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.

DETALHES

ORIGEM DA MADEIRA

Floresta

TIPO DE MADEIRA

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TIPO DE MADEIRA EM CAUSA

Mediterranean forests in Spain and Portugal

IMPACTE NO AMBIENTE E BIODIVERSIDADE

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

IMPACTE NAS RECEITAS

No data

POTENCIAL DE EXPLORAçãO

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 MOBILIZAçãO

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

SUSTENTABILIDADE POTENCIAL - VALOR

Muito positivo

FACILIDADE DE IMPLEMENTAçãO

"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.

FACILIDADE DE IMPLEMENTAçãO

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PRE-REQUISITOS CHAVE

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

TIPO DE EVENTO EM QUE ESTE BPI TEM SIDO APRESENTADO

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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

Pólo Sudoeste

IMPACTE NO EMPREGO

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.

IMPACTE ECONOMICO

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

CUSTOS DE IMPLEMENTAçãO (EURO - EUR)

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CONHECIMENTOS ESPECIFICOS NECESSáRIOS

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

MAIS DETALHES

DESAFIO ABORDADO

1. Melhorar a resiliência e adaptação das florestas às alterações climáticas

DOMíNIO

Inventário, avaliação e monitorização

Gestão florestal, silvicultura, serviços do ecosistema, resiliencia

Perturbações florestais, riscos e resposta a catástrofes

TIPO DE SOLUçãO

Plataformas de dados, centros de dados, partilha de dados

PALAVRAS-CHAVE

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

SOLUçãO DIGITAL

Sim

INOVAçãO

Sim

PAíS DE ORIGEM

Portugal

ESCALA DE APLICAçãO

Além fronteiras/ multilateral

ANO DE INíCIO E FIM

2018 - 2021

DADOS DE CONTACTO

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REFERENCES AND RESOURCES

WEBSITE PRINCIPAL

https://crossforest.eu/

WEBSITE DO PROJETO

https://crossforest.eu/

REFERêNCIA AO PROJETO

RECURSOS

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LOGOTIPO DA BOA PRáTICA

LOGOTIPO DA ORGANIZAçãO PRINCIPAL

PROJETO NO âMBITO DO QUAL A FOLHA DE DIVULGAçãO FOI CRIADA

Rosewood 4.0

DATA DE ENTRADA

7 Jun 2021

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A TOOL FROM ROSEWOOD 4.0, DESIGNED AND DEVELOPED BY