Preliminary SWDI maps using the BEC L4 soil moisture product

The Water Resources Research Group of the University of Salamanca has developed a new agricultural drought index, the so-called Soil Water Deficit Index (SWDI) [1], [2], based in soil moisture and soil parameters. Using the high resolution BEC L4 soil moisture product [3] as an input of the SWDI, agricultural drought maps of Zamora province (west of Spain) were derived (Fig. 1). With this product, agricultural drought conditions in the most important agricultural regions in Spain will be monitored.

The results of this research will be published soon, so stay tuned!

[1] Martínez-Fernández, J., González-Zamora, A., Sánchez, N., & Gumuzzio, A. (2015). "A soil water based index as a suitable agricultural drought indicator." *Journal of Hydrology, 522*, 265-273.

[2] Martínez-Fernández, J., González-Zamora, A., Sánchez, N., Gumuzzio, A., & Herrero-Jiménez, C.M. (2016). "Satellite soil moisture for agricultural drought monitoring: Assessment of the SMOS derived Soil Water Deficit Index." Remote Sensing of Environment, 177, 277-286.

[3] Piles, M., Camps, A., Vall-llossera, M., Corbella, I., Panciera, R., Rüdiger, C., Kerr, Y.H., & Walker, J. (2011). "Downscaling SMOS-Derived Soil Moisture Using MODIS Visible/Infrared Data." IEEE Transactions on Geoscience and Remote Sensing, 49, 3156-3166.