







送FOREST4EU





**Forest Innovation Workshop** 6<sup>th</sup>



Shared PRIvate FORest MANagement in Eastern Alps

# **PRI.FOR.MAN. forestry** decision support system

# Luca Cadez





Dates: 11-12 February 2025 | Location: Representation of the Free State of **Bavaria to the European Union, Rue Wiertz 77, 1000 Brussels** 





Kindly hosted by Representation of the Free State of Bavaria to the European Union





luca.cadez@uniud.it



http://www.forestinnovation.eu/



# #forestinnovation2025 pri.F.MAN. FOREST4EU

## The Pri.For.Man. project

- In north east Italy forest resources are underutilized also due to the fragmentation of properties
- Shared **Private For**est **Man**agement in Eastern Alp
- Objective: promoting shared management of small properties
- Funded by the Rural Development Plan of the Autonomous Region of Friuli Venezia Giulia – Italy
- Operational group: 5 forestry companies, University of Udine and Florence, and others

Misura 16. cooperazione tipo intervento 16.1.1 - Decreto di concessione n. 422/AGFOR del 22/01/2020

Danta Legnami e Biomasse srl, DI4A - Università di Udine, DAGRI - Università di Firenze, Legno Servizi Soc. Coop., Consorzio Comunità di Rutte - Dorfschaft Greuth, SA Dolomitis Legnami ss, Impresa forestale Vuerich Gregorio, PM Maurizio Trevisan, SW Alberto DE Luca



DSS at reg
Local dro
Contract

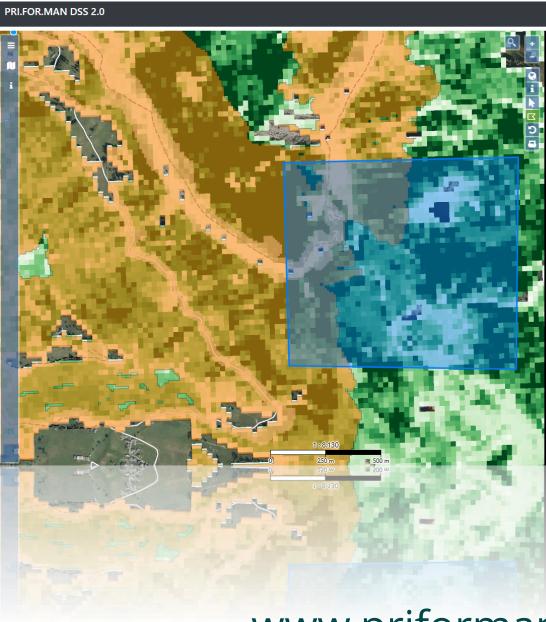




# #forestinnovation2025 PRI.F. R.MAN. FOREST4EU

## The forestry decision support system

- Designed as a WebGIS the DSS to provide valuable and up to date • information to forestry technicians, companies, administrations and owners:
  - Supports the identification of areas suitable for wood harvesting considering the wood volume and the accessibility, also provide costs estimation
  - Facilitates the compilation of planning documents or harvest • declarations
  - Identify environmental/landscape constraints in order to ٠ direct harvesting in a sustainable way





### www.priformandss.it

### Estimated extractable volume

- Automatic estimation based on PRFA

### tomized value of average utilization rate

is section allows you to obtain an indicative value of the extractable volume. You can use th utomatic estimate based on the statistical analysis of the PRFA utilization rates, or enter

### Estimated extractable volume

### 4 - Withdrawal and economic estimation

Calculate statistics		
No. particles	46	
Total surface area [ha]	370.21	
% forest area [%]	96	
Total volume [mc]	167934	
Average volume [mc/ha]	460	
Total increase [m3/year]	2571	
Average increase [mc/ha/year]	7.09	
% accessible by tractor [%]	4	
Volume served by tractor [mc]	4543	
% crane accessible sup. [%]	40	
Volume served by crane [m3]	58168	

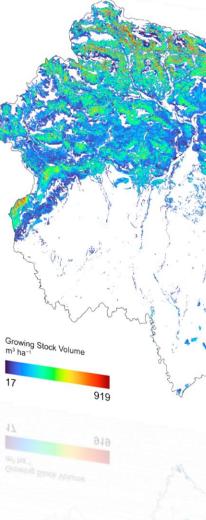
### - Particle Search

- Statistics



## The data

- 30 spatial layers ٠
- Basic information retrieved from the databases provided by the Region ٠ and standardized, and new:
- Map with resolution of the growing stock (m<sup>3</sup> ha<sup>-1</sup>) and the current annual ٠ increment (m<sup>3</sup> ha<sup>-1</sup> y<sup>-1</sup>) from satellite remote sensing, ALS LiDAR and artificial intelligence
- Map of accessibility with tractor/harvester within 100 meters and with ٠ cable crane within 500 meters considering the operating limits and the slope
- Estimate of the economic cost of logging ٠
- A dashboard with statistical data available at regional and municipal scale •
- The DSS data can be viewed online and downloaded in a spreadsheet •

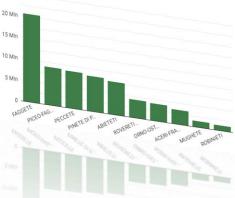




n Jon

# #forestinnovation2025 PRI.F. R.MAN. FOREST4EU

# PRI.F R.MAN. dss Panel regional data





- Which challenges are you or have you been faced with during implementation?
- Which ideas do you have to mainstream your innovation in forestry/agroforestry? 2.

## It is NOT about the technologies

Approximately we have all we need...

Lidar

Data from satellite remote sensing

Algorithms

Inventories

Data from woods exploitation

## It is about the USERS

- Old aged technicians
- New enlisted maybe ready for new
- technologies?
- Small enterprises are not open to
- innovations
- Unaware administrations and owners

# #forestinnovation2025 PRI.F. R.MAN. KFOREST4EU

## Information is the key

Inform and train professionals and forest companies Raise awareness of owners Create awareness in the local administrations of forest potential



EUROMONTANA SEFOREST4EU Representation of the Free State of Bavaria



Shared PRIvate FORest MANagement in Eastern Alps

# Luca Cadez





# #forestinnovation2025 PRI.F.MAN. FOREST4EU

### luca.cadez@uniud.it