

[Plant traits relevant to fluvial geomorphology and hydrological interactions \(O'Hare et al. 2015\) \[1\]](#)

Plants can slow water and trap sediment with their canopies and stabilise sediment with their roots. These influences are mediated by the characteristics or traits of the vegetation. Here, we review and investigate the flexibility, size, root form, clonal growth, perennation and Ellenberg F values of 459 European riverine species, considering their role in physical and ecological processes.

We make use of existing plant trait datasets to create two typologies: one that identifies the role vegetation has in channel blockage (conveyance) and sediment accrual and a second typology, that indicates vegetation's ability to stabilize sediment. The two typologies are tools for interpreting botanical survey data collected using standard techniques across large numbers of sites as part of the European Union Water Framework Directive monitoring programmes. As such, they are designed to be used to indicate broad-scale patterns across sites rather than detailed insights into site-specific processes.

Key words: plant functional traits; ecosystem engineering; hydrology; fluvial geomorphology; riverine vegetation

Publication Date:

Thursday, 20 August 2015

Full reference:

O'Hare, M.T., J. O. Mountford, J. Maroto & I. D. M. Gunn (2015) Plant traits relevant to fluvial geomorphology and hydrological interactions. River Research and Applications. – published online 20 August 2015

Link to DOI:

<http://dx.doi.org/10.1002/rra.2940> [2]

- [Home](#)
- [Imprint](#)

Source URL: <https://reformrivers.eu/plant-traits-relevant-fluvial-geomorphology-and-hydrological-interactions-ohare-et-al-2015>

Links

[1] <https://reformrivers.eu/plant-traits-relevant-fluvial-geomorphology-and-hydrological-interactions-ohare-et-al-2015>

[2] <http://dx.doi.org/10.1002/rra.2940>