

## **Internship 2019 ICOS Hlytemossa Sweden**

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ICOS which stands for Integrated carbon observation system, is a leading research infrastructure that is located all over Europe. Which purpose is to measure and understand greenhouse gas all over Europe and the adjacent continent. The stations have different theme and area focus depending on the location. Such focuses are atmosphere, ocean and ecosystem in order to fully understand the exchange between the spheres. There's ICOS stations in about 12 european countries amongst them in Sweden too, which has three stations covering spruce forest, boreal and subarctic mire.

The Icos system in which the internship was done is Hyltemossa which is located in the North of Scania, Sweden. The coordinates for the location are 56°06'N, 13°25'E, 115 m asl. The aim of the research infrastructure all over europe is to give an overlook and insight into the near future concerning the carbon cycle and greenhouse gas emissions in europe by continuously producing standardised long term measurements and data that can be of assistance in reduction of greenhouse emissions as it produces data of the different ecosystem that can be openly accessed by everyone.

The internship period started from the 24th of June to the 24th of August 2019. The purpose of the internship is to increase practical experience and understand the background of the research done by ICOS stations. It is a way to come out of the classroom and use the theoretical knowledge taught and also fully envisioned it in the field. The activities that we participated in were various daily tasks in which some were repetitive.

Such as the litter sorting, which as the name implies was the sorting of different below ground biomass litter to determine its ANPP.

Different measurements were taken each day and also recorded to determine above and below ground measurements using technologies and techniques that were supervised by the two researchers in the stations. Small and large woody debris were taken in different plot research area, in which the fresh and dry weights were taken. The debris was to determine the amount of carbon content. Each measurement that was done was in a focus on carbon content and supplying the data and information to the public which is why it is important to have continuous data on the research plots and also monitor any changes that occurred in said plots.

All of these proved to be very useful to get an overall understanding of how the theoretical knowledge that has been learned during the classroom and from the textbooks can be used in everyday life and also how useful it is to the society, providing this data and information. The practice of these instruments such as Carbon fluxes, or changing of the Rain gauge turned out to be really valuable when it comes to my next internship. It is enabling me to carry out my own independent investigation in my current internship in Colombia, Amazonas. The investigation that I am currently working with is BVOCS measurement, and it is something i choose to do myself, because of the knowledge I gained during the internship and work this summer. Therefore i believe i have learned a lot, especially when it comes to critical thinking, carrying out field work. The things that one should think of and also plan ahead.

#### Short Summary from the Internship Report

The internship started from June 2019 to August 2019, the process of work included mostly daily activities of the stations such as sorting of litters, weighing and attending to any instruments. These were all done under the supervision of the two main researchers by the station. Not only were we taught on the daily activities of the stations but also included in special tasks such as working on building a chamber along with a professor from the university, discussions concerning the measurements, especially the continuous one and even bigger projects such as soil measurement which were needed for other Icos stations. In conclusion all tasks were relevant to our studies and also aided in inspiration for future thesis projects.