Technical Work Summary

In order to settle on the main areas where LIFE GrIn project interventions are going to be made, the following technical work has been conducted:

Analysis of climate parameters

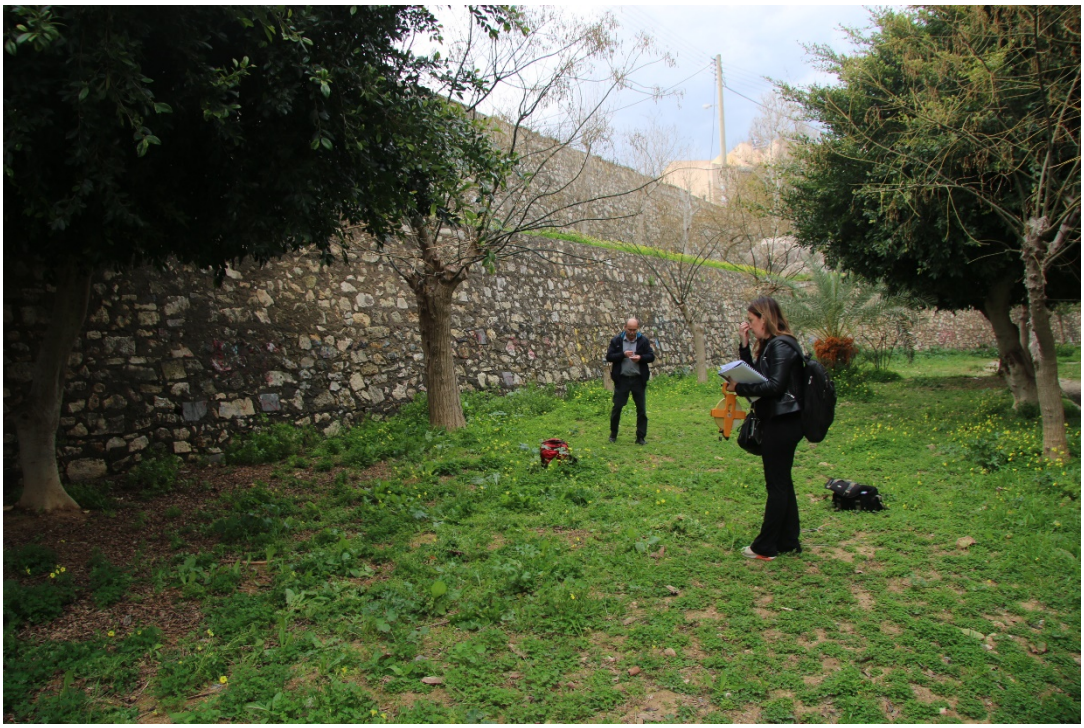
Monthly values of Tmean, Tmax and Tmin were used. Data were obtained, from the meteorological station of Heraklion South Greece (35.34o N, 25.18o E, 39m asl), covering the time period 1955-2017. The data were analysed on a monthly, seasonal and annual basis. The climate trends were identified by employing the Mann-Kendall non parametric test for different confidence levels (□=0.001, 0.01, 0.05 and 0.1). Mann-Kendall method is widely used for climatic and environmental time series trends evaluation, since it is a reliable method to identify monotonic linear and non-linear trends in non-normal data sets. The slope of each trend evaluated from the climatic data, was identified by the method of Sen (Q Sen slope), as a median of all possible slopes.

Equivalent methodology is currently elaborated for the Municipality of Amaroussion.

Plant and Plant Phenotypes analysis

In order to proceed with the selection of the Urban Green Areas (UGAs) that interventions and measurements will be made, first of all we were in close collaboration with both municipalities (from Heraklion and Amarousi) and we have visited all possible places that they have suggested. Afterwards we selected 16 UGAs for Municipality of Amarousion and 16 for Municipality of Heraklion where criteria of diversity for herbaceous plants, trees and bushes where met. The technical part in the field involved screening of biodiversity (estimation of biodiversity indices) and evaluation of urban green areas (appropriate species, quantity and quality), characterization of phenotypic tolerance of different trees and bushes, measurement of height and diameter of trees and GPS coordinates recording. Furthermore, we identified problems concerning UGAs (use, suitability for planting species, sufficiency, functionality and aesthetics of UGAs). All these first measurements and information will be added also in the SWOT analysis and will be further analyzed in order to provide deliverables in C1: “Guidelines for the strategic planning and management of urban green areas in response to climate change” and “Indicators’ system on indicators

for the evaluation – monitoring of urban green areas in relation to climate change" (both deliverables end in 6/2019 pp 58 of GA).

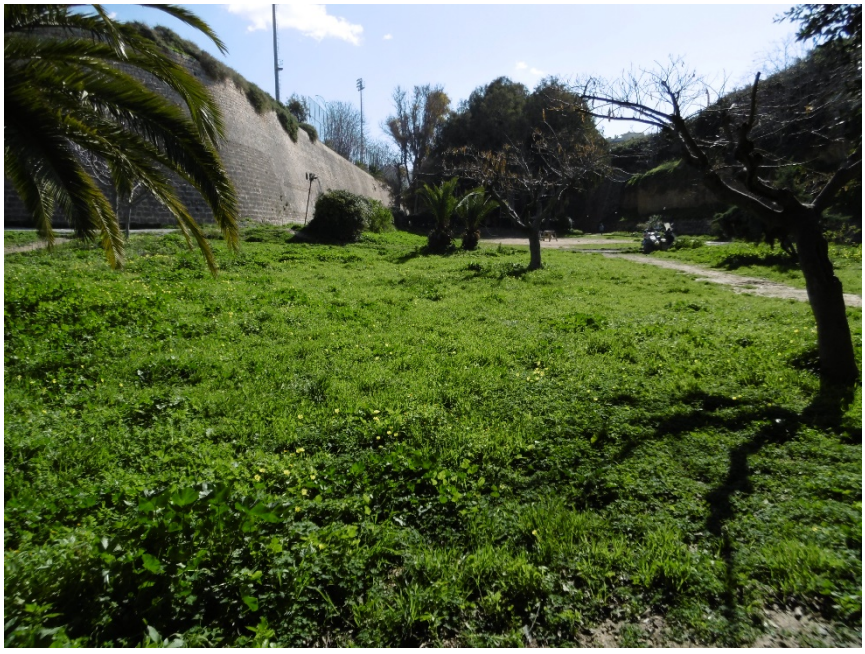


Plant Sampling in Heraklion

Insects analysis

Sampling, in both Municipalities is taking place twice a month. Sampling, on each area, lasts 30 minutes, between 10 am to 15:00 am, to avoid any effect of time. Each time data are recorded on specific fixed length lines, according to Pollard. The observer moves on a steady 50 meter length line, checking the presence of butterflies, on the right and left sides, within 5 meters. Once he locates a butterfly, he collects it and identifies it.

Insects sampling area in Maroussi_23.11.2018



Insects sampling area in Heraklion_27.01.2019