



MED-GOLD Living Lab 2020

Turning climate information into value for
traditional Mediterranean agri-food systems

The grape and wine industry case study

Green Team

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Case of study



Duro Valley



Climatology vs Seasonal Forecast

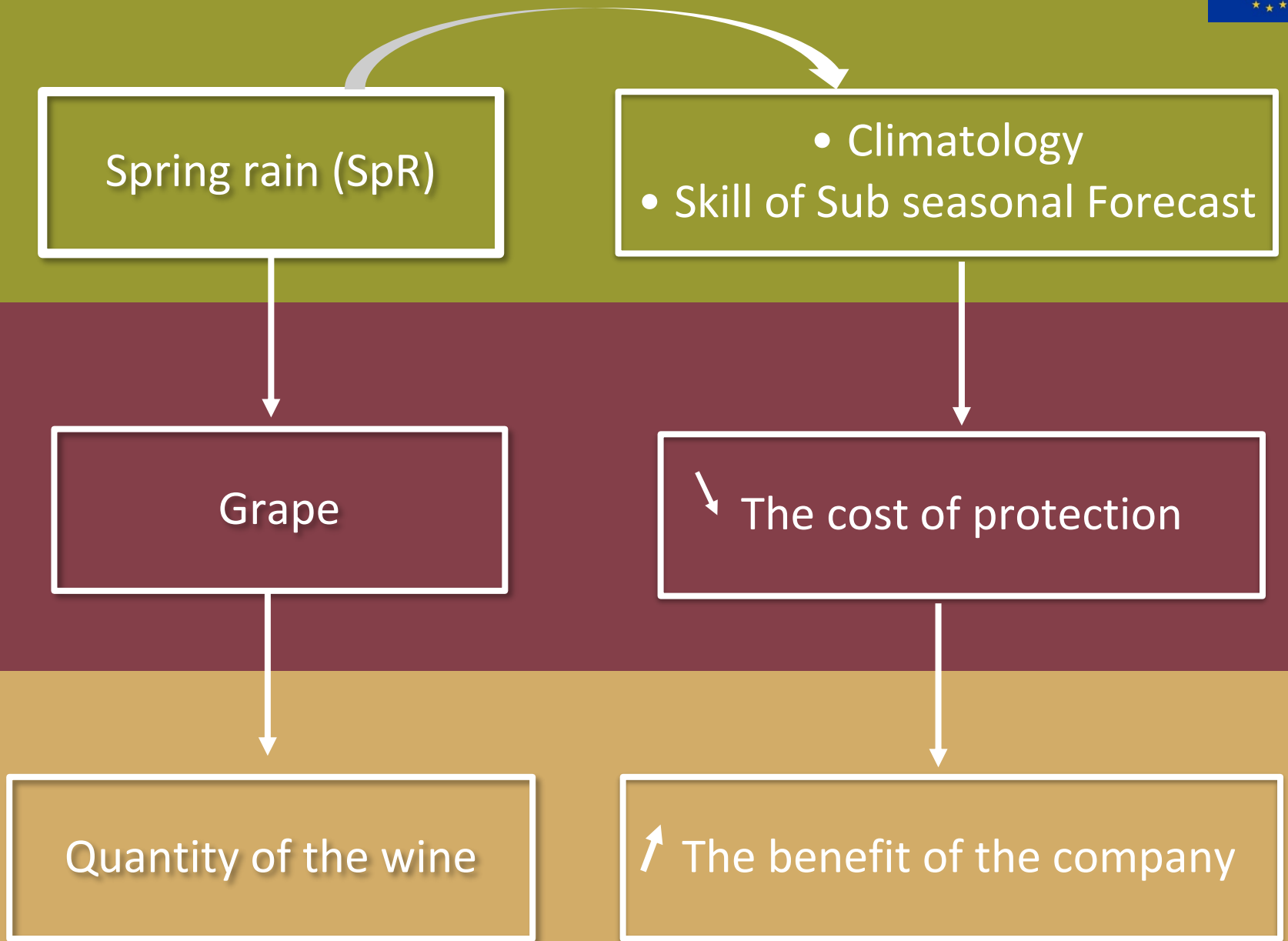
What to choose?

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





Problem vs Solution

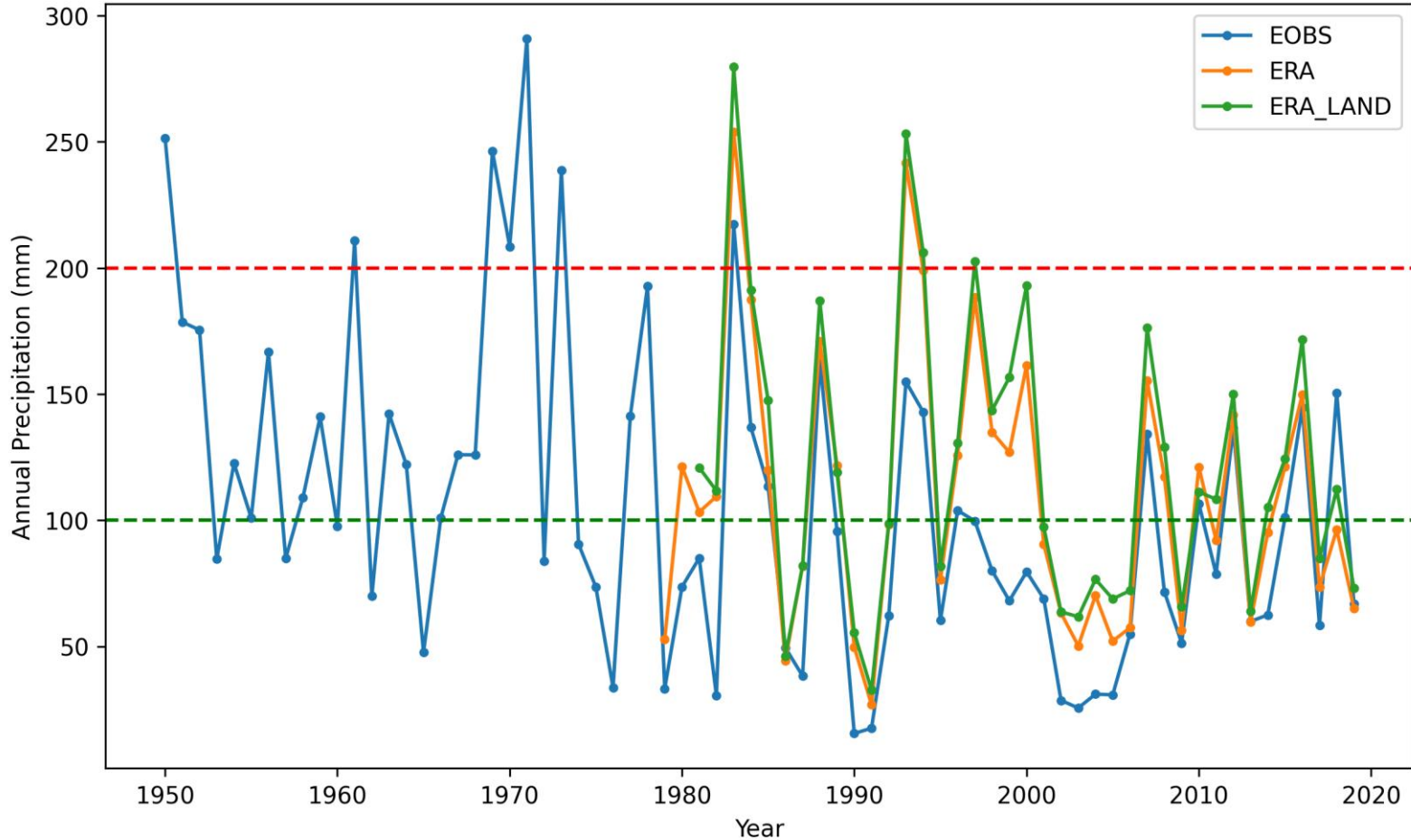


Data analysis flowchart





Annual Precipitation between 21 April - 21 June



	EOBS	ERA	ERA_LAND
Over 200 mm	7 (10.0%)	2 (4.88%)	4 (10.26%)
Under 100 mm	37 (52.86%)	20 (48.78%)	16 (41.03%)

Forecast



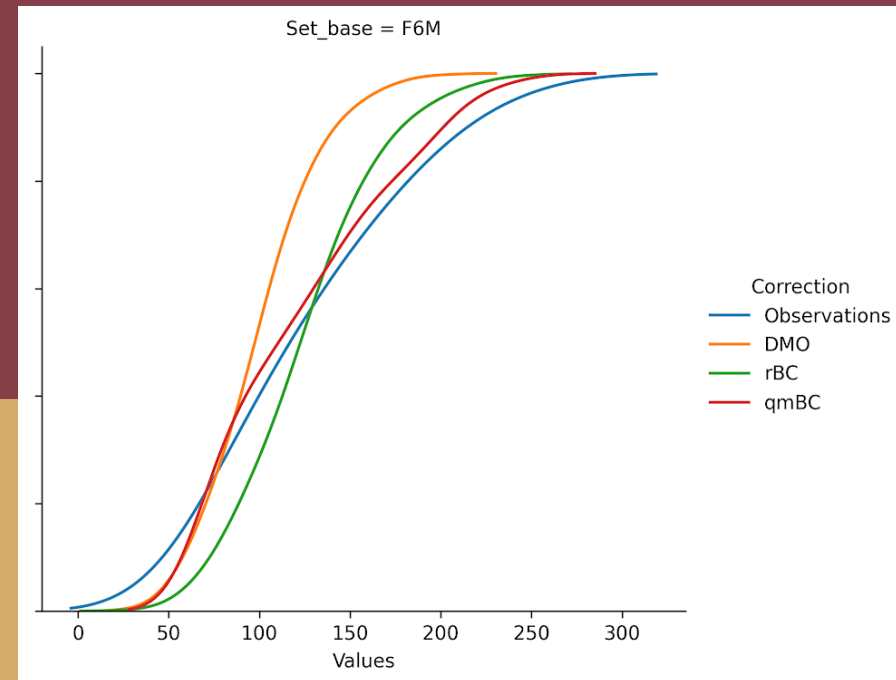
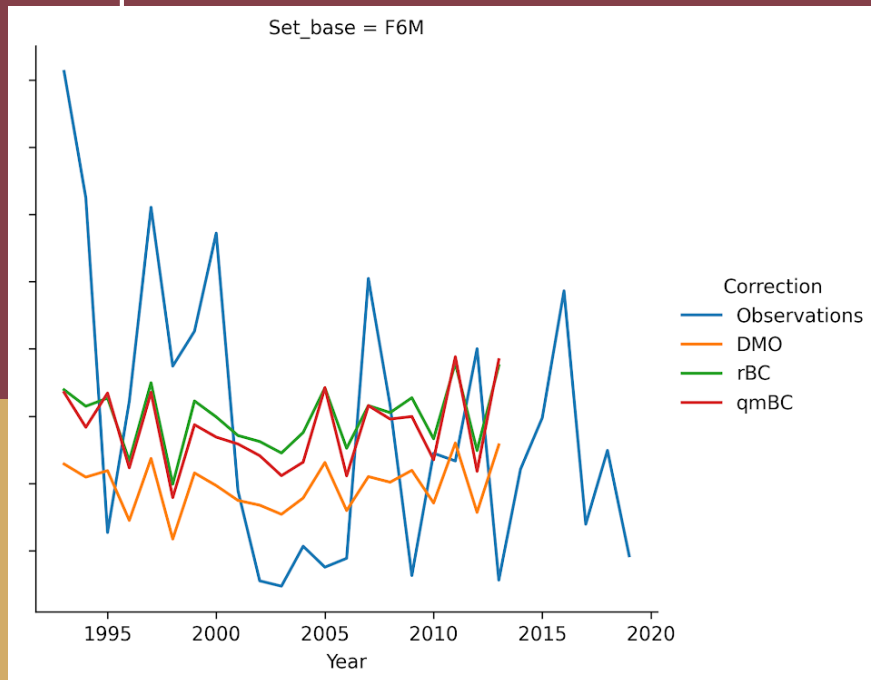
Model used: ECMWF system 5

Nominal Lead Time	Actual Lead Time
2 weeks (6 April)	2 weeks (5 April)
3 months (20 January)	~ 3.5 months (5 January)
6 months (20 October)	~ 6.5 months (5 October)



Forecast

2 bias correction methods were introduced
(Ratio Bias and Quantile Mapping)





Forecast

Forecast/Climatology Scores

Metrics	CI	F2W	F2W_rBC	F2W_qmBC	F6M	F6M_rBC	F6M_qmBC
CRPS	30.99	37.50	34.53	33.47	37.57	34.35	32.54
Brier>200	0.12	0.14	0.14	0.14	0.14	0.13	0.12
Brier<=100	0.76	0.70	0.72	0.72	0.72	0.73	0.74



Steps for a more realistic approach

Use more forecast products

Provide outputs based on terciles

Check more variables

Consider incremental purchasing of protective equipment

Many thanks

From the Green Team