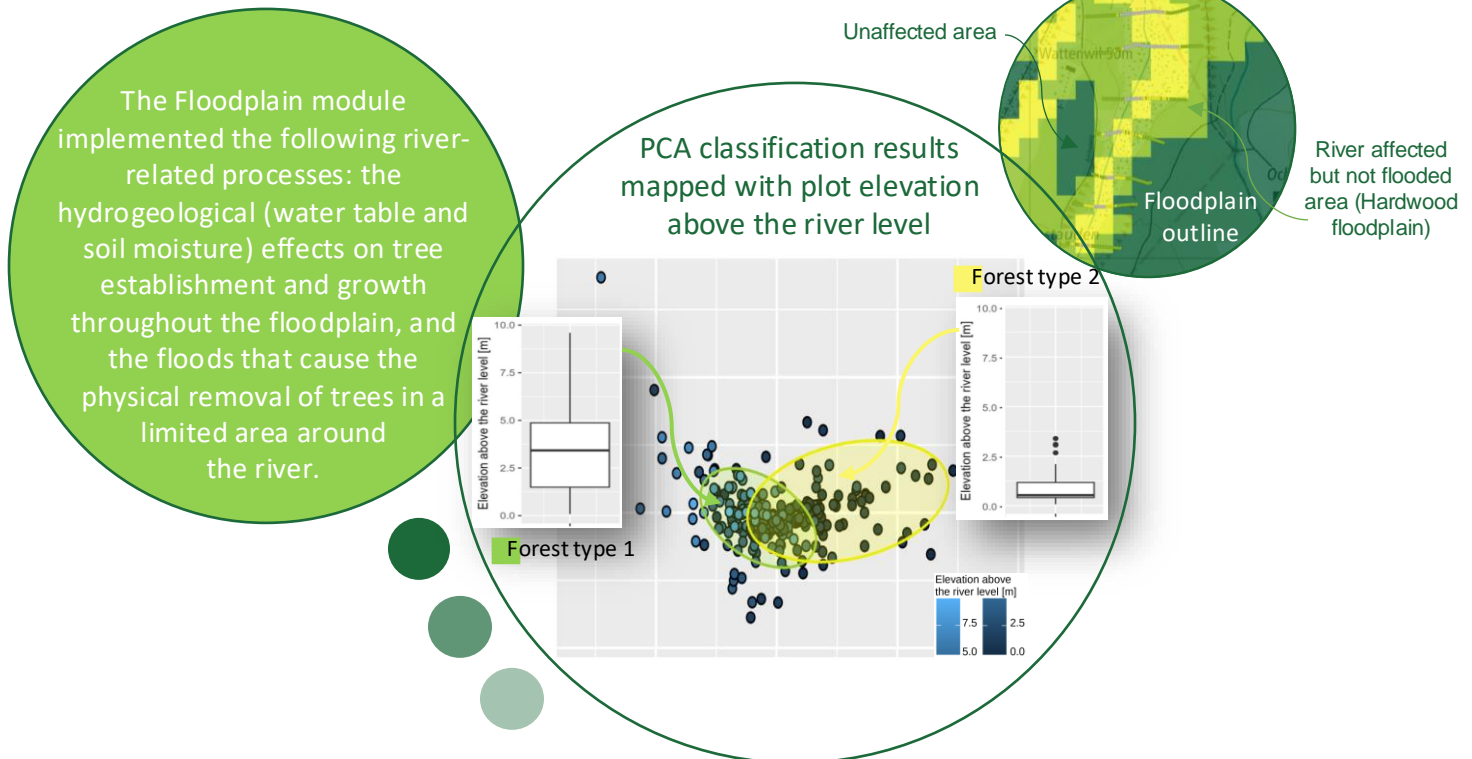


Embracing the Wild: Introducing Floodplain Forest Types to LandClim

Par Camille Heubi, année académique 2023/2024



OBJECTIVES AND RESULTS

The aim of this work was to use a spatial dynamic forest model, LandClim, to simulate riparian forests. This work consisted of a field part, carried out in a riparian zone of the Gürbe river (in the Gürbetal, Bern, Switzerland), to study the tree distribution and to generate data for comparison with the model results. Using principal component analysis, we show that forest composition is clearly related to elevation above river level, and that the floodplain can be separated into two compositionally distinct forest types by elevation thresholds. The second part of this work consisted of comparing the LandClim simulation output with the field data and led to the design of a new module, the Floodplain module, to account for the effects of the river on the vegetation. Implementation of the new module resulted in an improvement in simulated species composition and was able to capture the high variability of frequently flooded areas as well as the main dynamics of the floodplains.



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