



## **Improving hydrological loading data by reallocation of global river storage variation from generalized global hydrological models on high-resolution geo-referenced river pathways**

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Non-tidal loading processes due to variations in terrestrial water storage cause vertical crustal displacements of several millimeters on subdaily to seasonal time scales. Locally strong loading signals with exceptionally high amplitudes occur along the major river channels. As the horizontal resolution of water mass distributions from global hydrological models are generally limited to 0.5x0.5 degree, their hydrological loading contributions cannot be properly estimated. Moreover, the model river network is not necessarily coallocated with the real river paths. To improve hydrological loading estimates caused by the water masses stored in the modeled river flow for stations at the river banks, like at Manaus where peak-to peak height variations of 70mm are observed, these masses have to be reallocated on a higher resolution river network. By introducing high-resolution river network informations from geoinformation system data bases we will demonstrate the generation of a high-resolution river storage data set suitable for calculating hydrological loading estimates for geodetic station in near-river locations.