

## **Sediment budget in the Ucayali River basin, an Andean tributary of the Amazon River**

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**Abstract** Formation of mountain ranges results from complex coupling between lithospheric deformation, mechanisms linked to subduction and surface processes: weathering, erosion, and climate. Today, erosion of the eastern Andean cordillera and sub-Andean foothills supplies over 99% of the sediment load passing through the Amazon Basin. Denudation rates in the upper Ucayali basin are rapid, favoured by a marked seasonality in this region and extreme precipitation cells above sedimentary strata, uplifted during Neogene times by a still active sub-Andean tectonic thrust. Around 40% of those sediments are trapped in the Ucayali retro-foreland basin system. Recent advances in remote sensing for Amazonian large rivers now allow us to complete the ground hydrological data. In this work, we propose a first estimation of the erosion and sedimentation budget of the Ucayali River catchment, based on spatial and conventional HYBAM Observatory network.

**Key words** Ucayali; Pachitea; Andes; Amazon; erosion; sedimentation; MODIS; Peru; hydrology