

## **FOREST HEALTH MONITORING IN EUROPE - ACHIEVEMENTS, PROBLEMS AND PERSPECTIVES**

**Marco Ferretti**

TerraData environmetrics, spin-off company of the University of Siena, Via L. Bardelloni 19, 58025 Monterotondo M.mo, Grosseto, Italy

Contact: [ferretti@terradata.it](mailto:ferretti@terradata.it)

Much of our current knowledge and understanding of “forest health monitoring” has been developed since the 1980s. It was across the past 30 years that major international monitoring and research programmes have been initiated and developed – and in some cases terminated. It was a sort of learning-by-doing process, which shaped our current vision of the “science of monitoring”. This process took place along a time when also environmental priorities have changed, the easiest example being the shift of concern from acidic deposition to climate change. Today, many questions the value of monitoring programmes in general, and forest monitoring in particular is at risk because of lack of credibility and funds. The two are connected: the lack of credibility (which is rooted in the poor attention given to monitoring design, data quality, and communication) creates a lack of confidence in monitoring results, which in turn results into skepticisms in the whole system and in problems to obtain support.

However, it is not possible to deny the achievements of forest monitoring, in terms of results and in terms of improvement in methods and quality. The science basis have been improved and strengthened, and the data generated by the forest monitoring programmes are being, and have been, used to address key environmental issues. The historical data series achieved in Europe have very few competitors in the world. It is therefore somewhat surprising the easiness with which funding agencies at national and international level may decide to quit supporting programmes (i.e., infrastructure, organization, expertise, data) that should better considered as a strategic asset for environmental and forest protection.

Forest monitoring is now facing a number of challenges. They involve organization, ability to provide the desired information in due time, scientific defensibility, ability to connect with other strategic networks (e.g. national forest inventories, long-term ecological research sites), and costs. Under the current economical and financial situation, convincing answers to the above challenges are even more important than before. It is therefore essential and urgent to translate such challenges into operational perspectives, and put them into practice.