



**Project acronym:** DECCAR

**Project title:** Relationship analysis between deadwood decay rate, microbial biodiversity and climate change mitigation in boreal forests

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**Discipline:** Earth Sciences & Environment: Ecosystems & Biodiversity

**Station(s):** Hyytiälä Forest Research Station (SMEAR II) (Finland)

Before the scientific mission to the Hyytiälä Forest Research Station (Finland), a literature review on the role of deadwood in Finnish boreal forests has been conducted to better focus how to organize the field measurements, the laboratory data, and the statistical data analysis. Furthermore, via email an exchange of information between the research group and the personnel of the station permitted to better finalize the field survey. We decided not to use fully open randomization to select sample plots because it may return also plots which are located in clearcutting areas or pure birch stands. We decided to locate sample plots in conserved or old-growth forests, directing the randomization so that it would return only plots which meet the criteria of conservation forest. Through a location randomization algorithm, 25 plots located in 4 conserved/old-growth forest areas near the Hyytiälä Forest Research Station were identified.

The data concerning the deadwood in conserved and old-growth forests in Hyytiälä will be collected in 25 sample circular plots of 13 m radius (AdS of 531 m<sup>2</sup>). In each sample plot the following phases were realized: 1. Identification of the center of the plot with the use of GPS and delimitation of boundaries through the use of metric tape and Vertex with transponder; 2. Identification of the tree species and measure of the diameter at breast height/dbh (cm) of all living trees with a diameter greater than 9.5 cm (10 cm diameter class); 3. Measurement of the height of the 5 living trees (with a diameter greater than 9.5 cm) closest to the center of the sample plot; 4. Measurement of deadwood components (standing dead trees, lying deadwood, stumps); 5. Collection of deadwood samples; 6. Carbon dioxide (CO<sub>2</sub>) emissions measurements; 7. Laboratory analysis; 8. Data processing.