



## Twelve Month Weekly Monitoring of Stable Isotopes of Water Associated to the Flooding of the Meirama Open Pit (NW Spain)

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In December, 2007, after 30 years of extraction, the mine of Meirama stopped the production of brown lignite. Since April 2008, a controlled flooding process is taking place by which a large mining lake with nearly 150 cubic hectometers and a maximum depth of 180 meters will join the geography of Galicia in a few years. A weekly-based monitoring survey has been taking place in the lake since the beginning of the flooding process. Nearly 50 components and physico-chemical parameters of a series of sampling points located in the surface of the lake as well as in related tributaries, ground and rain waters are being recorded. Among the parameters analyzed, the stable isotopes of water ( $^{18}\text{O}$  and  $^{2}\text{H}$ ) are worth noting. The data collected so far help us to better understand the hydrological processes occurring in the first year of flooding and combined with different types of chemical constituents (conservative and non-conservative) put important constrains on the hydrochemical processes observed in the lake up to date.