

Supplementary material

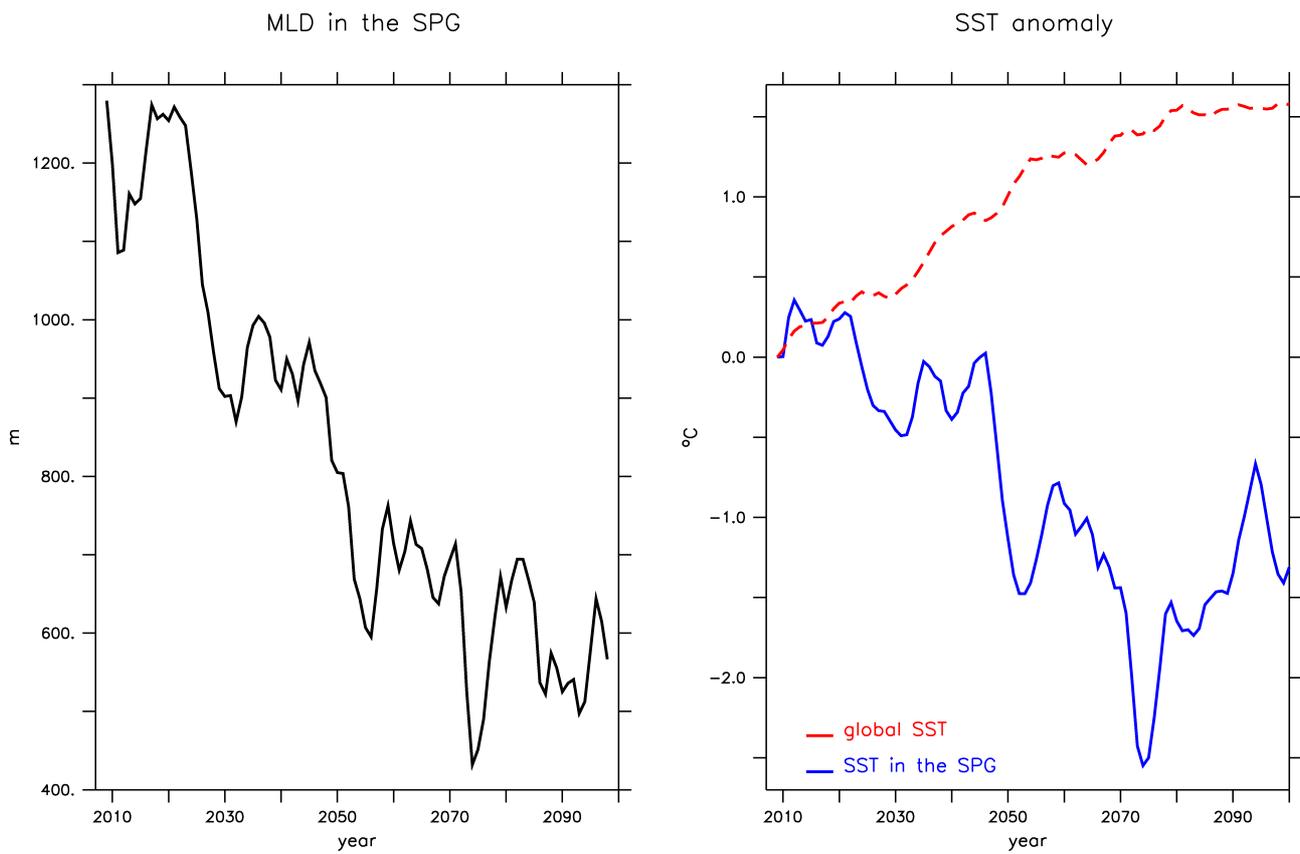


Figure S1. (a) Climate changes over the SPG regions as simulated by the downscaled CSIRO-Mk3-6-0 model for RCP4.5 scenario: (a) evolution of the Mixed Layer Depth (MLD, in m) in the SPG and (b) Sea Surface Temperature anomaly (SST, in $^{\circ}C$) over the SPG. In (b) the dashed red line indicates the anomaly of the global mean SST.

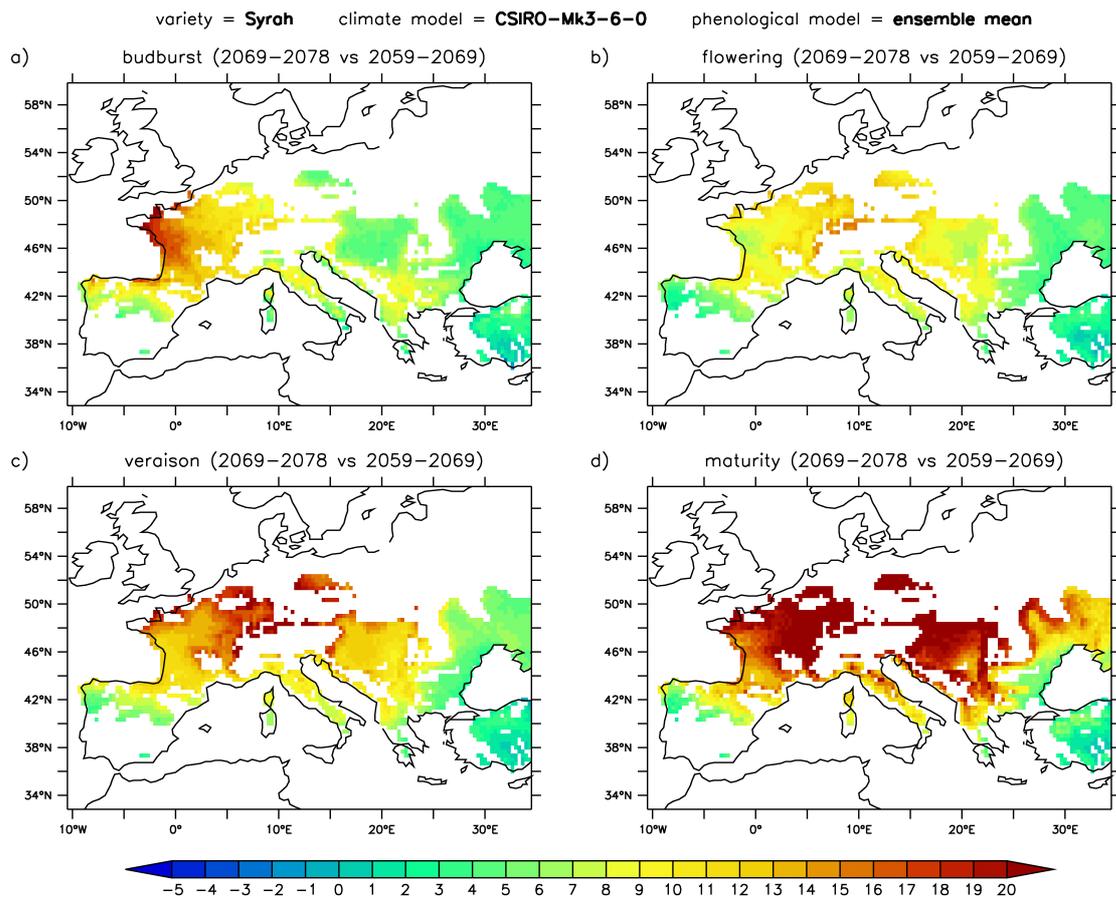


Figure S2. As Fig. 4 but for the Syrah variety.

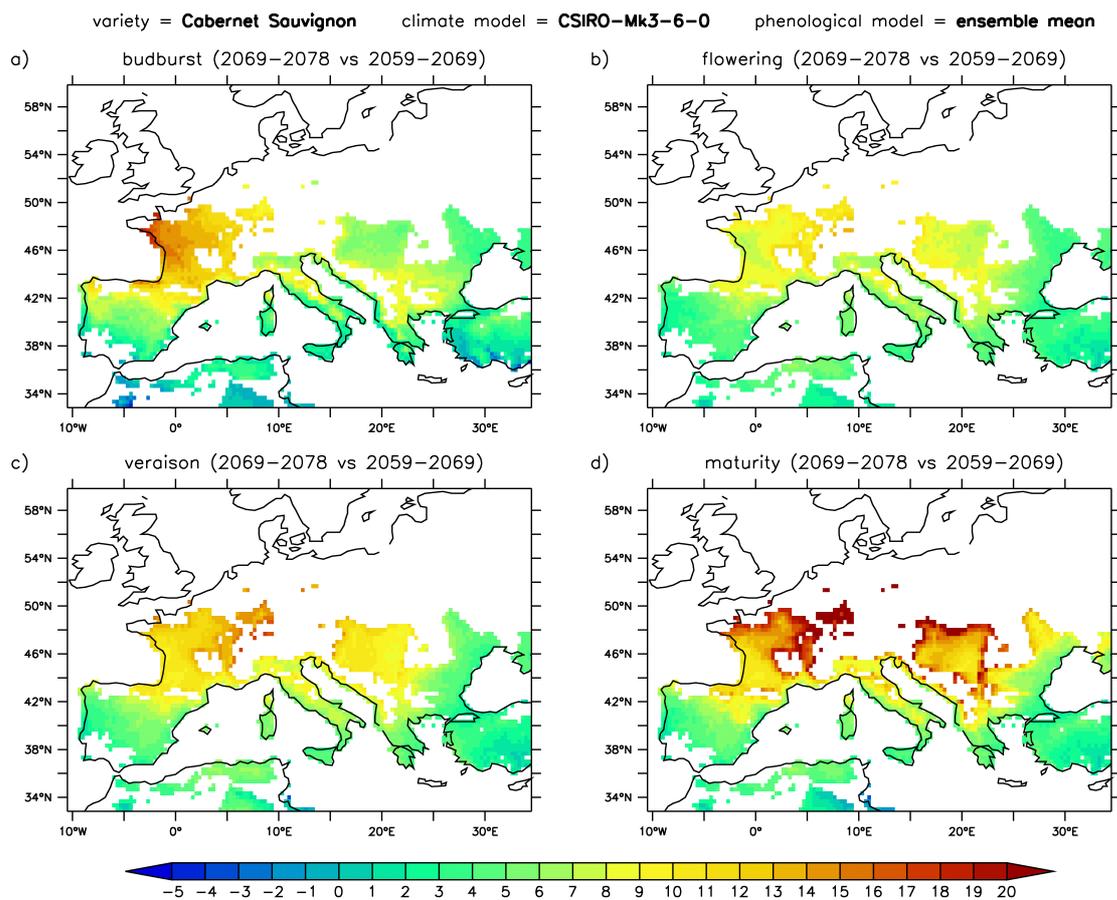


Figure S3. As Fig. 4 but for the Cabernet sauvignon variety.

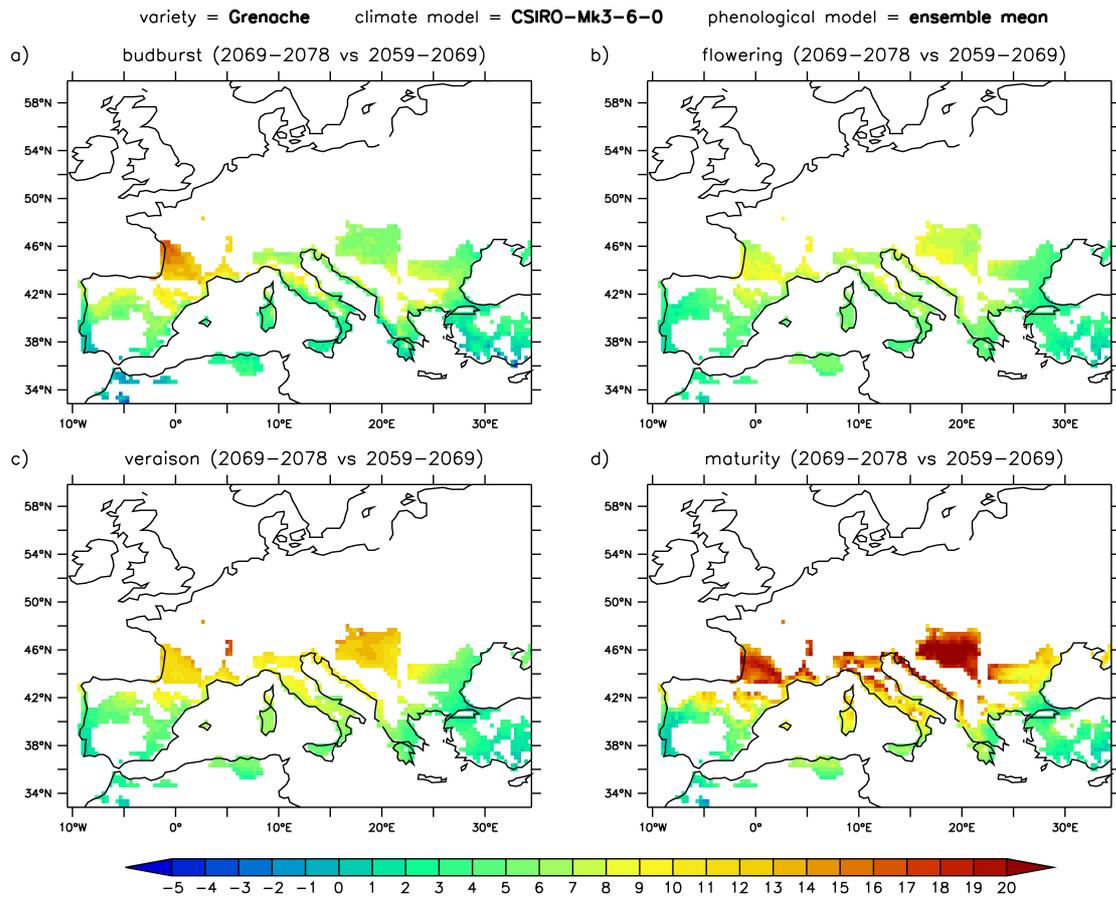


Figure S4. As Fig. 4 but for the Grenache variety.

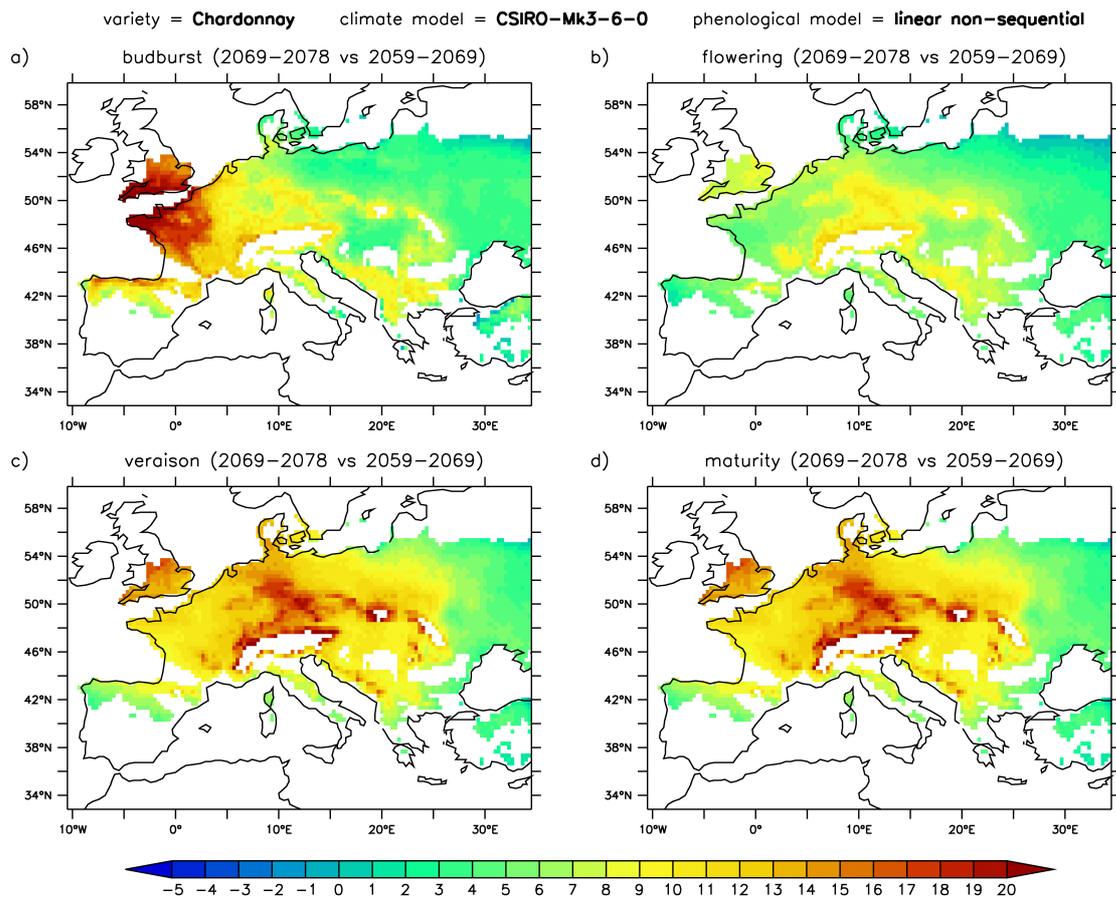


Figure S5. As Fig. 4 but with results based on the linear non-sequential phenological model.

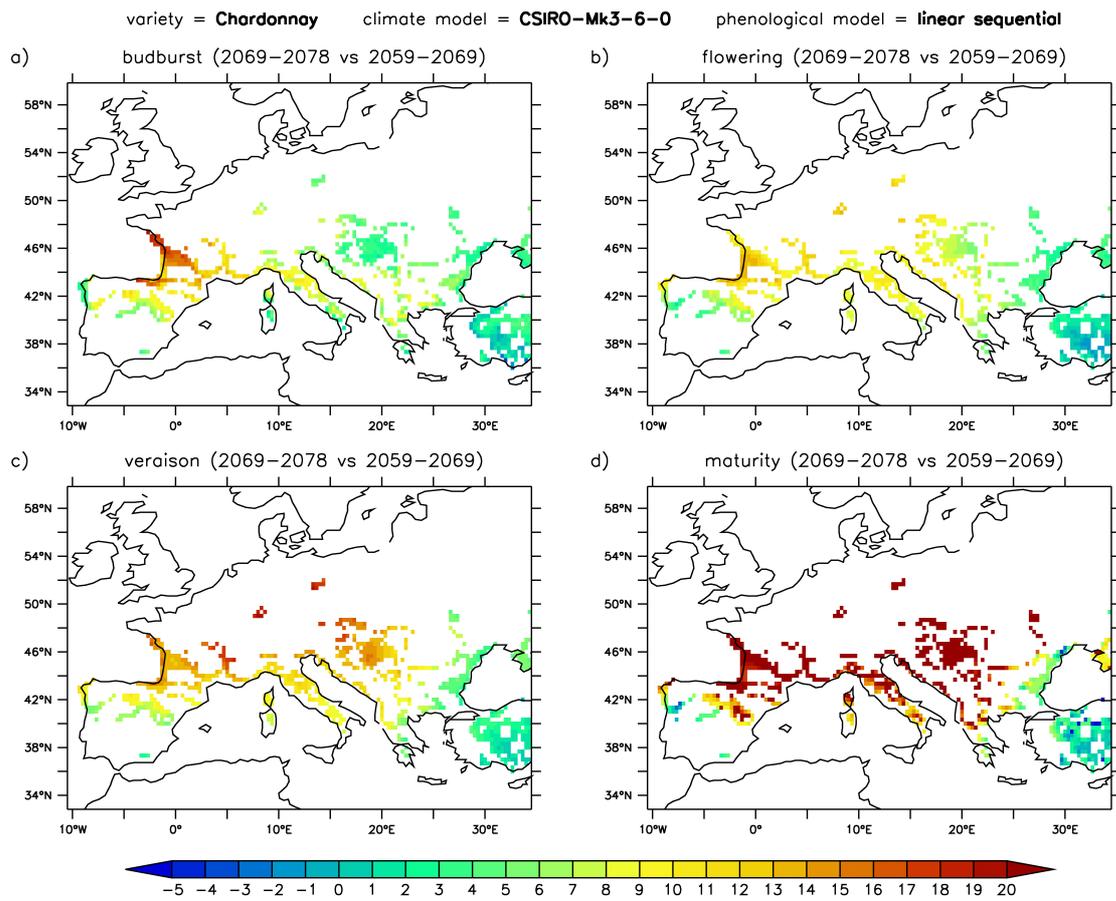


Figure S6. As Fig. 4 but with results based on the linear sequential phenological model.

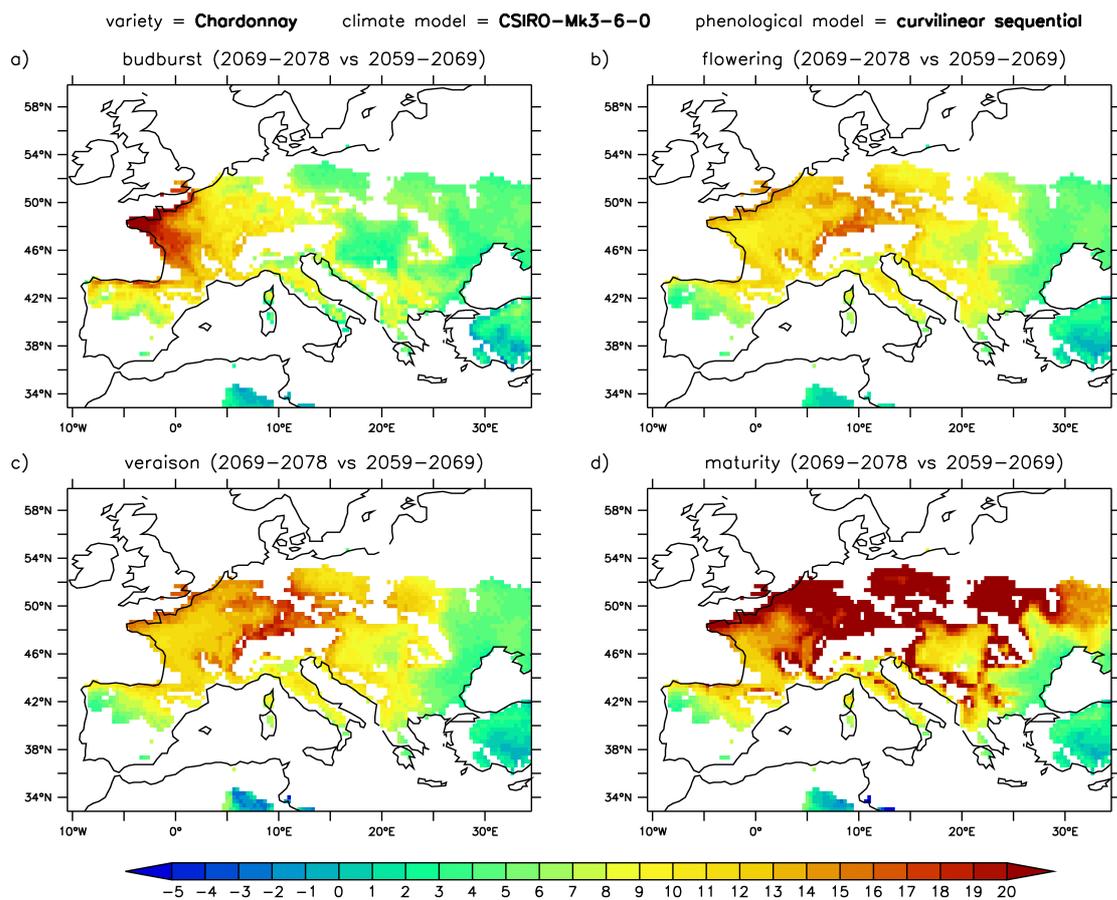


Figure S7. As Fig. 4 but with results based on the curvilinear sequential phenological model.

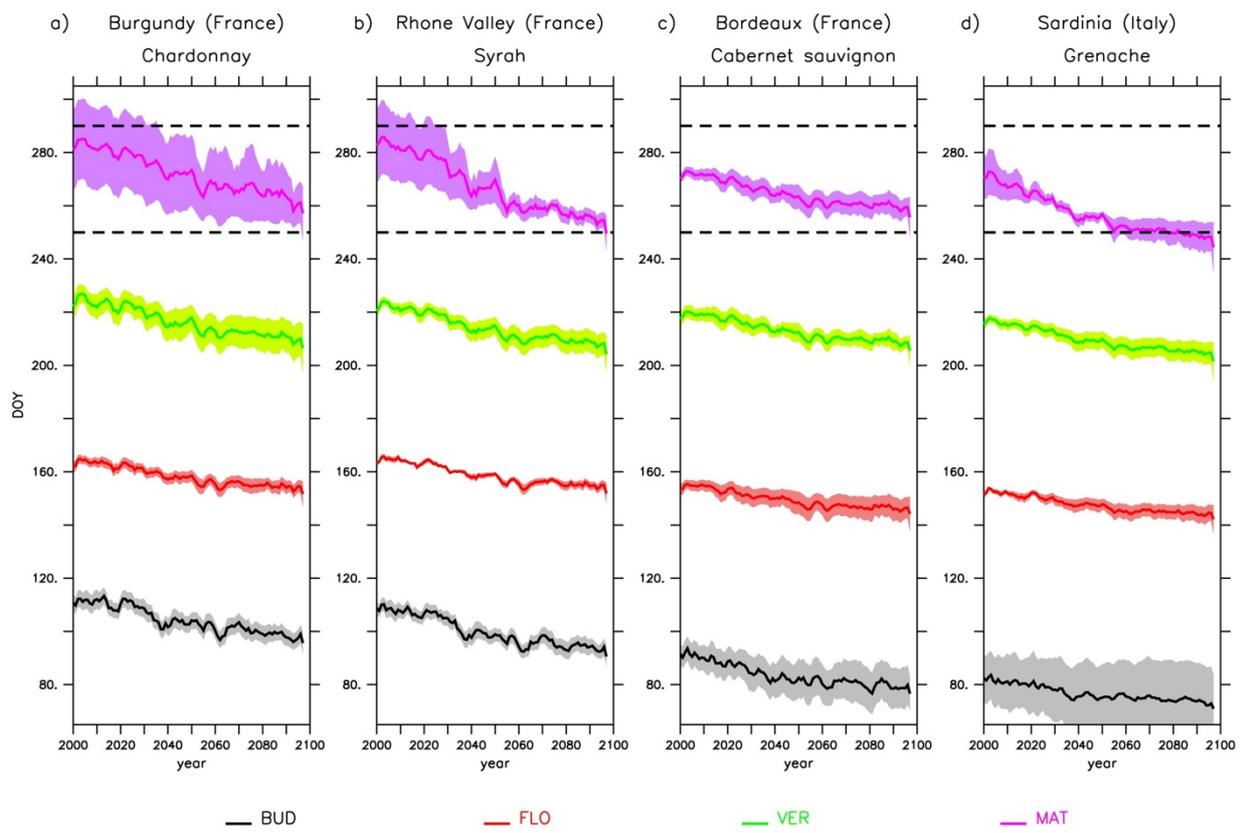


Figure S8. As Fig. 5 but with results based on the ensemble mean of climate model projections.

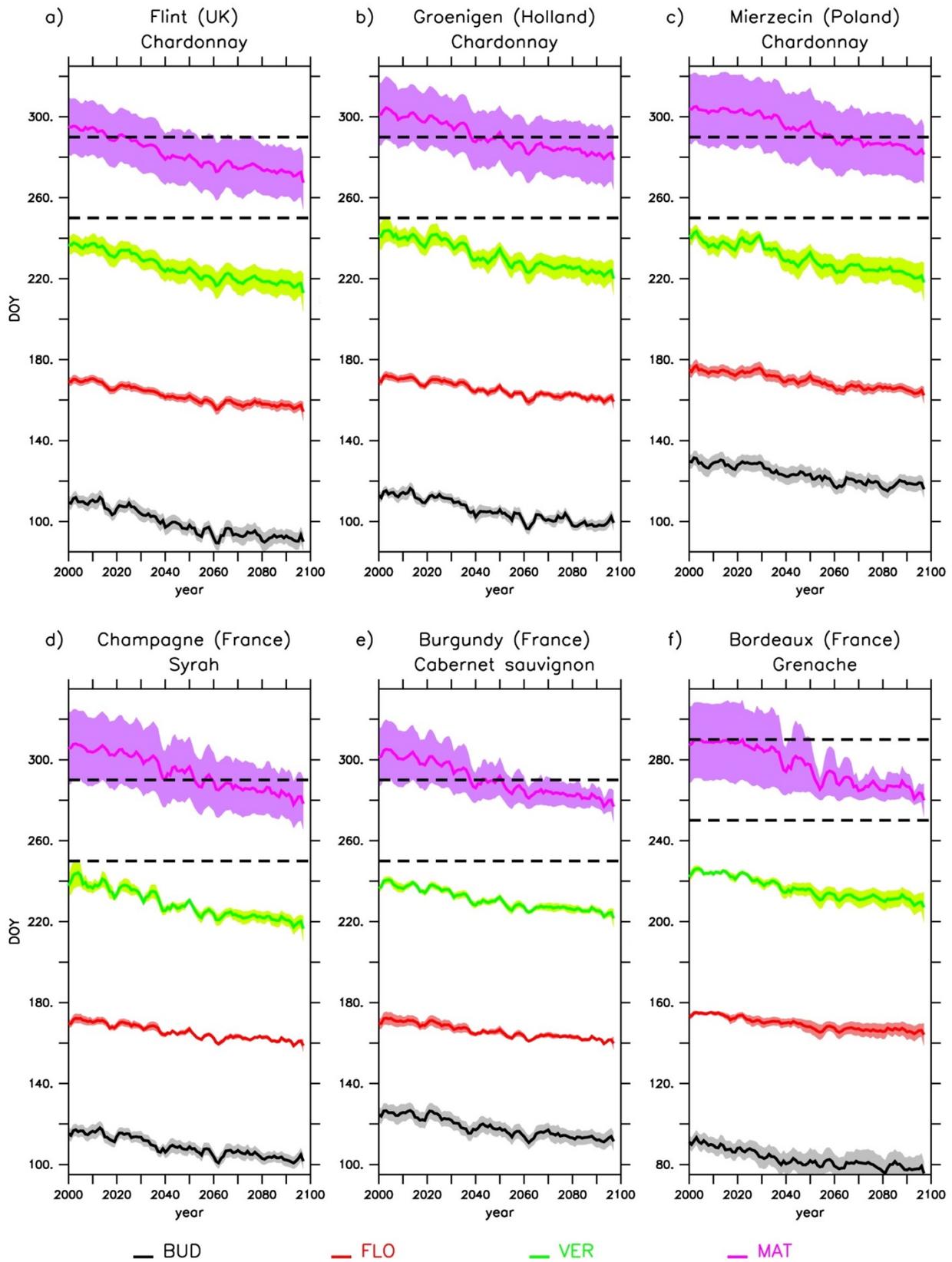


Figure S9. As Fig. 6 but with results based on the ensemble mean of climate model projections.

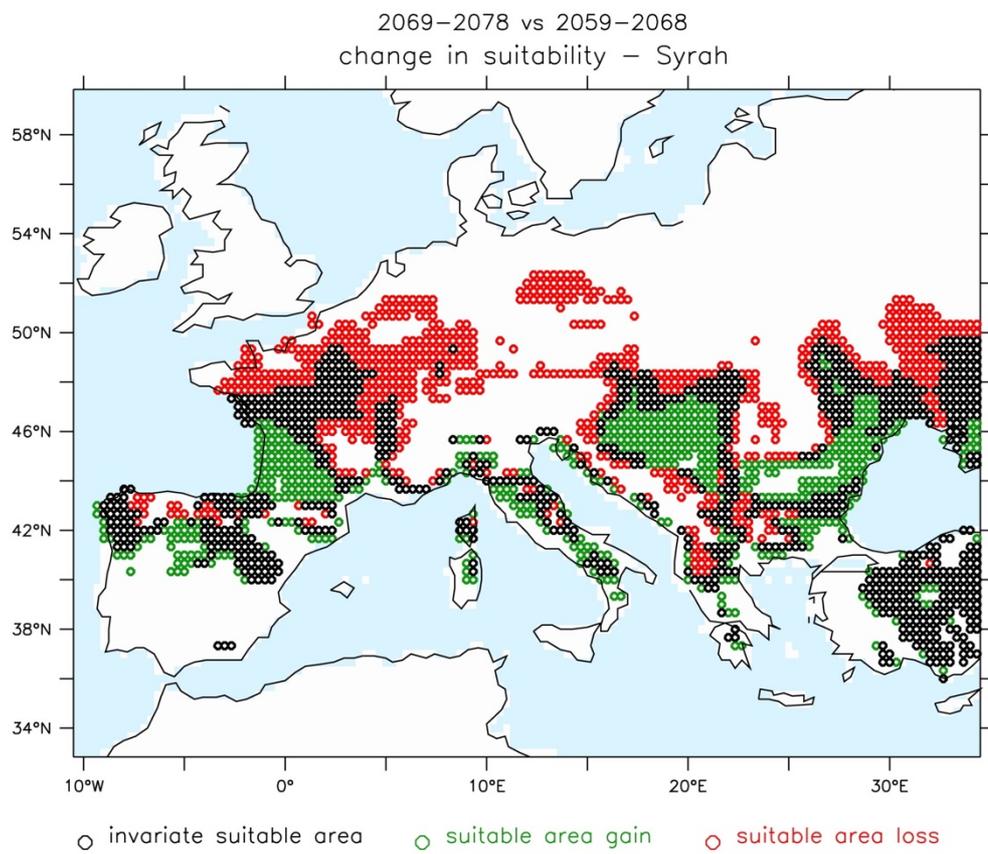


Figure S10. As Fig. 7 but for Syrah variety.

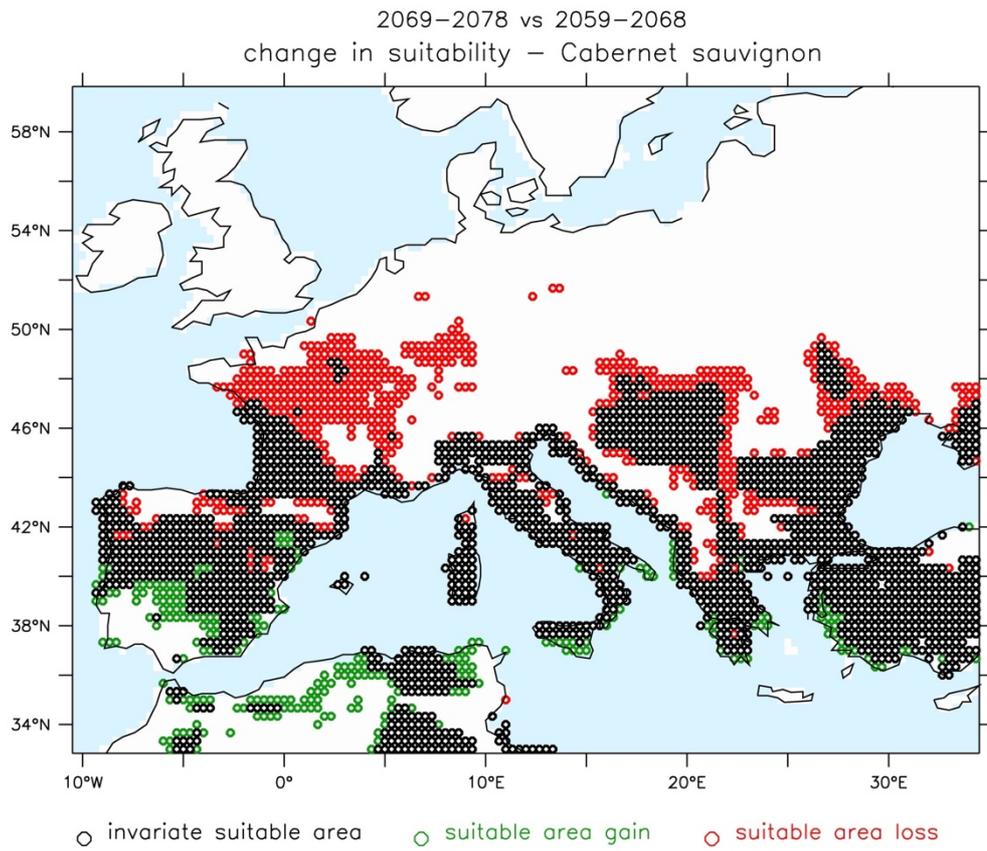


Figure S11. As Fig. 7 but for Cabernets sauvignon variety.

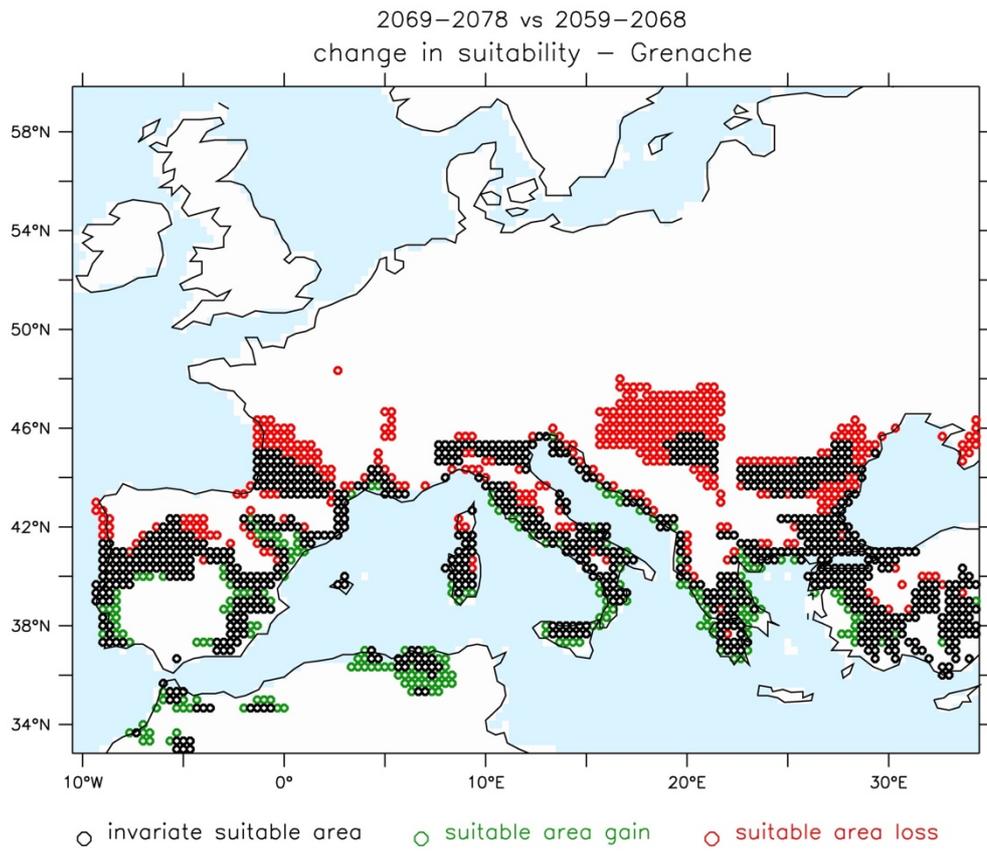


Figure S12. As Fig. 7 but for Grenache variety.

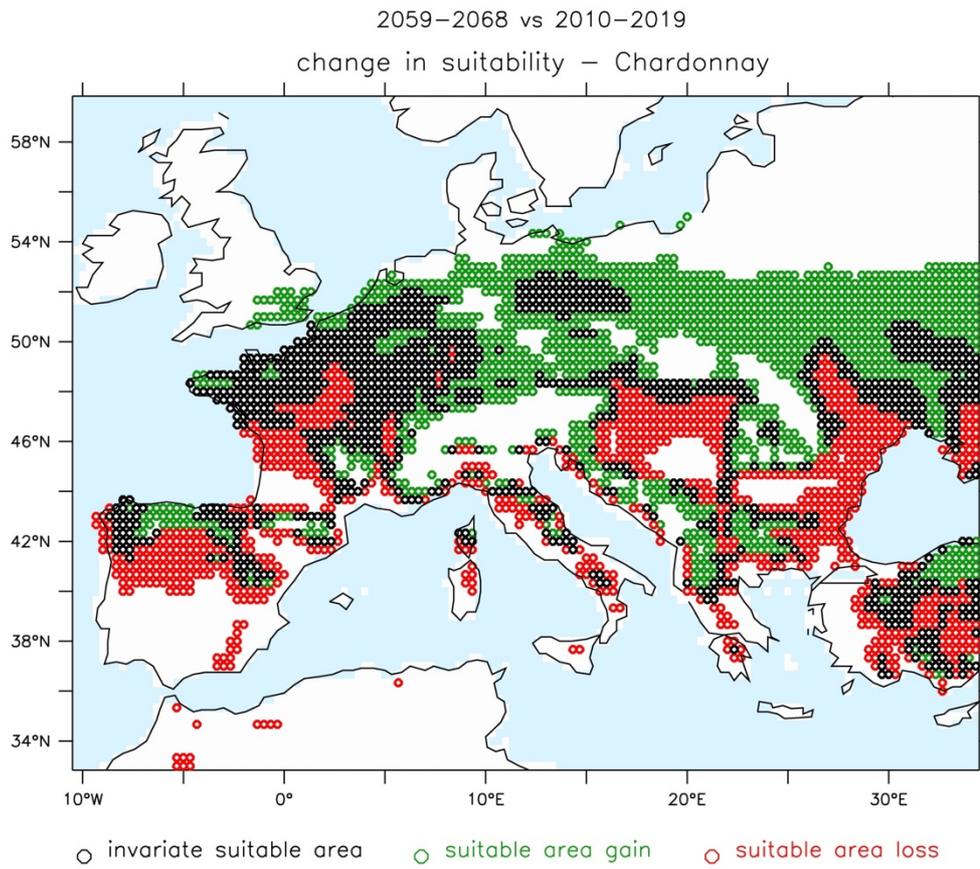


Figure S13. As for Fig. 7, but with anomaly calculated between 2059-2068 and 2010-2019.