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.

DETAILS

ORIGIN OF WOOD
Forest

TYPE OF WOOD
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KIND OF WOOD CONCERNED
Mediterranean forests in Spain and Portugal

IMPACT ON ENVIRONMENT & BIODIVERSITY
Very high as it will help to protect forests from fires for its best management.

INCOME EFFECT
No data

EXPLOITATION POTENTIAL
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

MOBILIZATION POTENTIAL
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

SUSTAINABILITY POTENTIAL - VALUE
Very Positive

EASE OF IMPLEMENTATION
"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.

EASE OF IMPLEMENTATION - EVALUATION
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KEY PREREQUISITES
The technology is already developed, the requirements are similar to those necessary for the use of any other similar software.

TYPE OF EVENT WHERE THIS BPI HAS BEEN FEATURED
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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

South-West Hub

JOB EFFECT

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.

ECONOMIC IMPACT

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

COSTS OF IMPLEMENTATION (EURO - €)

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SPECIFIC KNOWLEDGE NEEDED

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

MORE DETAILS

CHALLENGE ADDRESSED

1.- Improve forest resilience and adaption to climate change

DOMAIN

Inventory, monitoring

Forest management, ecosystem, resilience

Forest disturbances, risks

TYPE OF SOLUTION

Data platforms, data hubs

KEYWORDS

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

DIGITAL SOLUTION

Yes

INNOVATION

Yes

COUNTRY OF ORIGIN

Portugal

SCALE OF APPLICATION

Cross-border/multi-lateral (several countries)

START AND END YEAR

2018 - 2021

CONTACT DATA

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REFERENCES AND RESOURCES

MAIN WEBSITE

https://crossforest.eu/

PROJECT WEBSITE

https://crossforest.eu/

RESOURCES

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PROJECT REFERENCE

Cross-Forest is co-financed by the European Union's Innovation and Networks Executive Agency (INEA), through the Connecting Europe Facility (CEF) 2014-

LOGO OF BEST PRACTICE

LOGO OF MAIN ORGANIZATION

PROJECT UNDER WHICH THIS FACTSHEET HAS BEEN CREATED

Rosewood 4.0

POST DATE

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A TOOL FROM ROSEWOOD 4.0, DESIGNED AND DEVELOPED BY