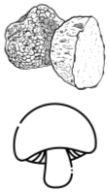
FOREST4EU

ITHub 4 – Non-Wood Forest Products



FOREST4EU partner: Cesefor

OG: MIKOGEST

OG's country: Spain

Type of Innovation: Service

Visor Mikogest

Introduction

One of the objectives of the operative group is to learn about and manage the regulation of the mycological resource using technological tools. Priority is given to guaranteeing sustainability in harvesting, traceability in the value chain and generating useful information for both the collector and the business sector. To this end, a Big Data collection and analysis system has been generated to provide the necessary information to guarantee the sustainability of both the activity and the habitats, offering precise knowledge of the production capacity of these habitats in real time (through estimates of the production in each place and time), and also processing precise parameters of the demand, commercialization and exploitation of the resource. Queries made on the Mycological Big Data database can be visualized through the mikogest viewer

Approach and main results

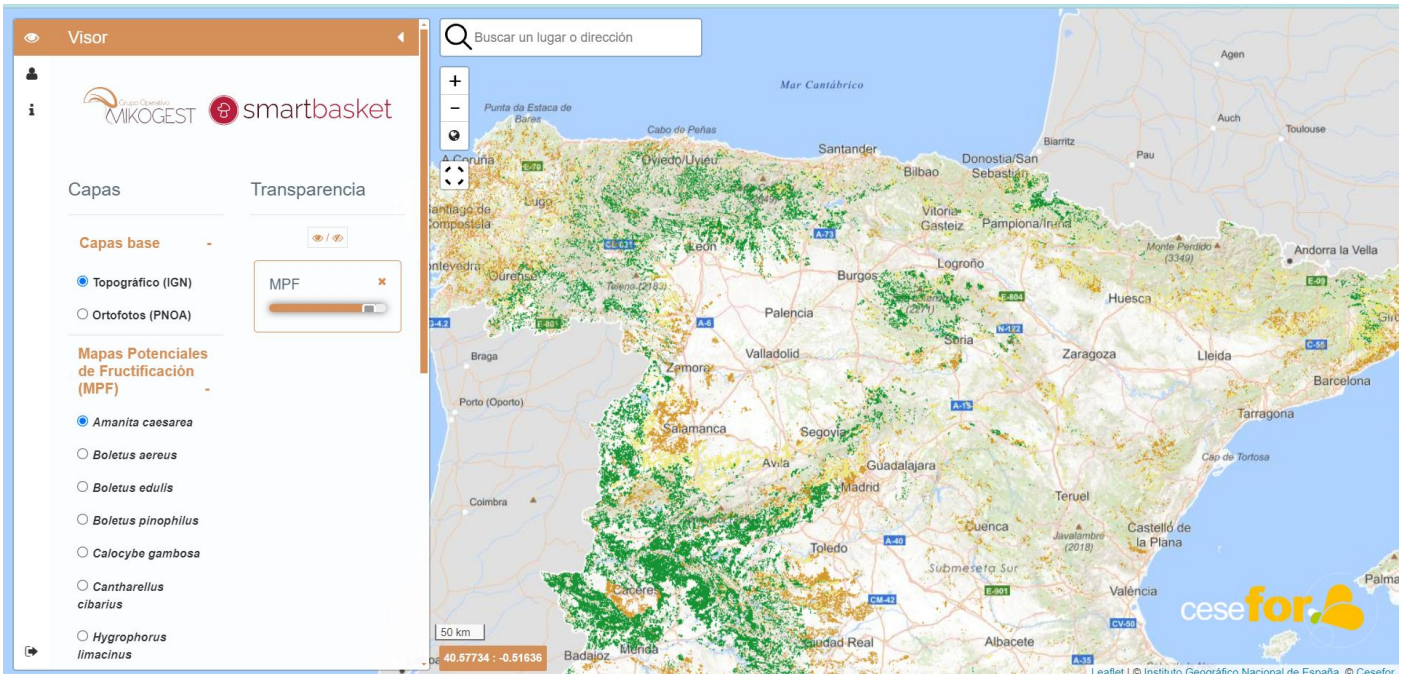
This viewer is based on the collection and integration of all existing data from the mycological sector for Big Data analysis, designed to allow us to address, in an effective and useful way, the large volume of existing data in the natural environment and also those collected through the apps generated within the project. Its purpose is to improve the management of our mushroom producing forests. This viewer displays the Potential Fruiting Maps (PPM) of the selected mushroom specie. This potential fruiting area is classified according to the legend in Optimum, Adequate and Marginal according to the main and secondary forest species, its age, climatological criteria, edaphology and fraction of covered area. Information can be obtained, among others, on: POTENTIAL FRUCTIFICATION AREA (ha), ANNUAL PRODUCTIVE CAPACITY, AVERAGE MARKET PRICES. Information can also be obtained on: POTENTIAL AND OBSERVED MYCOLOGICAL DIVERSITY OF EDIBLE SPECIES. For the 11 species for which the potential fruiting map has been obtained, the Optimum, Adequate and Marginal surface is shown. In addition, it also shows the potential annual production capacity in kg, estimated from adjusted production models based on habitat-dependent variables and stand characteristics. Observed diversity refers to the number of times that species is known to be present in the administrative unit of work. OBSERVED PRODUCTION OF EDIBLE SPECIES: for the target species of socioeconomic interest for which a fruiting potential map is available, the number of observations recorded in the database is shown, as well as the average production calculated in kg per hectare and the average yield in kg per hour. PRODUCTIVE CAPACITY OF EDIBLE SPECIES: in this case we can see the annual amount harvested during the previous season and the estimated productive capacity. An indicator of the sustainability of the resource is also included so that it will appear green when the species is harvested without compromising the resource and orange when the species may be

harvested with the risk of compromising its survival. FRUCTIFICATION PREDICTION: you can also see a prediction of fruiting production for the next few days for the target species. Thus, you can see whether an area has a very likely, likely, unlikely or improbable fruiting prediction for each of the 11 target species.

Lessons learned

The prediction models developed by the viewer require long series of data well distributed in time and territory. The development of the viewer itself is feasible for any computer expert. However, its implementation requires crossing several data layers, which are sometimes not available. The real complexity lies in the collection of this information needed to generate the viewer's outputs, such as fruiting potential maps or fruiting predictions

Figure1: Appearance of the website



The information presented in this factsheet was developed by the FOREST4EU partner, drawing on the innovations and knowledge generated by the indicated operational group with their explicit authorization.

Further information

https://www.youtube.com/watch?v=dLQ732Zp_J8&ab_channel=FundacionCesefor

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