



Wood potentially available for harvesting activities

Introduction

Understanding the volume that can truly be harvested using mechanical means is of paramount importance in assessing the real value of forest utilization. In this context, it is necessary to develop methodologies that enable companies to identify areas of higher value. In Italy, several methodologies for assessing accessible areas have been developed in the research field, but none have been applied at a regional scale.

In this context, the GO-PRI.FOR.MAN has applied a methodology for calculating the volume that can actually be harvested, using slope data derived from the digital terrain model and a regional map of wood volume derived from the integration of LiDAR remote sensing data and national forest inventory data as input. Additionally, operational limits of the extraction systems commonly used by companies (cable cranes and tractors) were considered, along with topographic limits (slope change). For example, it's not possible for a cable crane to cross a ridge or work simultaneously up and down a slope.

Indeed, in this context, the project aimed to provide a comprehensive assessment of the actual harvesting potential of forested areas, taking into account both natural terrain characteristics and the capabilities of the machinery used in logging operations. This approach helps companies identify areas with the highest potential for profitable utilization. For the first time in the wall Region of Friuli-Venezia Giulia Region it is possible to have access to this information. Quantifying the amount of potential wood harvesting compared to the available supply is an important factor in calculating the amount of wood that can be extracted from a specific forest area.

Lessons learned

To quantify the volume that can actually be harvested, a series of regional-scale geographic layers are required. These layers, thanks to new methodologies, including the integrated use of ground-based and remote sensing data, allow for the application of research-developed methodologies in operational contexts, such as in the Friuli Venezia Giulia region.

The integration of various geographic layers, including terrain data, wood volume data derived from remote sensing, and ground-based data, enables a more accurate and comprehensive assessment of the actual harvestable volume in a region. These advancements in data collection and analysis methods have made it possible to apply research findings and techniques to practical forestry operations, allowing for a more informed and efficient approach to forest resource management in the Friuli Venezia Giulia region.

For further information contacts

Giorgio Alberti, PhD, University of Udine, Italy, e-mail: giorgio.alberti@unud.it

Luca Cadez, PhD, University of Udine, Italy, e-mail: luca.cadez@uniud.it

Francesca Giannetti, Assistant Professor, University of Florence, Italy, e-mail: francesca.giannetti@unifi.it

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Further information

https://lookerstudio.google.com/u/0/reporting/2f6c2f81-b78f-446c-ab07-96571d7b6984/page/p_w5k3gvls6c





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[✉](mailto:info@forest4eu.eu) info@forest4eu.eu