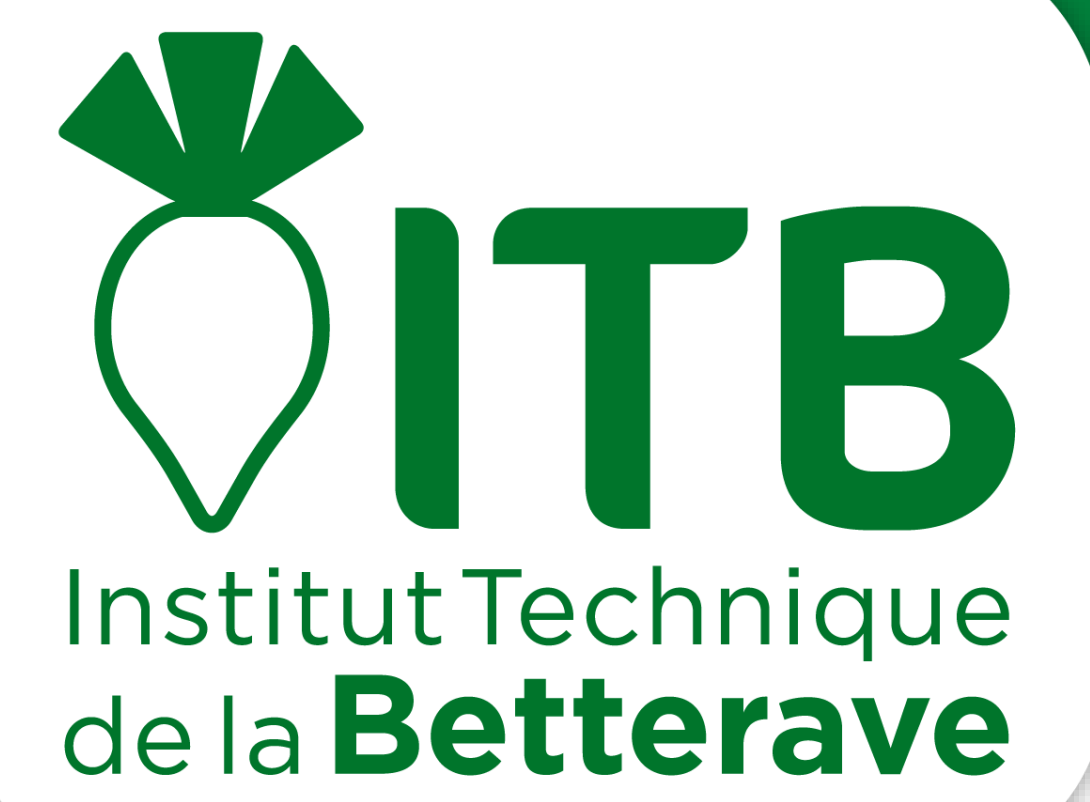




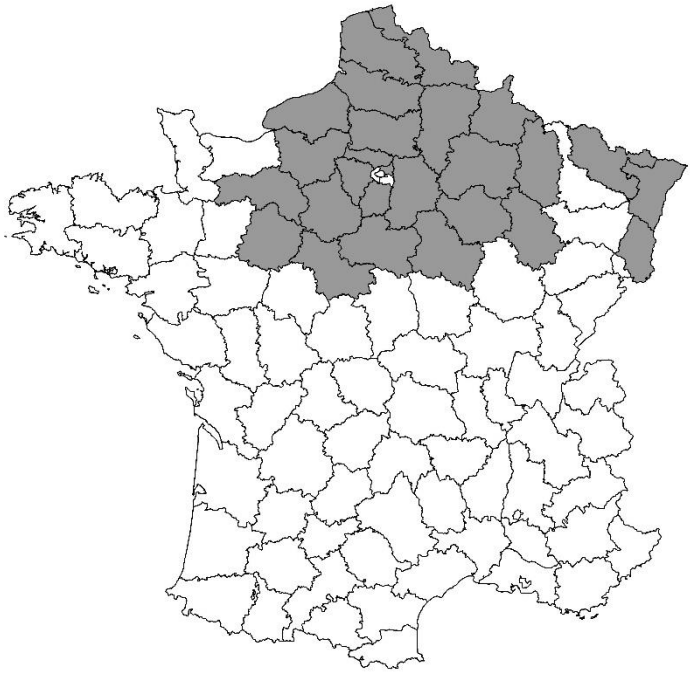
DESCRIPTION OF THE WATER STRESS DYNAMICS IN SUGAR BEET CROPS

Juliette ADRIAN – Chaima BEN AICHA – Arnaud GAUFFRETEAU – Fabienne MAUPAS

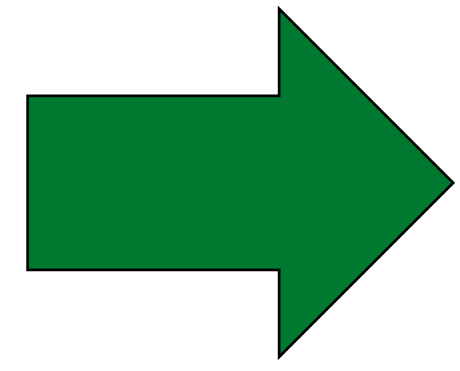


Water stress indicators

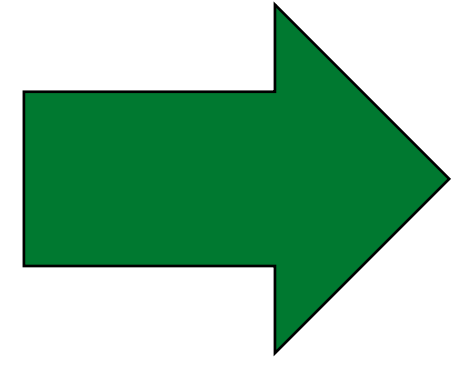
AWC* by region



Climate data
SAFRAN
2000 - 2023



Water balance simulated using the crop model **IRRIBET**



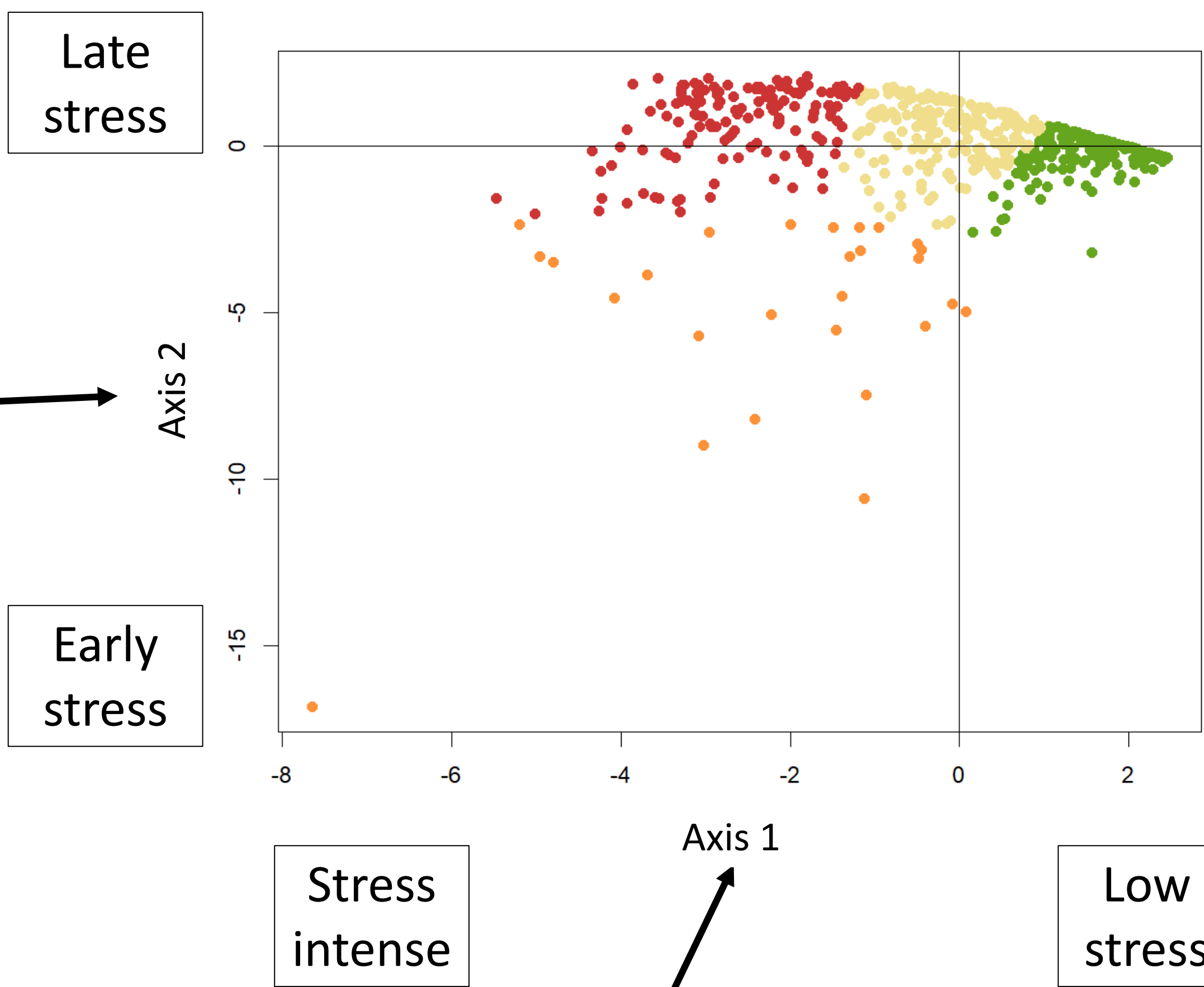
mean $\frac{ETR}{ETM}$ daily in phases of 300° days

Conclusions :

- Sugar beet growing area has **varying levels of water stress**.
- Since 2018, **intense water stress appears more frequently** while low intensity water stress appears less frequently.
- Regions located in the **southwest** of sugar beet growing area present **greater water stress**.

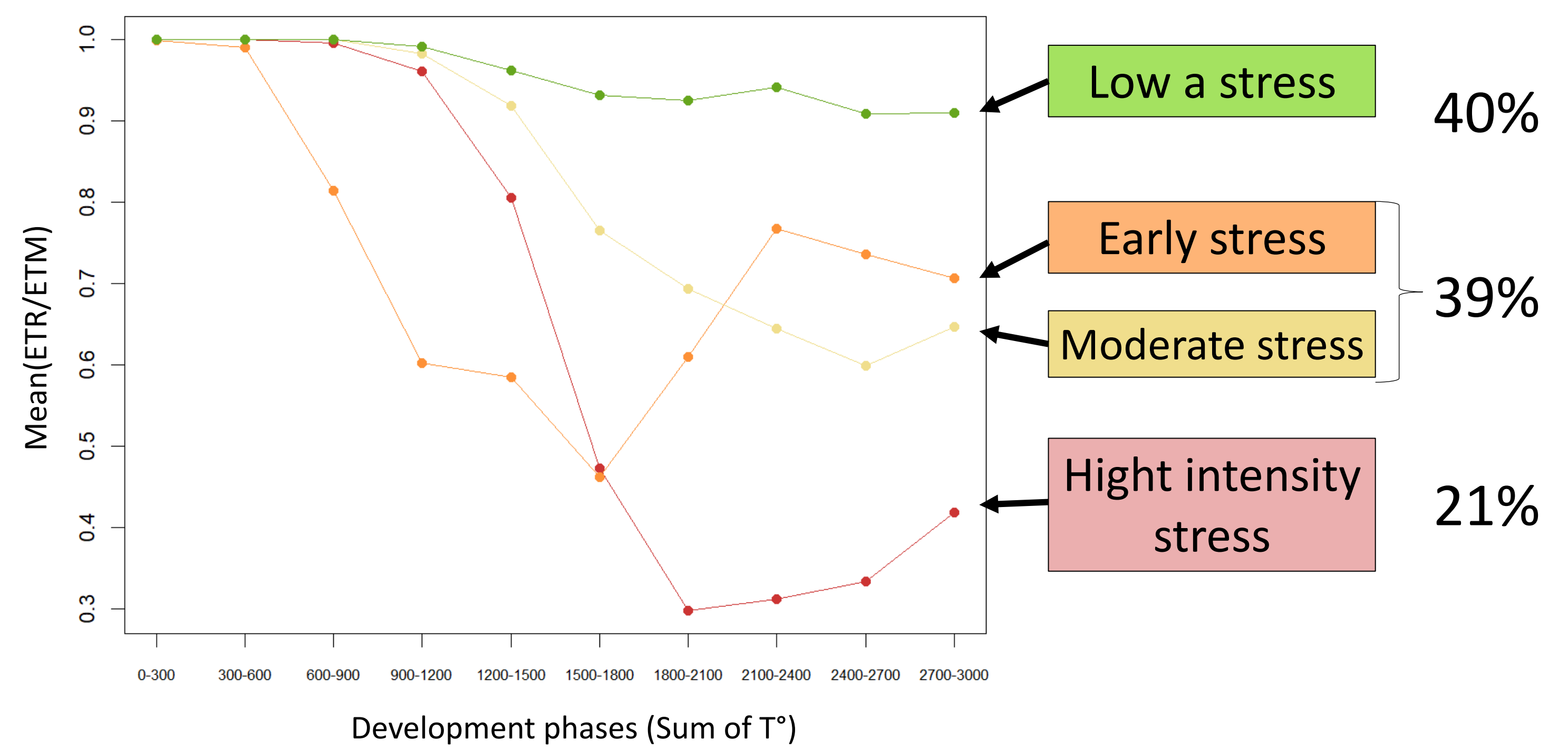
Environmental classification

PCA axis 2 explains 23% of data variability and represents the period of water stress.

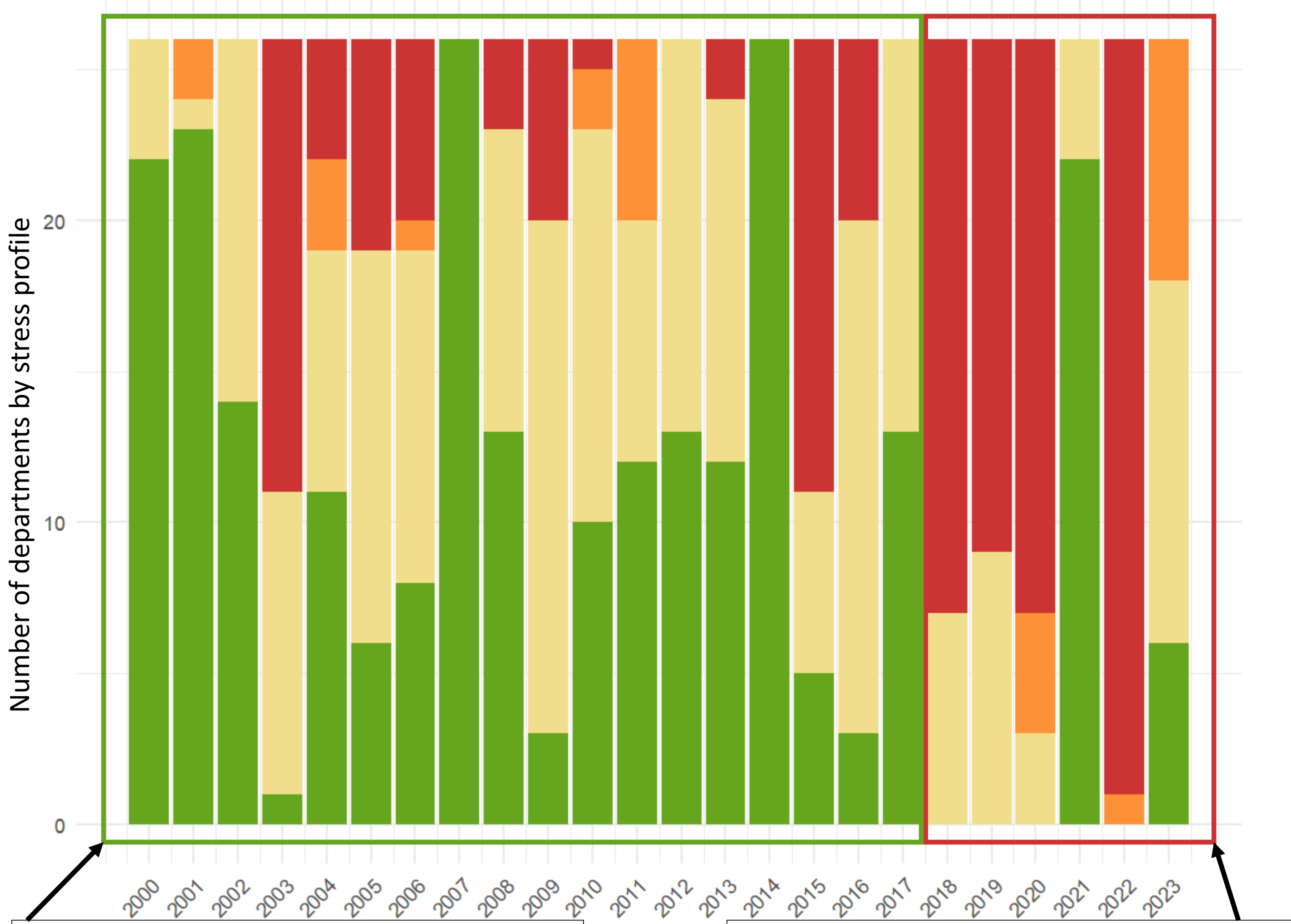


PCA axis 1 explains 36% of data variability and represents the level of water stress intensity.

4 water profiles



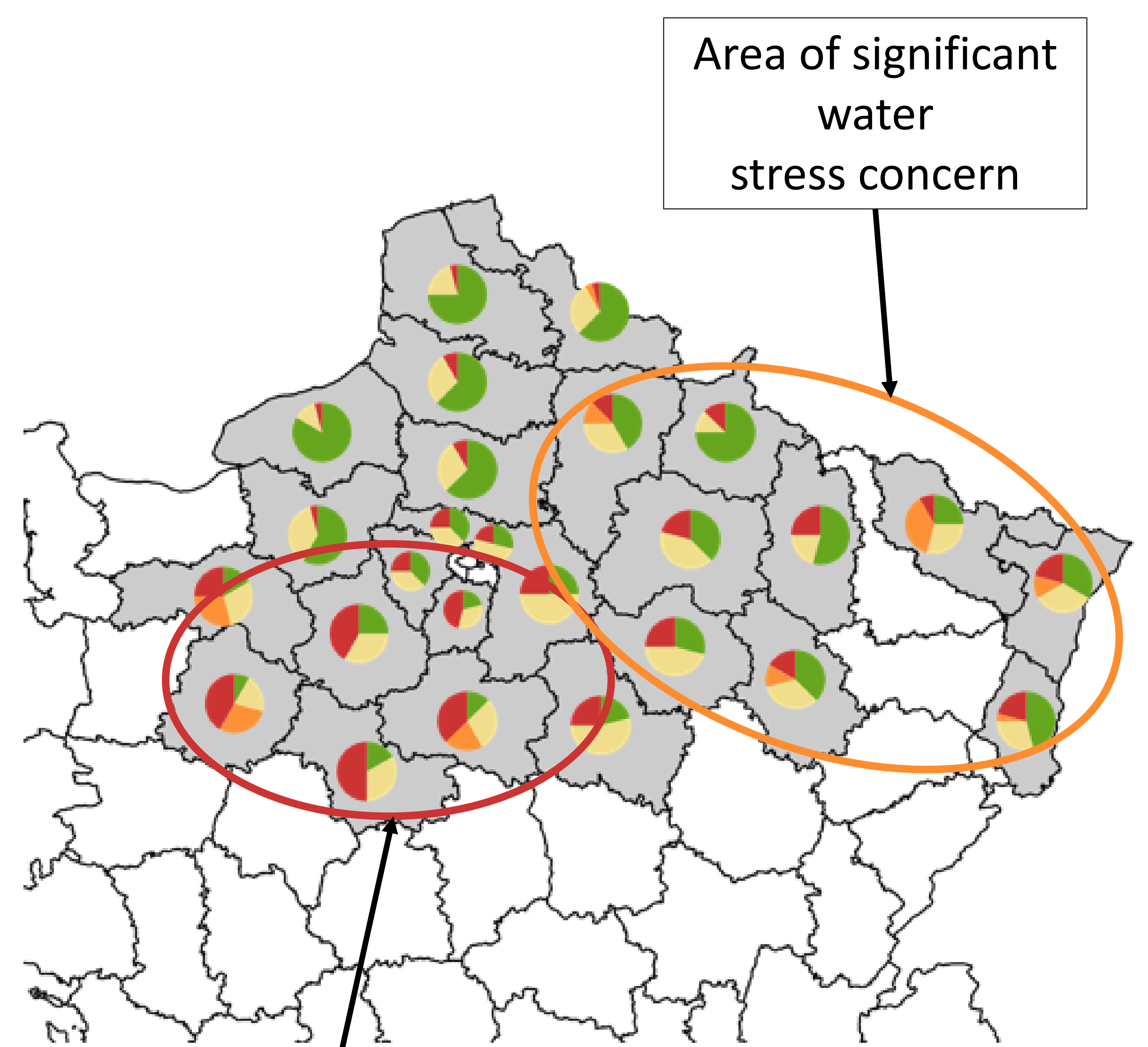
Yearly characterization



Before 2018, low intensity water stress represented 47% and intense water stress 13% of situations.

Since 2018, low intensity water stress represents 18% and intense water stress 47% of situations.

Regional characterization



Area of major concern for water stress