



Study of the sediment sources and fine-sediment storage in the Isábena River basin

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Fluvial sediment transport interacts with different bio-physical processes of the river-bed and can cause severe socio-economic impacts. The Isábena River basin (445 km²) is a clear example of a fluvial system transporting huge amounts of sediment which has been proved as one of the main causes of the Barasona reservoir siltation. To improve the knowledge of the sediment transport of the basin, a pilot study on sediment sources and in-channel sediment storage using a fingerprinting approach has been started. Sample analyses are based on 3 main tracing properties: 1) radionuclides (¹³⁷Cs and ²¹⁰Pbex); 2) geochemistry (elementary metals); and 3) mineral-magnetics properties. It is foreseen that results provide information on the relative contributions of each sediment source over the total basin's sediment transport at flood and seasonal scales, and over the connectivity of the sources with the sediment transport which determine the sediment budget of the Barasona reservoir.