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Last two Millennia atmospheric lead and heavy metals inputs in a Belgian peat bog: regional to global Human impacts.

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Europe has been continuously polluted throughout the last two millennia. These pollutions are of from various origins: mining, coal burning, smelting, combustion engine. The potential of a Belgian ombrotrophic peat bog as a new accurate site for the reconstruction of the history of atmospheric deposition in NW Europe is depicted in this paper.

Results of recent and past trace metal accumulation together with Pb isotopes in a one-meter peat core (in the *Misten* peat bog) have been collected using several techniques such as XRF and Nu-plasma MC-ICP-MS. The collected dataset combined with ^{14}C and ^{210}Pb dates allows to trace anthropogenic influence fluxes history back to Celtic settlements.

Several periods of well-known Pb pollution events are clearly recorded: the Roman period and its decline, the Dark and Middle Ages, the second industrial revolution, but also the introduction of leaded gasoline, and more recently the introduction of unleaded gasoline. Lead isotopes in this site allow to distinguish several regional and global sources of anthropogenic particles input to the bog.