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Channel morphology of a mountainous gravel bed river assessed using topographical and UAV surveys

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Channel morphology is widely studied in fluvial geomorphology. The tools used to quantify the sgape and morphometry of channels has greatly advanced, nowadays by coupling topographic with UAV surveys, creating high resolution models of channel topography. We present the use of topographical and of UAV surveys for the channel and confluences of Bistricioara river, a mountainous gravel bed river from Central-Eastern Romania. Beside the main channel, we surveyed also the confluence with the most important tributaries in order to assess the geometry of the channel in this dynamic areas. We discuss intensively the results in term of errors, uncertainties and technical approaches to better represent the complicated morphology of river channels.