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MED-GOLD

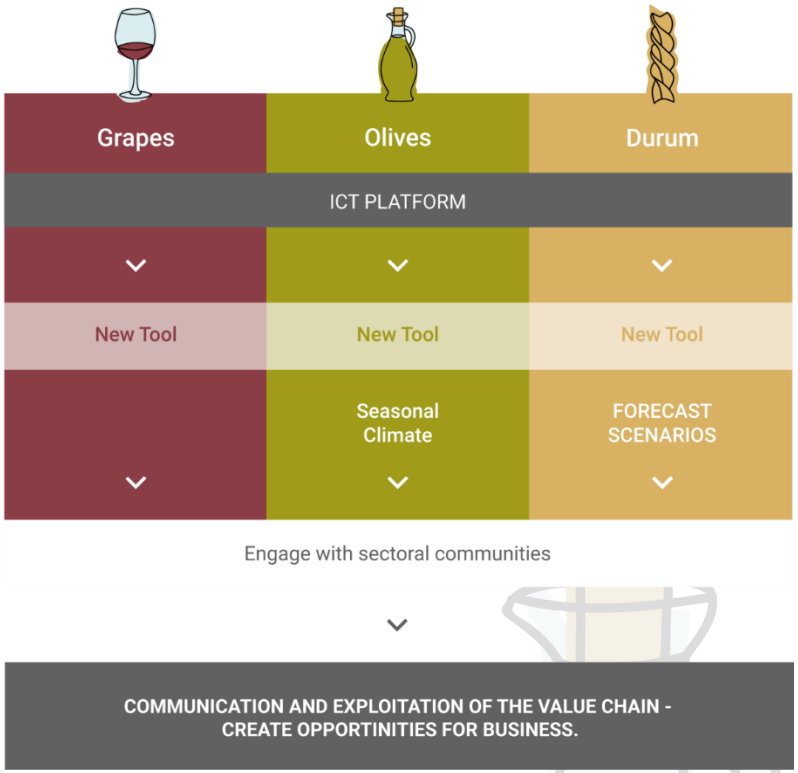
Trasformare le informazioni climatiche in valore economico per il settore olio e vino.

Alessandro Dell'Aquia

ENEA

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 776467.

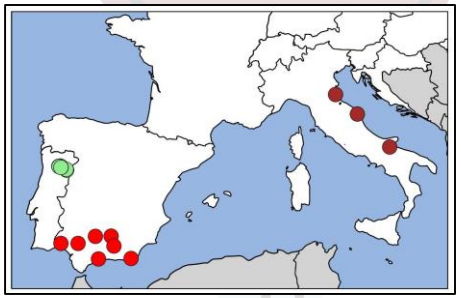
STRATEGY



- Climate Science
- Agro-ecosystem models
- Stakeholders engagement
- Technical Solutions
- Training activities
- Industrial problem-holders

MED-GOLD: Main objectives

- **Involve users** in the design, development, test, and evaluation of the added value of pilot climate services for olive, grape, and durum wheat
- Refine, validate, and upscale **pilot services** with the wider European and global user communities for olive / oil, grape / wine and durum wheat / pasta.
- **Ensure replicability** of climate services for other crops / climates (e.g., coffee) and link with global policy-making
- Implement a comprehensive communication and market plan to **enhance uptake** for MED-GOLD climate services
- Build better informed and connected **end-user communities** for the global olive oil, wine, and pasta food systems and related policy making



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Scoping workshops

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Olives/olive oil

DCOOP Hq.
Antequera, Málaga
SPAIN

June 2018, May 2019

Grapes/Wine

Sogrape Vinhos
Porto
PORTUGAL

May 2018, May 2019

Durum wheat/past

HORTA
Ca' Bosco, Ravenna
ITALY

May 2018, April 2019

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Grape/wine: key requirement

- SOGRAPE is interested in both seasonal predictions and climate change projections.
- Variables of interest: Temperature, precipitation and climatic indices derived from them.
- Region of interest: Douro region.
- Temporal resolution:

Seasonal predictions	Climate projections
weekly will be ideal but monthly will be useful too	monthly will be ideal but trimestral, half-annual or annual will be also fine

- Required level of reliability:

Seasonal predictions	Climate projections
70%	80%

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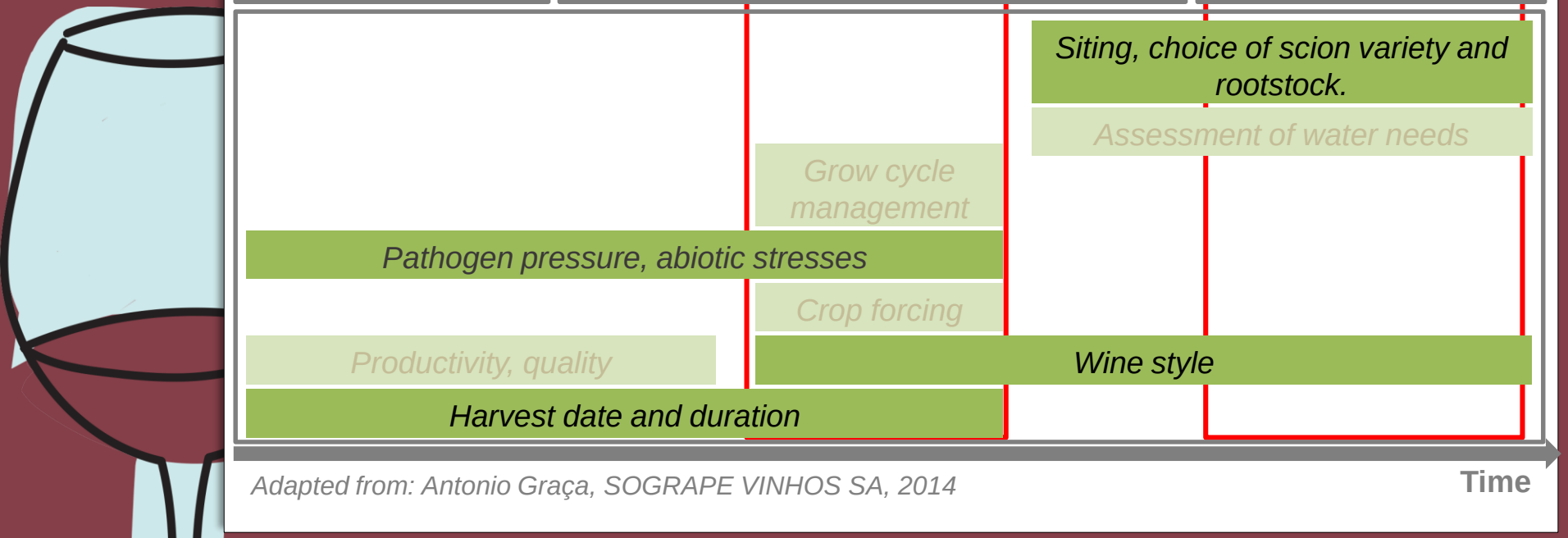
Grape/wine: key actions



Adapted from: Antonio Graça, SOGRAPE VINHOS SA, 2014

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After the feedbacks: beta version of the services

After collecting the key requirements, identifying the key decision, starting working on the trust/value

SprR	**Spring Precipitation**
GST	**Growing Season Temp**
SU35	**Summer days (>35°C)**
HarvestR	**Harvest Precipitation**
WSDI	**Warm spell**

Santa Barbara IPMA weather station data

Bio-climatic indicators selected for the wine sector

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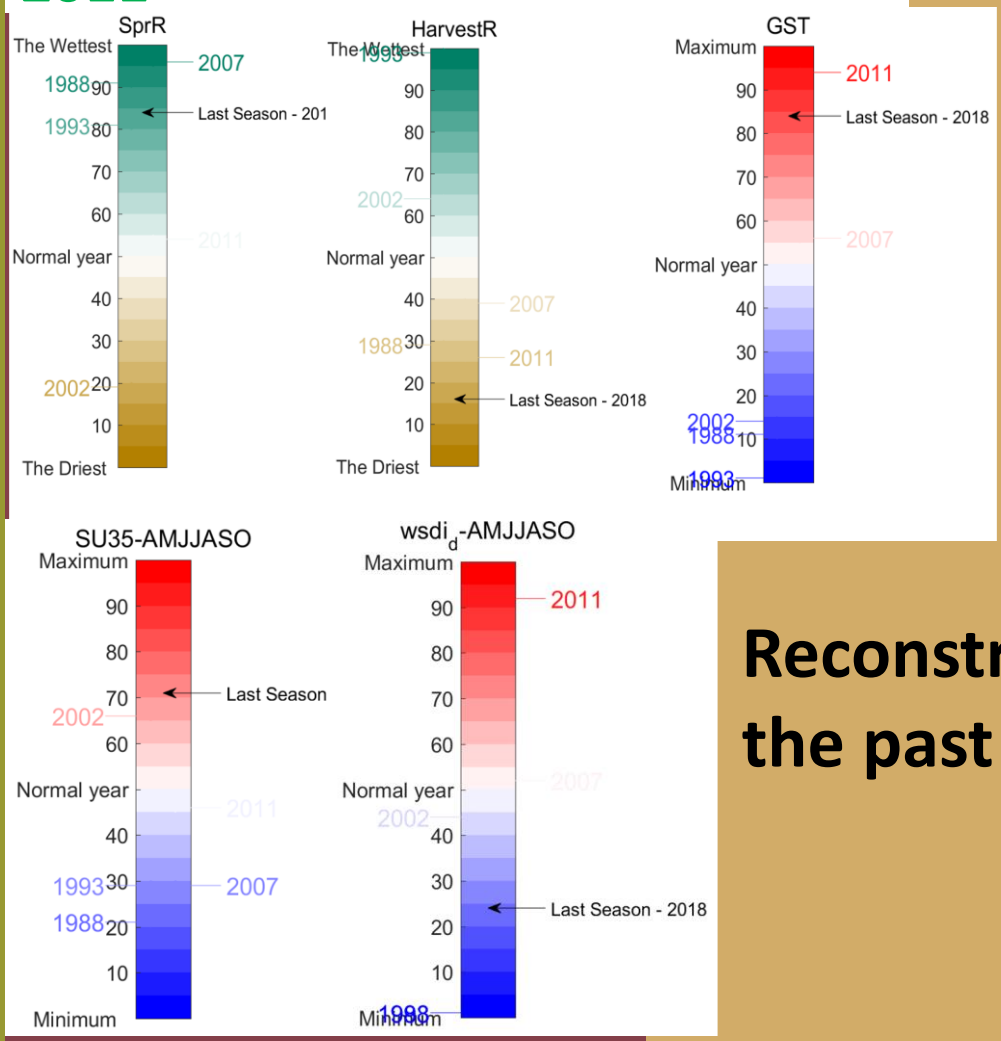
Input from users: **bad** vs **good** years: **1988,1993 2002** vs **2007-2011**



Reconstructing the past

After the feedbacks: beta version of the services

After collecting the key requirements, identifying the key decision, starting working on the trust/value

SprR	**Spring Precipitation**
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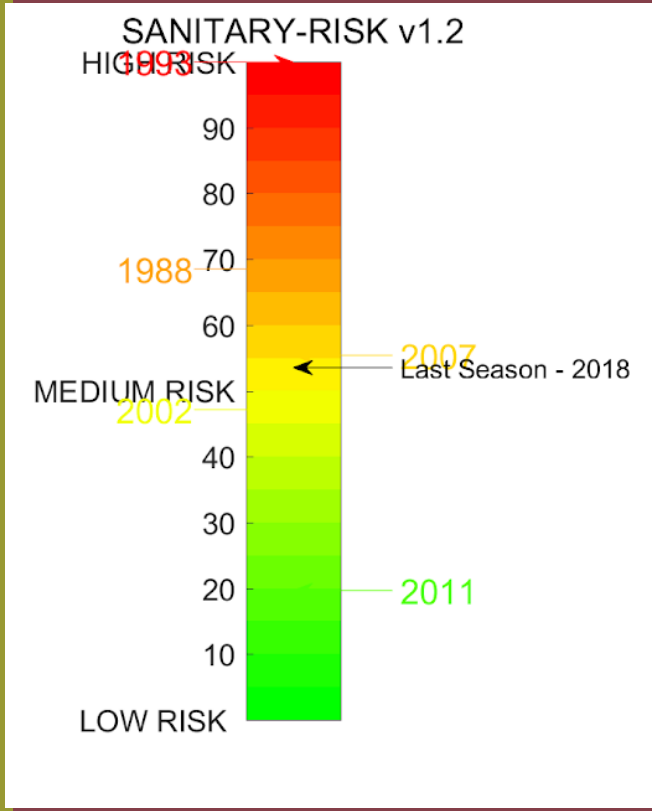
E-OBS gridpoint closest to Santa Barbara IPMA weather station data

Bio-climatic indicators selected for the wine sector

An example of information for a «Gradual» decision (i.e. Compound Sanitary Risk Index for grapes in Douro Valley)



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Input from users: **bad** vs **good** years: **1988,1993 2002** vs **2007-2011**

Sources of risks for infestations identified:

1. High/Low **SprR** (if high SprR risk doubled!)
2. High **HarvestR**
3. Low **GST**

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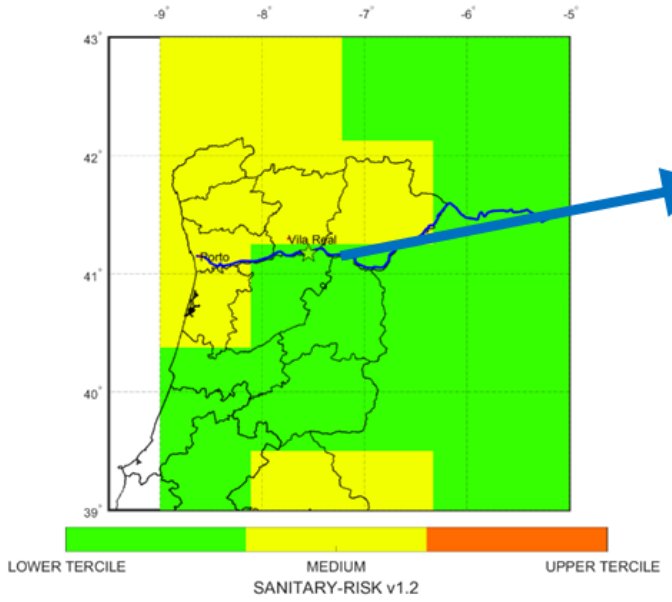
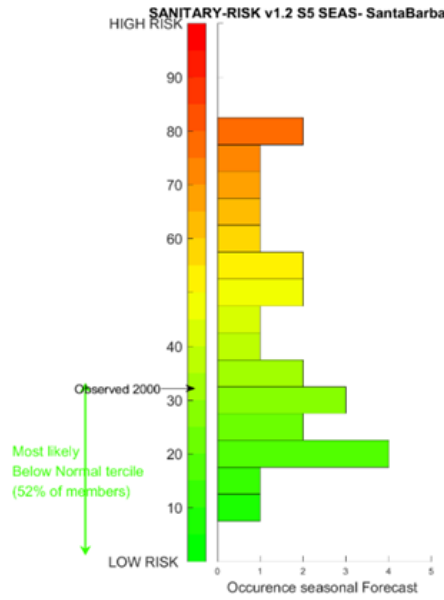
After the feedbacks: beta version of the services

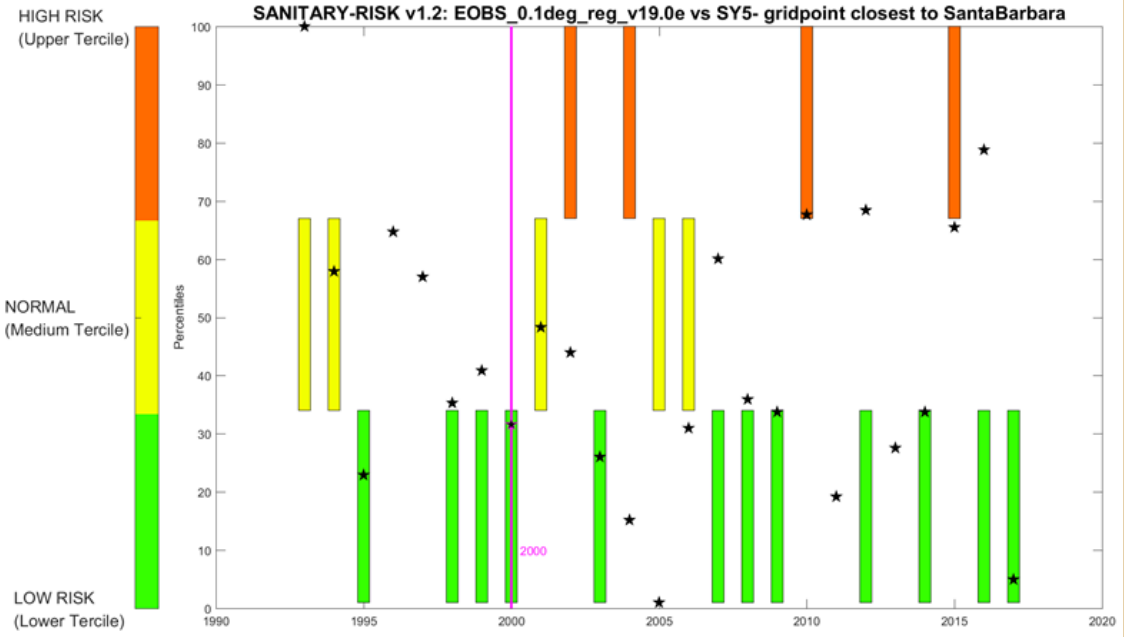
YEAR 2000



...as received funding from ...n Union's Horizon 2020 ... innovation programme ...greement No 776467.



Compound Sanitary Risk Index in seasonal forecasts (Seas5)

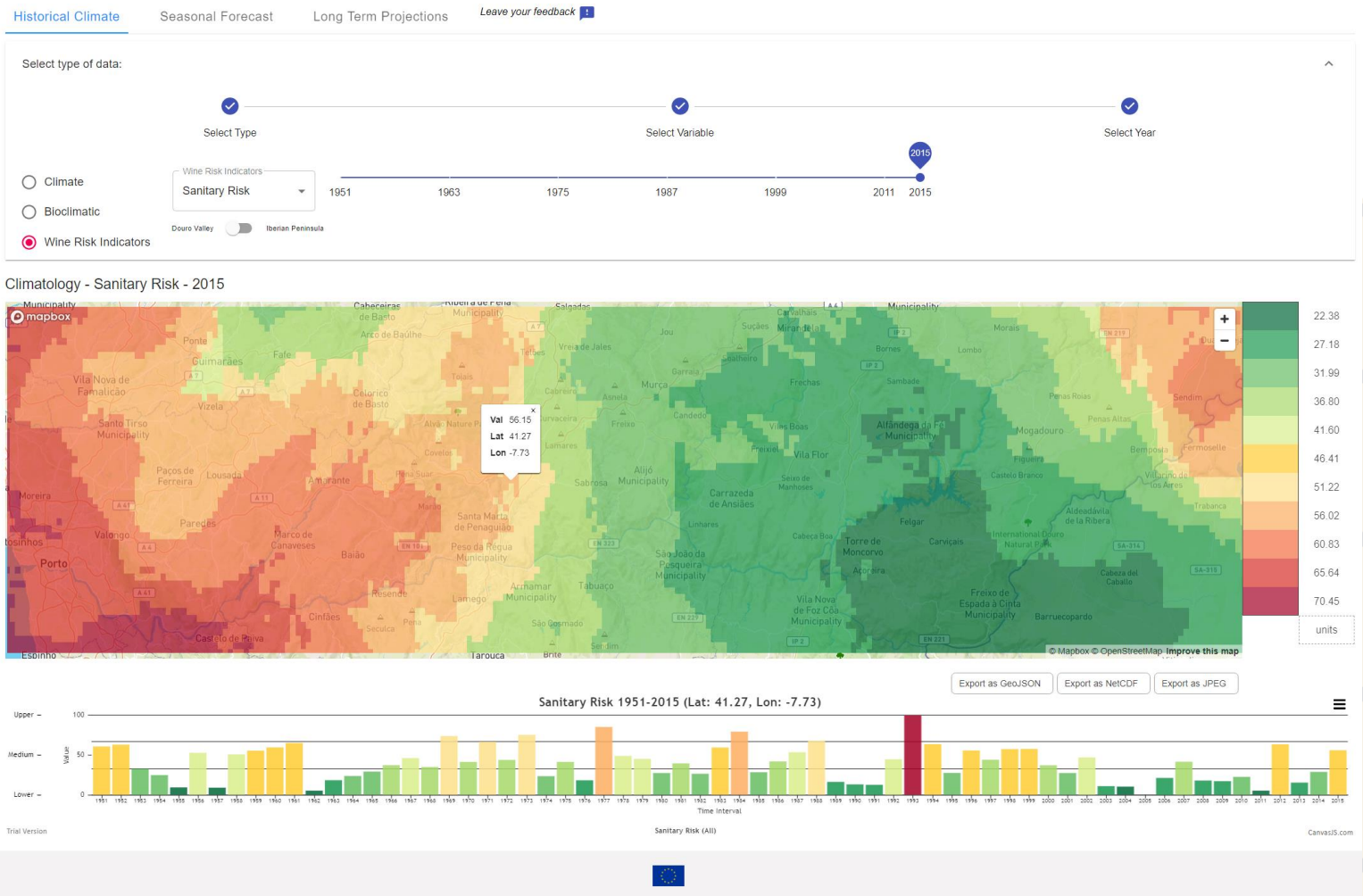


Delivery the tool: MED-GOLD DASHBOARD V1.0

Seasonal forecast

Monitoring

Longer time scales



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Olive/olive oil

MED-GOLD will integrate models capable of predicting pest dynamics and fruit infestation by the olive fly (Bactrocera oleae), so as to provide sensible information to support the best management and reduce agricultural costs by addressing issues like:

- **When and where is olive fly pest expected in my area during the next season?**
- **Which new pests will I have to fight against during the next ten years?**
- **What will be the productivity under climate change?**

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Olive/olive oil: key actions

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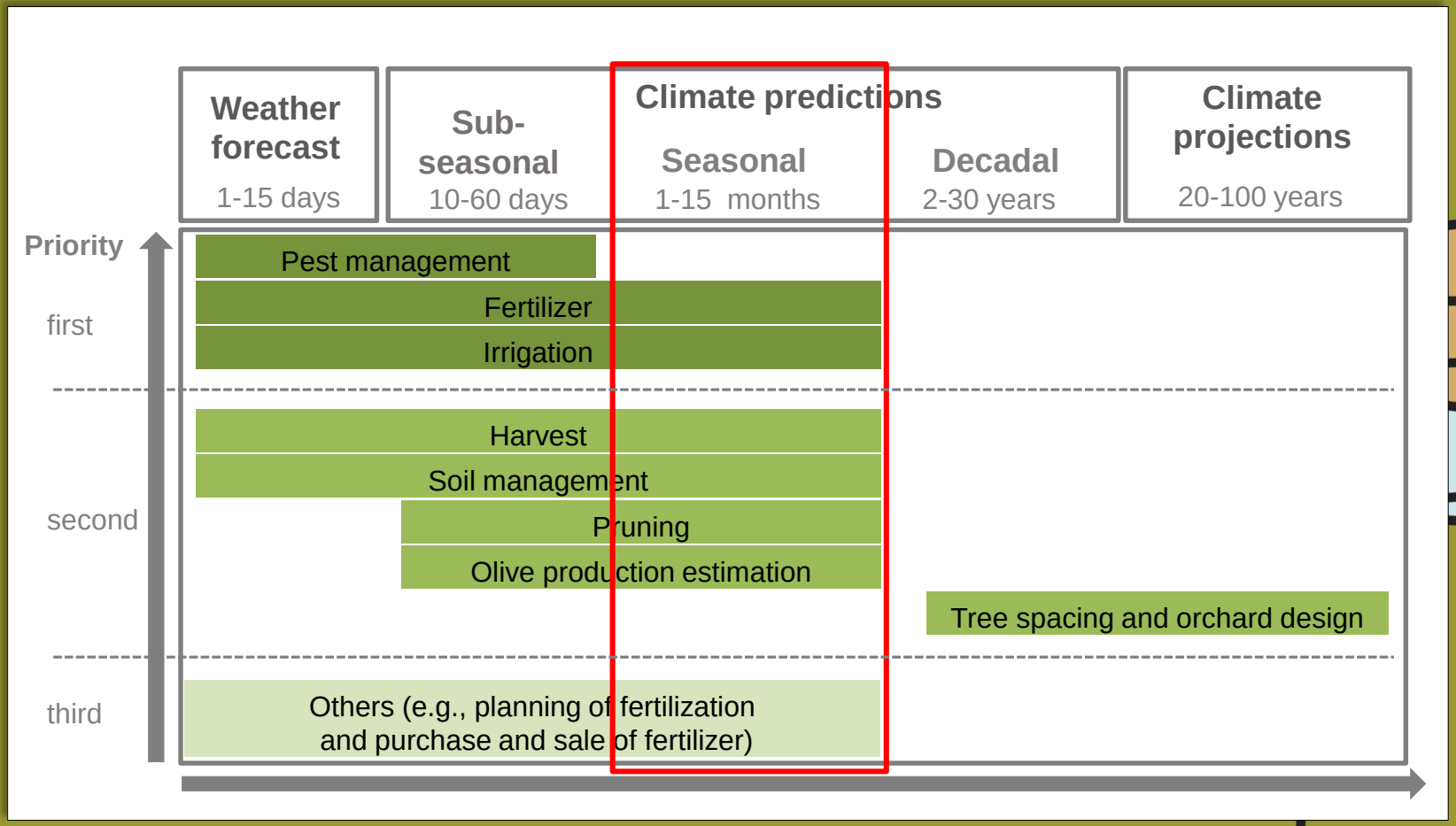

3. MAIN RESULTS.

OLIVIA.
Decision support system based on artificial intelligence for olive fruit fly.
MED-GOLD design a survey to collect the feedback

General score:

Turning climate-related information into added value for traditional MEDiterranean Grape, OLive and Durum wheat food systems

MED-GOLD

THE MED-GOLD PROJECT

MED-GOLD is a four-year research and innovation project. The aim of MED-GOLD is to **develop climate services specific to agriculture**, a sector directly impacted by climate variability and change. In particular, MED-GOLD will develop climate services for **Olive/Olive Oil sector,** to **demonstrate the applicability and benefits** of such services within key decision-making processes, **minimize climate-driven risks and seize opportunities** for this sector.

THE OLIVIA PLATFORM

The Olivia platform is part of the climate service being developed for the olive/olive oil sector in Med-Gold and can help support decisions about olive grove by anticipating and improving information related to:

- Productivity – It predicts the production of olive, oil and fat yield, optimizing fertigation;
- Pest control - It anticipates up to 4 weeks the evolution of pest to level plot;
- Market forecast - Models the production of global market and olive producing regions.

More on the OLIVIA platform here: https://www.olivia.ec2ce.com/

WE NEED YOUR HELP!

As you have used and tested the Olivia platform in the past, we would like to ask you to fill in a short survey with regards to how you used the platform, the type of information you used, how useful it was, etc. This information will help us understand how useful and practical the OLIVIA platform is in supporting the type of decisions you need to make with regard to olive production.
The survey can be accessed using the link provided below until **13th May 2020**.

YOUR CONTRIBUTION

Your data will kept anonymous and access to this data will be restricted to the project team. The results may be published in academic journals, presented at scientific conferences and project reports will be freely available from the Med-Gold project website.

The survey can be found: **https://www.surveymonkey.co.uk/r/oliviaplatform**

More information on the **MED-GOLD project** can be found here: www.med-gold.eu/

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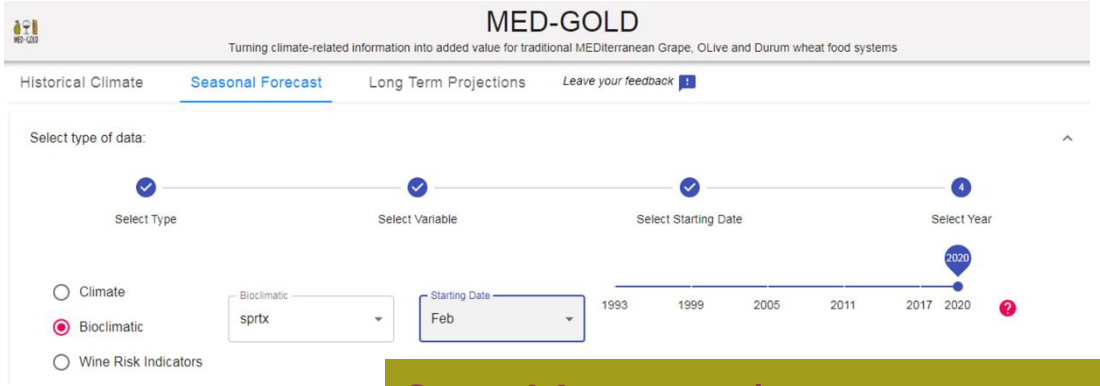
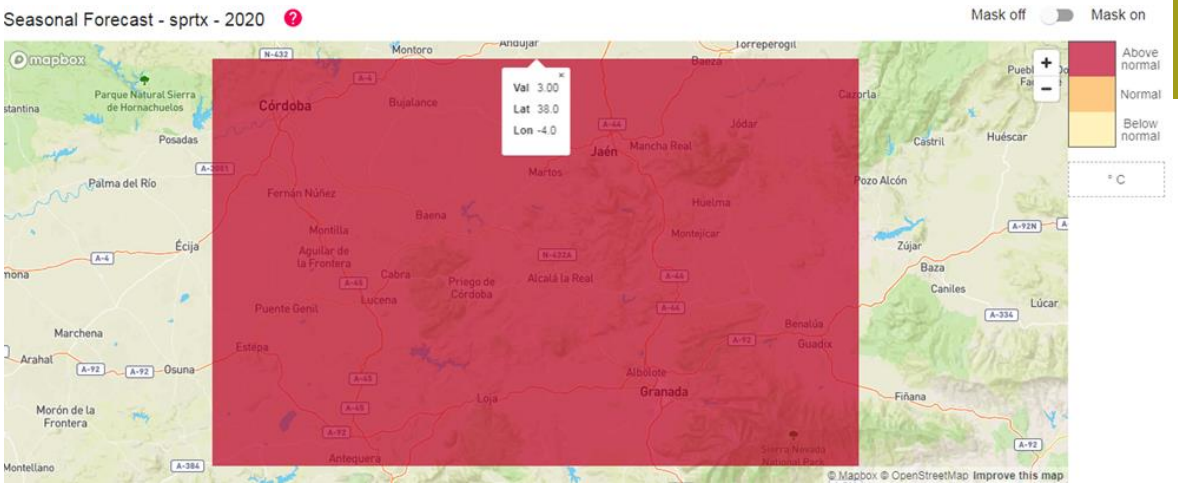
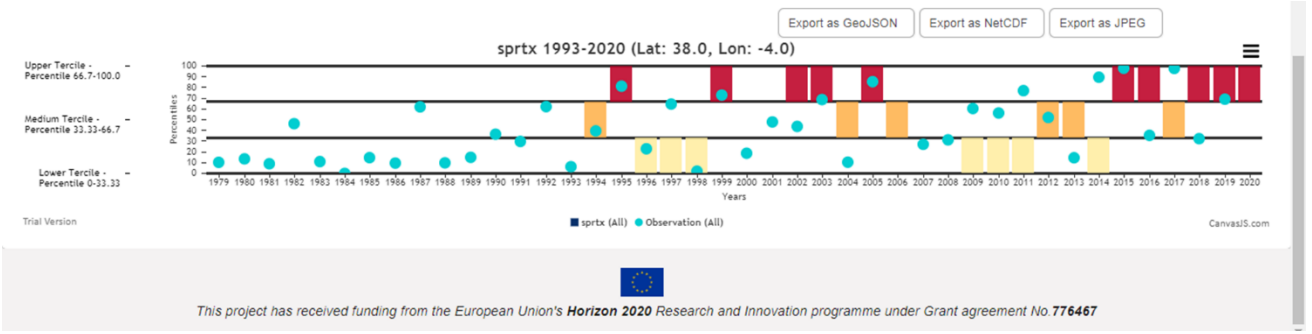
3. MAIN RESULTS.

DASHBOARD.
- Meeting with the Dashboard team of MED-GOLD.
- 1 Dashboard demonstration to DCOOP.



Sptx: Mean maximum temperature from April to May.





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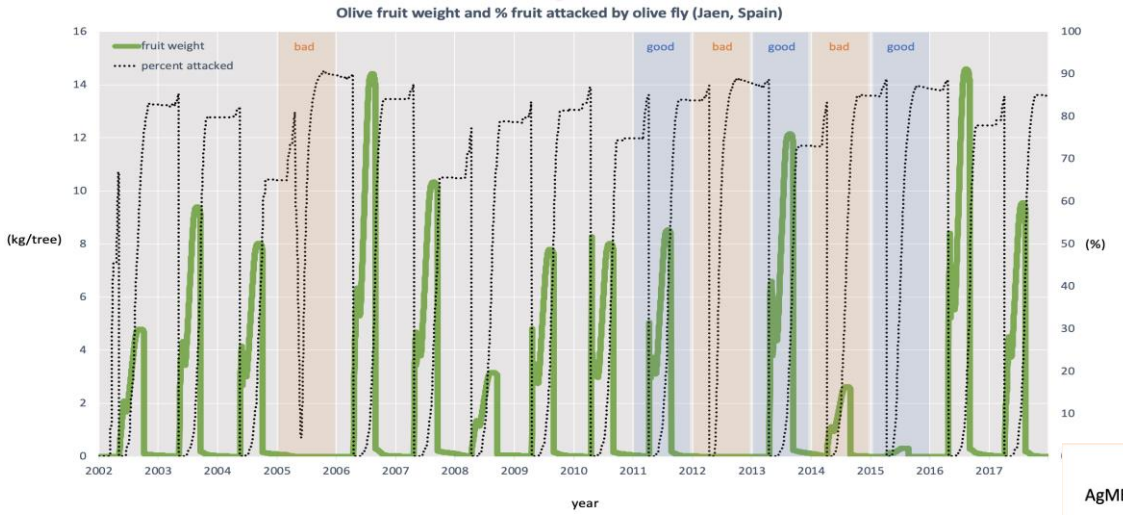
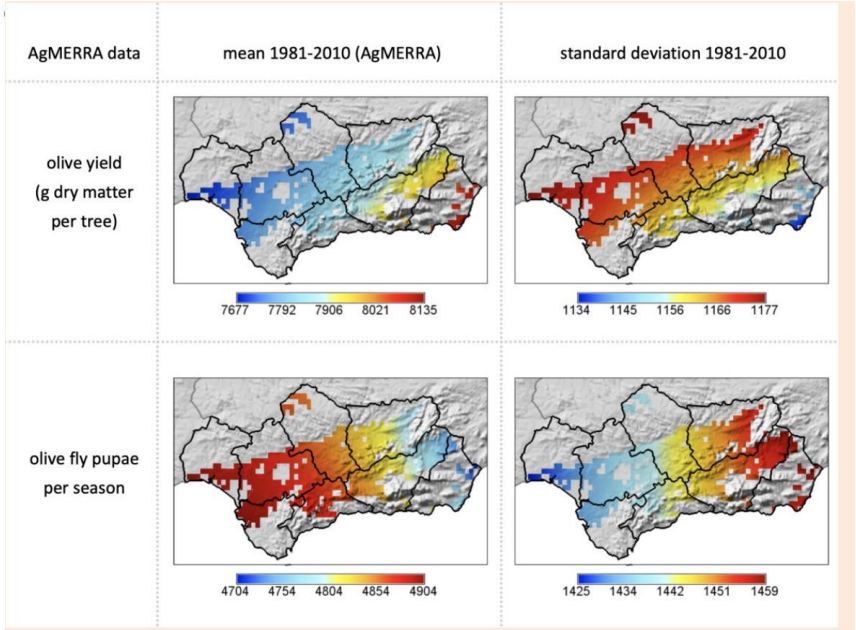
3. MAIN RESULTS.

Regional recommendations for crop management based on agroecosystem analysis using CASAS Global physiologically based demographic model (CASAS-PBDMs)





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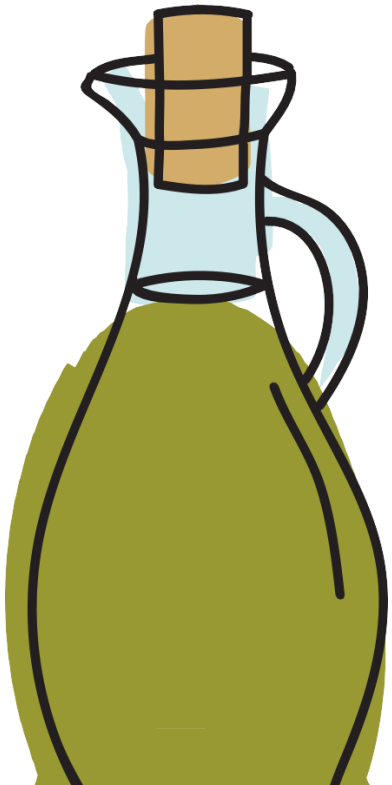
medgold_h2020

Thank you
Ευχαριστίες
Grazie
Gracias
Obrigado
Merci



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