Forest-LidaRioja | Forest inventory and fuel model map using remote sensing technologies



This project has created an updated cartography of the main forest species in La Rioja, collecting data such as the volume of wood, tree heights and vegetation structure for every 25x25m of land, with a very high level of resolution.

The Forest-LidaRioja operational group has been formed with the aim of developing a forest inventory and a fuel model map of La Rioja using remote sensing technologies. Among the main practical utilities, we can highlight the importance for improving sustainable forest management, since with accurate and updated data, better decisions can be made and actions in forest areas can be better planned. This project has allowed the development of methodologies and processes for the integration of different sources of information (mainly airborne LiDAR from PNOA 2016 data and OPTICA satellite information). These methods are supported by the development of algorithms that correlate by statistical methods precise terrain data with LiDAR data, requiring the realization of very well calibrated forest plots and measurements located with sub-meter precision in strategic points for each forest species and working area.

The main results of the Forest-LidaRioja Project are:

- Forest inventory of the forests of La Rioja.
- Mapping of fuel models of the forest area of La Rioja to plan preventive forest fire prevention work.
- Study of the evolution of poplar groves in the region and their supply potential.
- Technical training on the products generated for professionals interested in their practical use.

The products generated are open to the public so that anyone can download and use them.

DETTAGLI

ORIGINE DEL LEGNO
foresta

TIPO DI LEGNO
--

TIPO DI LEGNO IN QUESTIONE
Wood standing

IMPATTO SULL'AMBIENTE E LA BIODIVERSITà
Difficult to estimate

EFFETTO SUL REDDITO
--

POTENZIALE DI SFRUTTAMENTO
--

HUB
Hub sud-ovest

IMPATTO ECONOMICO

POTENZIALE DI MOBILITAZIONE
Difficult to define, but if we base ourselves on the annual felling and the possibilities in La Rioja, it could be between 100,000 and 250,000 m3 of wood, but it would not be only through this system.

POTENZIALE SOSTENIBILITà - VALORE
Molto positivo

FACILITà DI IMPLEMENTAZIONE
A very easy-to-use application has been created to make it user-friendly for everyone, with a basic variant for all audiences that is intuitive to use and a more advanced variant for technicians (the latter was accompanied by training).

FACILITà DI IMPLEMENTAZIONE - VALUTAZIONE
Very Easy

PREREQUISITI CHIAVE
--

TIPO DI EVENTO IN CUI QUESTO BPI è STATO PRESENTATO
--

EFFETTO SUL LAVORO
Difficult to specify

I COSTI DI ATTUAZIONE (EURO - €)

High at the scale of forest users, facilitates many processes linked to public forest services and lowers inventory costs for both public and private users.	243000

CONOSCENZE SPECIFICHE NECESSARIE

For the all public variant none, only knowledge of the location of the plot and internet access, for the technical variant knowledge of foresters and some rudiments of using the application.

Più DETTAGLI

SFIDA RISOLTA

2. Migliorare le infrastrutture e le capacità degli attori pubblici

DOMINIO

Inventario, la valutazione, il monitoraggio

La raccolta, le infrastrutture, la logistica

TIPO DI SOLUZIONE

Modellazione, DSS, la simulazione, l'ottimizzazione

PAROLE CHIAVE

Cartografía

Inventario forestal continúo

LiDAR

SOLUZIONE DIGITALE

Sì

INNOVAZIONE

Sì

PAESE D'ORIGINE

Spagna

SCALA DI APPLICAZIONE

Regionale / sub-nazionale

INIZIO E FINE ANNO

2018 - 2020

CONTATTI

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REFERENCES AND RESOURCES

SITO PRINCIPALE

https://www.forest-lidarioja.info/

SITO WEB DEL PROGETTO

https://www.forest-lidarioja.info/grupo-operativo/

PROGETTO DI RIFERIMENTO

FEADER

RISORSE

Spatial Data Infrastructures of the Government of La Rioja (IDErioja)

Application for consulting and extracting data from specific plots of land

LOGO DELLE MIGLIORI PRATICHE

LOGO DELLA PRINCIPALE ORGANIZZAZIONE

PROGETTO NELL'AMBITO DEL QUALE QUESTA SCHEDA è STATA CREATA

Rosewood 4.0

DATA DI INSERIMENTO

8 Set 2021

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A TOOL FROM ROSEWOOD 4.0, DESIGNED AND DEVELOPED BY