

COST Action E43 on Harmonisation of national forest inventories in Europe:  
Techniques for common reporting

**Work plan for the WG1 / WG3 STSM from 28 August to 17  
September 2007 in Helsinki, Finland**

The participants of the short-term scientific mission (STSM) will be briefed and supported on site by the Chair of Action E43, Prof. Erkki Tomppo.

The other participants will be Dr. Flora De Natale and MSc Caterina Gagliano, CRA - Istituto Sperimentale per l'Assestamento Forestale e l'Alpicoltura, Trento loc. Villazzano, Italia. The COST STSM funding is applied to Ms Caterina Gagliano.

The overall goal is to develop methods to predict categorical variables like forest type, tree species dominance and site fertility using field data, satellite image data and other ancillary data, as well as definitions accepted by COST action E43. The aim is also to write a scientific article to be submitted to Remote Sensing of Environment.

The work is continuation to that started in the spring 2007. The first results were presented in the second Nearest Neighbours workshop in Florence, Italy, from 5 to 7 of July 2007. The presentation was titled "Predicting categorical variables by means of an improved k-NN (E. Tomppo, C. Gagliano, F. de Natale)".

The following activities will be conducted:

1. The improved k-NN algorithm with a genetic algorithm will be tailored and finalised to predict categorical variables.
2. Statistical methods will be developed to assess the accuracy of the predictions.
3. The results will be validated also with independent data.
4. A scientific article will be written and submitted to a journal.

Helsinki, 26 July 2007 Erkki Tomppo