Lund, 2020-03-10

ClimBEco- Workshop 1

Introduction

Today we are going to get a quick introduction to Jupyter notebooks and look deeper into observations from 18 stations in northern Europe (the majority of which are ICOS stations). The stations are characterized by different vegetation types; coniferous forest, deciduous forest, grassland, wetland, peat, etc. The aim of this workshop is to get used to working with Jupyter notebooks and to become familiar with the datasets by exploring different variables from the station observations.

The first notebook you will go through (htm_eco_drought_2018.ipynb) includes step by step examples on how to import data from Hyltemossa station, add it to pandas dataframes (2-dimensional arrays in Python), harmonize and process it, calculate statistics and produce plots. You will not need to add any code in this notebook. However, you are expected to read and understand what is happening in the code as well as to interpret the results in the plots.

The second notebook (inspect_fluxnet_files.ipynb) includes visualizations of the 18 stations you will work with throughout all exercise sessions. You can create plots of different types of measurements per station and get a quick overview of what variables are available through the FLUXNET daily-value dataset. You may also get detailed information regarding individual stations by using the interactive map. This notebook can be used as a reference for all exercises.

The third notebook (exercise1.ipynb) includes a set of tasks. You will write your own code to import, process and plot FLUXNET data from the aforementioned 18 stations. Here you can start thinking about comparing variables from different stations, etc.

Notebooks

- htm_eco_drought_2018.ipynb
- inspect_fluxnet_files.ipynb
- exercise1.ipynb
- tools.ipynb --- > includes ready functions (used in all notebooks)

Tip

Rememeber to download "tools.ipynb" to your **work** directory.
Alternatively change the code at the top part of your notebook from:

%run ./tools.ipynb

to

%run ../climbeco/notebooks/tools.ipynb