

THE BED DYNAMIC IN THE LOWER SIRET RIVER'S SUBSIDENCE PLAIN (ROMANIA)

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The present study aims to analyse the spatial – temporal dynamic (between 1962 and 2005) of the Siret river bed (in its lower sector). In their research the authors used software like ArcGis and Global Mapper, and the data base consisting of the 1982 *topographical map* at a 1:25.000 scale, the *geological map* at a 1:50.000 scale, the 2005 *Galați County orthophotomap* at a 1:5.000 scale, *Corine Land Cover vectorial data* (<http://www.eea.europa.eu/data-and-maps/>), *2009 general vectorial data for Romania* (<http://earth.unibuc.ro/download/romania-seturi-vectoriale>).

The area analysed for this study is contained in the Lower Siret River Plain (the NE part of the Romanian Plain) the most typical and active subsidence Romanian plain (-3/-5 mm/year) (Zugrăvescu et.al., 1998). The sedimentary formations are arranged above the Valahă Platform, as they were deposited in numerous sedimentary cycles (including Quaternary) and they are made of sands, gravels, clays, clayey sands, loess and loess deposits. Because of a series of active subsidence actions during the Quaternary Period their thickness can reach 2000 meters at the confluence of Siret and Danube (Geological Map, Focșani sheet, 1:200.000 scale).

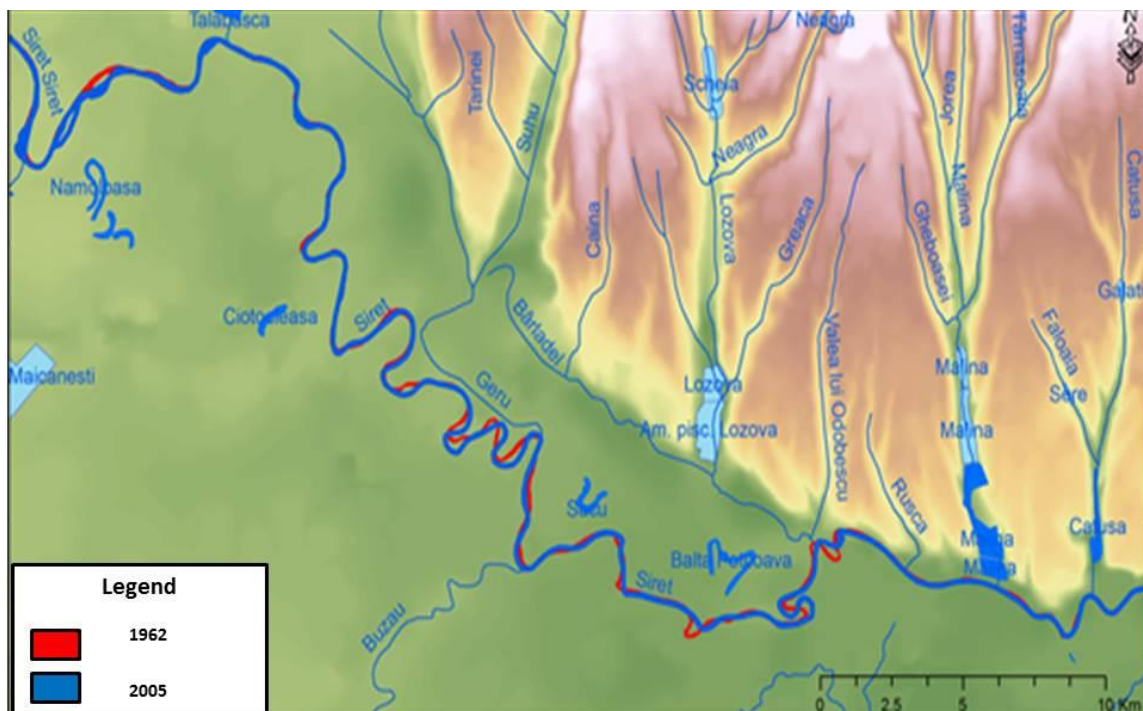


Fig.1.The bed dynamic of Siret river (1962, 2005)

Altitudes vary between 150 and 200 meters and 10 and 20 meters (where in a slow sinking stretch a confluence area developed towards which the rivers recurve in the shape of a fan) (Grecu F., 2010). The geological, geomorphological and hydrological conditions dictated a specific bed dynamic (fig.1), and the most important changes are linked to increased tortuosity in the proximity of the confluence point and the emergence/ disappearance of islands.

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