiveness on the background of a sustained human impact developed in the last two centuries. Despite the widespread soil and water conservation measures that have been implemented during the soviet period, following the Agricultural Real Estate Act applied in 1991, a revival of these processes is easier to observe especially by means of floodplains aggradation. Under these circumstances, our study aims to assess the sedimentation rates on the floodplains and reservoirs and to establish the source area of the eroded sediments as well as the responsible process. Based on field campaigns, we took representative in-situ soil / sediment samples from floodplains and reservoirs all over the Sarata catchment, including wind-blown samples from the interfluvial ridges. The laboratory analyses consisted of physical and chemical features such as: weight, apparent density, texture, ph, electrical conductivity, total organic carbon, inorganic carbon, organic matter, inorganic nitrogen (N), total phosphorus (P), total potassium (K) and other macro elements (i.e. Na<sup>+</sup>, Mg<sup>2+</sup>, Ca<sup>2+</sup>, and Cl<sup>-</sup>). The preliminary results show that the soil erosion remains an important

process not by quantity but by quality. This is related also to the widespread high efficiency of gully erosion control measures that have been implemented. A secondary role, most often neglected, is held by wind erosion