Notas Resultados

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2017

# EVI

## Tendencias

* Cerca del 79 % de los pixeles han mostrado una tendencia positiva en el EVI durante 2000-2016 (RELACIONAR con ontologías y citar)
* Los taus mayores sobre todo en las zonas del SW
* Plot de trajectorias para ver la heterogeneidad. Si analizamos el plot de trajectorias (evi medio anual), vemos como en 2005 y 2012 se observó un browning para los valores medios de EVI. En ambos casos, se observó un patrón homogéneo de browing, aunque en 2012 el browning fue mucho menor.

## EVI y sequias

* Disminución del EVI durante las sequias, sobre todo la de 2005. Heterogeneidad de la disminución del EVI (ver plot de trajectorias)
* Anomalías estandarizadas
  + En 2005 y en 2012 las anomalías fueron negativas.
  + 2005 la mayoría de los pixeles sobrepasas .
  + En 2005 se observó un bronwing en los bosques de Q. pyrenaica, sobre todo en las situadas en el northern slopes

Pero si miramos las anomalías estandarizadas, vemos que es en 2005 donde los valores sobrepasan EVIsa < -2 (browing < -1). Es decir, atendiendo a las anomalias sa, 2005 fue muy severa, y sobre todo para las poblaciones del N, ya que:

# Sistema Vascular de *Q. pyrenaica*

* Ring-porous tress are assumed to be particularly sensitive to climate warming, because they operate with narrow hydraulic safety margins (see Choat et al. )(Pérez-de-Lis et al. 2016)
* Vessel size chronologies were related to previous summer rainfall (from González-González et al. 2014)(Pérez-de-Lis et al. 2016)
* Ring-porous trees yearly restore their photosynthetic apparatus and hydraulic architecture using exclusively carbon reserves from the previous season. This is particularly true for *Q. pyrenaica* whose leaves were not fully expanded until the end of earlywood formation.
* Climate signals in multi-decadal tree rings series indicate that vessel traits in ring-porous species are mostly influenced by climatic conditions in two physiological distinc periods: during the previous year and at the onset of cambial activity. $TODO$: Relation with lag effects of the drought
* **Previous summer rainfall** has been stated as the most relevant climatic factor determining vessel size rather than temperature in winter and spring (see González-González et al. 2014; 2015 in (Pérez-de-Lis et al. 2016)). Moisture availability was reported to be the most limiting factor driving radial growth in Iberian *Q. pyrenaica* populations (see Gea-Izquierdo and Cañellas 2014). :arrow\_right: Vessel size could be more dependent on environmental signals operating at time windows that are different from those of vessel enlargement, such as precipitation during the previous growing season.
* Formation of narrower vessels is considered an adaptive response of trees to water stress in ring-porous species. It could be somewhat triggered by declining carbon gain after severe droughts, due to reliance of ring-porous oaks on the reserves of the previous year for earlywood formation and canopy development

# Sequía

## Summer of 2005

* 2004/2005 hydrological year is considered one of the worst drooughts ever recorded in the Iberian Peninsula, particularly in the central and southern sectors (García-Herrera et al. 2007).
* The southern half of Iberia received less than 45 % of the usual precipitation between October 2004 and June 2005 (García-Herrera et al. 2007).
* The hydrological year from October 2004 to September 2005 was the driest on record at several locations throughout Iberia (García-Herrera et al. 2007).
* An analysis of the long term series from meteorological stations (n=54) of Iberian Peninsula (1961-2011) reveals that major drought episodes in the Iberian Peninsula were recorded in 1981, 1995, 2000 and 2005 (Vicente-Serrano et al. 2014).

# References

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