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## **A relationship between repiquetes, rainfall and circulation low-level wind regimes over the Andean-Amazon river basin**

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Riparian farmers along the Peruvian Amazon River face hydrological events and poor soil conditions that put their low-land crops on high risk of production loss during the flood recession period. One of those hydrological events is a sudden reversal on the river stage known as “*repiquete*”, which have been poorly studied in terms of its origins. This work analyzes the hydro-meteorological mechanisms over the Andes-Amazon river basins that could produce repiquetes near Iquitos city in Peru. Repiquetes were defined and characterized for the 1996-2018 period by using river stage data from three hydrological gauging stations at Amazon, Marañón and Ucayali rivers. Furthermore, daily rainfall from high spatial resolution CHIRPS (0.05° and 0.25) and TRMM (0.25) data, as well as, daily low-level winds at 850 hPa from ERA-Interim are used to characterize rainfall and large-scale atmospheric patterns associated with repiquetes. Considering that 73 significant repiquetes (reversal > 20cm) occurred in Amazon River, 64.4% of them are preceded by repiquetes only in the Marañón River, 5.5% are preceded by repiquetes only in the Ucayali River, 20.5% are preceded by repiquetes on both rivers and the rest only registered in Amazon River without precursor defined. These results show that the main precursor of repiquetes in Amazon River is the Marañón River. Most of repiquetes are associated with abundant rainfall over the Peruvian and Ecuadorian Andes-Amazon transition region with a remarkable change of northerly winds to southerly winds regime and an easterly flow during five to three days before the beginning of repiquete in Amazon River.