

# 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

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### ORIGIN OF WOOD

Forest

### TYPE OF WOOD

Stemwood

### KIND OF WOOD CONCERNED

Reforestation and creation of forest areas

### IMPACT ON ENVIRONMENT & BIODIVERSITY

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

Very positive. Better forest management can generate more income.

### EXPLOITATION POTENTIAL

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, managing specific aspects of existing ones.

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

### MOBILIZATION POTENTIAL

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### SUSTAINABILITY POTENTIAL - VALUE

Very Positive

### EASE OF IMPLEMENTATION

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### EASE OF IMPLEMENTATION - EVALUATION

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### KEY PREREQUISITES

In order to carry out this project, it would be necessary to have a solid database, compiled over a number of years.

### TYPE OF EVENT WHERE THIS BPI HAS BEEN FEATURED

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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**

South-West Hub

**JOB EFFECT**

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**ECONOMIC IMPACT**

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**COSTS OF IMPLEMENTATION ( EURO - € )**

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**SPECIFIC KNOWLEDGE NEEDED**

Use of digital tools.

## MORE DETAILS

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

## CONTACT DATA

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### OWNER OR AUTHOR

CESEFOR, Junta de Castilla y León

Francisco Gallego

[francisco.gallego@cesefor.com](mailto:francisco.gallego@cesefor.com)

<https://www.cesefor.com/>

### REPORTER

Fundación CESEFOR

Angela García de Arana

[angela.garcia@cesefor.com](mailto:angela.garcia@cesefor.com)

## REFERENCES AND RESOURCES

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### MAIN WEBSITE

[https://www.pfcyl.es/sites/default/files/biblioteca/documentos/ficha\\_sisrep.pdf](https://www.pfcyl.es/sites/default/files/biblioteca/documentos/ficha_sisrep.pdf)

### PROJECT WEBSITE

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### PROJECT REFERENCE

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### RESOURCES

**Presentación : Proyecto SISREP**

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**PROJECT UNDER WHICH THIS FACTSHEET HAS BEEN CREATED**

Rosewood 4.0

**POST DATE**

15 Dec 2021

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**A TOOL FROM ROSEWOOD 4.0, DESIGNED AND DEVELOPED BY**

