



## Map accessibility to forest parcel to support wood mobilization

### Introduction

Forest roads and associated structures are essential for various forestry activities, including harvesting, and have a broader role in supporting agro-silvo-pastoral operations. Specifically, planning, construction, adaptation, and maintenance of these infrastructures are integral to forest management activities. From a productivity perspective related to timber harvesting, careful forest road planning is crucial for reducing the overall cost of forest operations.

Their primary functions include:

- Facilitating surveillance and monitoring activities;
- Ensuring safe forest management practices;
- Supporting the construction and maintenance of hydraulic-forestry and hydrogeological defense structures;
- Enhancing the enjoyment of ecosystem services associated with recreational and tourism activities in forested areas;
- Aiding in wildfire prevention and suppression efforts;
- Contributing to civil protection initiatives;
- Enabling rescue operations and emergency medical responses in forested regions;
- Additionally, they serve as vital connectors to the management of agricultural and pastoral production units situated within or adjacent to forested areas.

Therefore, it is important to evaluate the condition of forest roads and calculate the accessibility of each forest parcel.

In the context of the OG-SURF project, an algorithm has been developed to link the forest road network, slope data, and distance from the roads to create maps assessing the accessibility of each forest parcel. These maps were produced for the forest of companies that are involved in the GO and they are invaluable for understanding and planning future forest road features and evaluating the potential wood resources available for harvesting.

## Lessons learned

Mapping accessibility with the algorithm developed within the project is not a complex task. However, very often, the roads identified in the initial cartographic survey of the properties were not actually well-maintained. Therefore, before they can be used for accessibility mapping, it is necessary to undertake maintenance on these roads. So we suggest that before mapping accessibility using road maps, a field survey should be conducted to assess their maintenance status.

## For further information contact

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

The information presented in this factsheet was developed by the FOREST4EU partner, drawing on the innovations and knowledge generated by the indicated operational group with their explicit authorization.

## Further information


<https://www.go-surf.it/>





**Funded by the European Union**

Funded by the European Union (Grant n. 101086216). Views and opinions expressed are however those of the authors only and do not necessarily reflect those of the European Union or REA. Neither the European Union nor the granting authority can be held responsible for them.



UNIVERSITÀ DEGLI STUDI FIRENZE  
DAGRI  
DIPARTIMENTO DI SCIENZE E TECNOLOGIE AGRARIE, ALIMENTARI, AMBIENTALI E FORESTALI



FOREST4EU

Website

 FOREST4EU Project  
 FOREST4EU Project  
 info@forest4eu.eu

