CROSS Harmonization & HPC modelization of FOREST Datasets



CROSS-FOREST

The aim of Cross-Forest is to publish Forest Inventory Datasets and Forestry maps from Portugal and Spain in Linked Open Data (LOD) format, and to combine them to create and integrate models supporting forest management and forest protection.

Cross-Forest is developing a common platform for open forest data, and a cross-border data model (ontology) shared between Portugal and Spain, for the publication of forest inventories, maps and other forest databases in Linked Open Data format (LOD). Cross-Forest will provide a public endpoint exposing Forest Data, according to the produced model. The main goal is focused on keeping forest information always available and updated, to make exploitation easier for all stakeholders involved in forest management and research.

Two use cases are being developed:

CAMBRIC - to estimate the evolution of forests and wood quality, under different management scenarios

FRAME - to predict forest fires behavior and spreading through precise information on combustible materials, forestry maps and propagation models.

High Performance Computing (HPC) resources are employed due to the amount of data generated and managed, and to the complexity of the models.

Results so far show the usefulness and versatility provided by LOD technology, as It allows users to freely access and manage updated data to develop tools adapted to their needs and purposes. Publishing data as LOD allows Public Administrations to easily fulfil their requirements of transparence and publicity, optimize resources and keep a statistic control of the use of public data.

DETALLES

ORIGEN DE LA MADERA

Bosque

TIPO DE MADERA

--

TIPO DE MADERA AFECTADA

Mediterranean forests in Spain and Portugal

IMPACTO EN EL MEDIO AMBIENTE Y LA BIODIVERSIDAD

Very high as it will help to protect forests from fires for its best management.

EFECTO SOBRE LOS INGRESOS

No data

POTENCIAL DE EXPLOTACIóN

The results obtained so far demonstrate the usefulness and versatility provided by LOD technology, as it allows users to freely access and manage up-to-date data to develop tools adapted to their needs and purposes.

LOD technology allows for the modular and interconnected construction of an open, public and quality information infrastructure available to the sector. The

POTENCIAL DE MOVILIZACIóN

Medium, this tool provides the best information for an appropiate managemnt to avoid forest fires and also for the best mangament, therfore, it will improve the mobilization potential when CrossForest is used for this purpose

POTENCIAL DE SOSTENIBILIDAD - VALOR

Muy positivo

FACILIDAD DE APLICACIóN

"Consuming open data" is not easy, so it is necessary to create intermediate links and multidisciplinary teams to bring new technologies closer to users, in order to design adapted solutions.

FACILIDAD DE IMPLEMENTACIóN - EVALUACIóN

--

PREREQUISITOS CLAVE

The technology is already developed, the requirements are similar to those necessary for the use of any other similar software.

TIPO DE EVENTO EN EL QUE SE HA PRESENTADO ESTA IFS

--

continuity of this type of publication allows public administrations to meet their transparency obligations, optimise resources and keep statistical control of the use made of the information.

HUB

Centro del Suroeste

EFECTO SOBRE EL EMPLEO

The project does not have a direct effect on employment, but it opens up opportunities for entrepreneurs and companies, as the information published allows any user with the appropriate profile to launch queries and develop adapted tools.

IMPACTO ECONóMICO

High, as the information facilitates the management and forecasting of forestry work to be carried out.

COSTES DE IMPLEMENTACIóN (EURO - €)

--

CONOCIMIENTOS ESPECíFICOS NECESARIOS

Medium, some knowledge of mapping and forestry tools is necessary.

MáS DETALLES

RETO ABORDADO

1. Mejorar la resistencia y la adaptación de los bosques al cambio climático

DOMINIO

Inventario, evaluación, seguimiento

Gestión forestal, silvicultura, servicios ecosistémicos, resiliencia

Perturbaciones forestales, riesgos, respuesta a desastres

TIPO DE SOLUCIóN

Plataformas de datos, centros de datos, datos abiertos

PALABRAS CLAVE

forest models; High Performance Computing (HPC); Linked Open Data (LOD); ontology

SOLUCIóN DIGITAL

Sí

INNOVACIóN

Si

PAíS DE ORIGEN

Portugal

ESCALA DE APLICACIóN

Transfronterizo/multilateral

AñO DE INICIO Y FIN

2018 - 2021

DATOS DE CONTACTO

PROPIETARIO O AUTOR

Grupo Tragsa

Asunción Roldan Zamarrón

aroldan@tragsa.es

http://www.tragsa.es

REPORTADOR

Cesefor Foundation

Ángela García

angela.garcia@cesefor.com

REFERENCES AND RESOURCES

SITIO WEB PRINCIPAL

https://crossforest.eu/

SITIO WEB DEL PROYECTO

https://crossforest.eu/

REFERENCIA DEL PROYECTO

RECURSOS

--

Cross-Forest is co-financed by the European Union’s Innovation and Networks Executive Agency (INEA), through the Connecting Europe Facility (CEF) 2014-2020. Action 2017-EU-IA-0140 (Agreement No INEA/CEF/ICT/A2017/1566738)

LOGO DE LA BUENA PRáCTICA

LOGOTIPO DE LA ORGANIZACIóN PRINCIPAL

PROYECTO BAJO EL QUE SE HA CREADO ESTA FICHA

Rosewood 4.0

FECHA DE MENSAJE

7 Jun 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