SISREP | Management and analysis of reforestations on agricultural land



SISREP is a project that has developed an advanced statistical model that allows predictive and descriptive analyses to be carried out using a forestation survival prediction tool to ensure the success of new plantations. SISREP is based on the use of knowledge from historical in-situ visits to predict the probability of success of future plantations using machine learning techniques, and on a database with more than 50,000 observations referring to forestations carried out from 1993 to the present day.

The main objective of SISREP is to make use of the information obtained during inspections in the framework of aid for afforestation and the creation of forest areas in Castilla y León in order to:

- Use of the information obtained in the field for the management of the controlled files.
- Creation of a centralised and geo-referenced database with information on the state of plantations.
- To be able to predict, by means of artificial intelligence techniques, the success of future plantations.
- With the knowledge extracted, review and improve the planning of future actions, allowing the implementation of the most appropriate technical conditions for the new environmental circumstances.

To this end, an infrastructure has been designed and implemented that allows the digitalisation of the entire workflow, from data collection in the field to the use of these data in advanced statistical analysis tools.

The data collected in the field are for example species, altitude, density, slope, method, orientation, age, lithography, with or without sowing, or area.

DETAILS

ORIGIN OF WOOD	MOBILIZATION POTENTIAL
Forest	
TYPE OF WOOD	
Stemwood	SUSTAINABILITY POTENTIAL - VALUE
	Very Positive
KIND OF WOOD CONCERNED	EASE OF IMPLEMENTATION
Reforestation and creation of forest areas	
IMPACT ON ENVIRONMENT & BIODIVERSITY	EASE OF IMPLEMENTATION - EVALUATION
SISREP enables better forest management and ensures the success of new	
tree plantations, thus improving the preservation of the environment and the	
creation of new forest ecosystems.	
Therefore, the project has a very positive impact on the environment and	
biodiversity.	
INCOME EFFECT	KEY PREREQUISITES
Very positive. Better forest management can generate more income.	In order to carry out this project, it would be necessary to have a solid
	database, compiled over a number of years.
EXPLOITATION POTENTIAL	TYPE OF EVENT WHERE THIS BPI HAS BEEN FEATURED
Very positive, as SISREP is a support system for forest management in	
multiple variants, as well as a valuable aid to both private owners and	
managers in the task of creating new forests and, in the medium term,	

The use of data derived from the daily management of administrations is a

managing specific aspects of existing ones.

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highly valuable source of information that can help to improve the services offered by these administrations. To this end, the digitisation of processes becomes a fundamental and indispensable task.

HUB	JOB EFFECT
South-West Hub	
ECONOMIC IMPACT	COSTS OF IMPLEMENTATION (EURO - €)
SPECIFIC KNOWLEDGE NEEDED	
Use of digital tools.	

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MORE DETAILS

CHALLENGE ADDRESSED	DOMAIN	TYPE OF SOLUTION
1 Improve forest resilience and adaption to climate	Inventory, monitoring	Modelling, simulation, optimization
change	Forest management, ecosystem, resilience	
	Forest disturbances, risks	
KEYWORDS	DIGITAL SOLUTION	INNOVATION
Reforestation	Yes	Yes
database		
forecasting		
COUNTRY OF ORIGIN	SCALE OF APPLICATION	START AND END YEAR
Spain	Regional/sub-national	

CONTACT DATA

OWNER OR AUTHOR	REPORTER
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REFERENCES AND RESOURCES

MAIN WEBSITE

https://www.pfcyl.es/sites/default/files/biblioteca/documentos/ficha_sisrep.pdf PROJECT WEBSITE

RESOURCES

Presentación : Proyecto SISREP

PROJECT REFERENCE

PROJECT UNDER WHICH THIS FACTSHEET HAS BEEN CREATED

Rosewood 4.0

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A TOOL FROM ROSEWOOD 4.0, DESIGNED AND DEVELOPED BY



