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.

DéTAILS

ORIGINE DU BOIS
Forêt

TYPE DE BOIS
--

TYPE DE BOIS CONCERNé
Wood standing

IMPACT SUR L'ENVIRONNEMENT ET LA BIODIVERSITé
Difficult to estimate

EFFET SUR LE REVENU
--

POTENTIEL D'EXPLOITATION
--

HUB
Pôle Sud-Ouest

IMPACT éCONOMIQUE

POTENTIEL DE MOBILISATION
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.

POTENTIEL DE DURABILITé - VALEUR
Très positif

FACILITé D'IMPLéMENTATION
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).

FACILITé D'IMPLéMENTATION - ÉVALUATION
Very Easy

PRéREQUIS CLéS
--

TYPE D'éVéNEMENT Où CETTE ICPE A éTé PRéSENTéE
--

EFFET SUR L'EMPLOI
Difficult to specify

COûTS D'IMPLéMENTATION (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

CONNAISSANCES SPéCIFIQUES REQUISES

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.

PLUS DE DéTAILS

DéFI CONCERNé

2. Améliorer les infrastrctures et les capacités des acteurs publics

DOMAINE

Inventaire, diagnostic, monitoring

Récolte, infrastructure, logistique

TYPE DE SOLUTION

Modélisation, DSS, simulation, optimisation

MOTS-CLéS

Cartografía

Inventario forestal continúo

LiDAR

SOLUTION DIGITALE

Oui

INNOVATION

Oui

PAYS D'ORIGINE

Espagne

ECHELLE D'APPLICATION

Régionale/subnationale

DéBUT ET FIN D'ANNéE

2018 - 2020

INFORMATIONS DE CONTACT

PROPRIéTAIRE OU AUTEUR

Agresta S. Coop.

David García

dgarcia@agresta.org

https://agresta.org/

RAPPORTEUR

CESEFOR

Ángela García de Arana

angela.garcia@cesefor.com

REFERENCES AND RESOURCES

SITE WEB PRINCIPAL

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

SITE WEB DU PROJET

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

RéFéRENCE DU PROJET

FEADER

RESSOURCES

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

Application for consulting and extracting data from specific plots of land

LOGO DE LA BONNE PRATIQUE

LOGO DE L'ORGANISATION PRINCIPALE

PROJET SOUS LEQUEL CETTE FICHE D'INFORMATION A éTé CRééE

Rosewood 4.0

DATE DE PUBLICATION

8 sep 2021

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No. 862681

A TOOL FROM ROSEWOOD 4.0, DESIGNED AND DEVELOPED BY