Figure S1. Spatial distribution of the positions (expressed in terms of percentiles) of the LOS grid point values in the distributions of GAR LOS values falling in the corresponding 5-meter elevation intervals.

	NW			NE		
	LOS	SOS	EOS	LOS	SOS	EOS
z < 1000	0.57	0.57	0.50	0.25	0.24	0.20
1000 < z < 2000	0.75	0.78	0.67	0.39	0.43	0.30
2000 < z < 3000	0.46	0.56	0.42	0.27	0.36	0.23
3000 < z < 4000	0.25	0.26	0.25	0.16	0.19	0.15
z>4000	0.24	0.20	0.24			
	SW			SE		
	LOS	SOS	EOS	LOS	SOS	EOS
z < 1000	0.45	0.44	0.41	0.22	0.24	0.20
1000 < z < 2000	0.40	0.44	0.33	0.30	0.33	0.20
2000 < z < 3000	0.29	0.34	0.26	0.25	0.37	0.22
3000 < z < 4000	0.23	0.24	0.23	0.11	0.13	0.10
z>4000	0.55	0.53	0.54			

Table S1: Variance explained by linear regression of individual variables against the three metrics in the GAR Figure 5. me elevation interval and a linear regression is applied to residuals. z represents elevation (m a.s.l.). Each cell reports the R^2.

	NW			NE		
	LOS	SOS	EOS	LOS	SOS	EOS
LOS < 180	0.51	0.55	0.40	0.25	0.25	0.18
180 < LOS < 330	0.50	0.58	0.45	0.41	0.47	0.36
LOS > 330	0.36	0.35	0.35	0.37	0.38	0.36
	SW			SE		
	LOS	SOS	EOS	LOS	SOS	EOS
LOS < 180	0.41	0.37	0.40	0.18	0.17	0.17
180 < LOS < 330	0.30	0.36	0.26	0.32	0.34	0.29

LOS > 330	0.24	0.28	0.23	0.34	0.35	0.34

Table S2: Variance explained by linear regression of individual variables against the three metrics in the GAR for different LOS (length of season) classes. Elevation is removed by subtracting the average in each 5 me elevation interval and a linear regression is applied to residuals. Each cell reports the R^2.
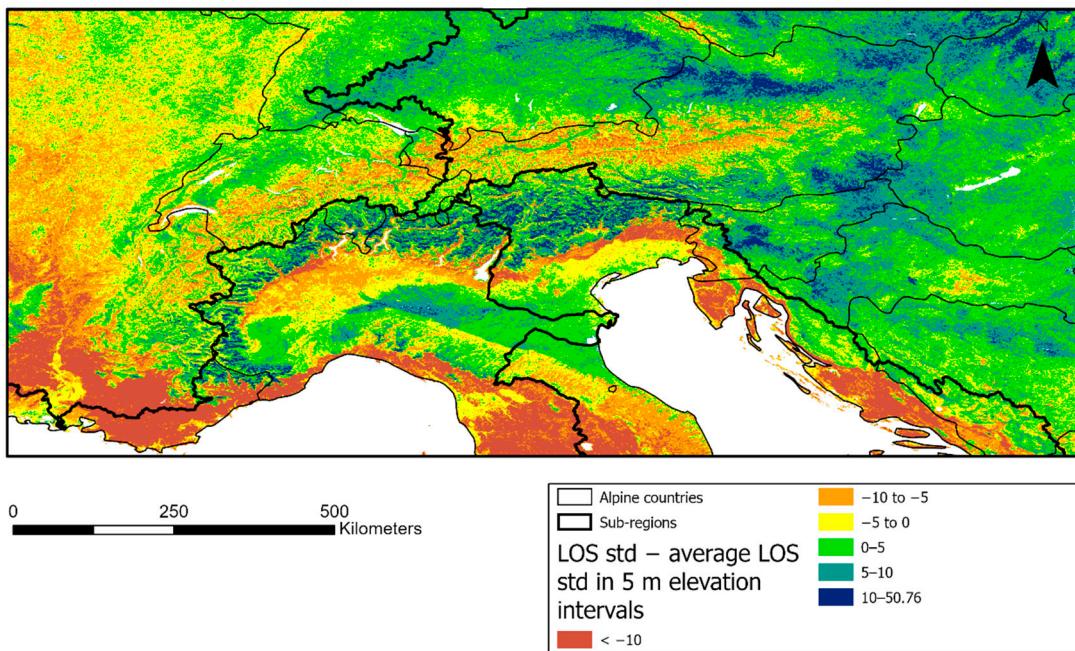

Figure S2: Standard deviation of the LOS standardized by subtracting the average standard deviation of LOS in 5 m elevation intervals
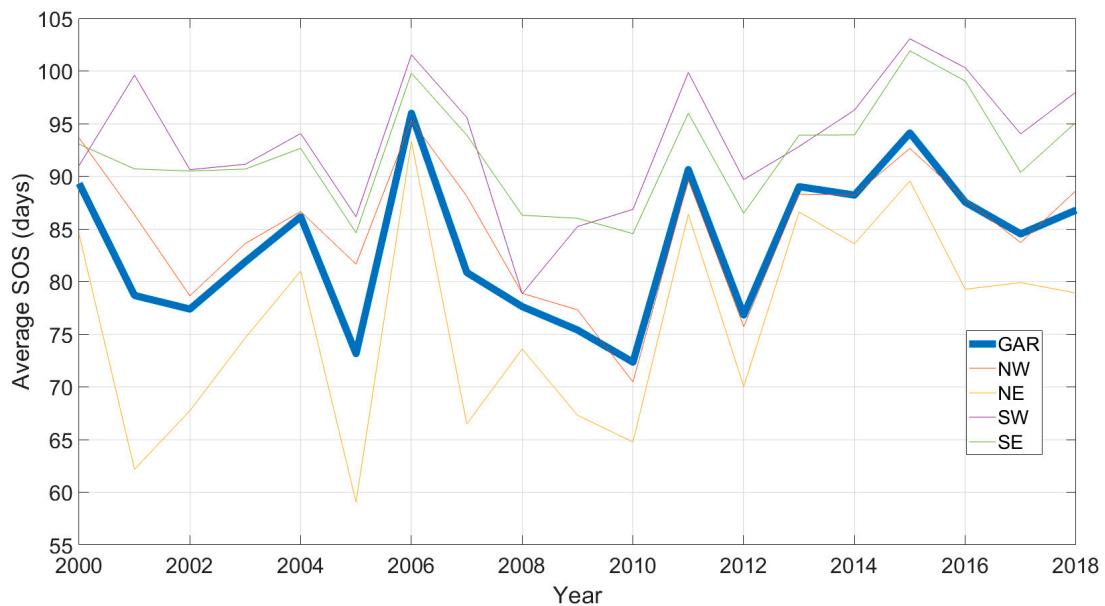
Figure S3: Average Start of Season (SOS) over the GAR and four sub-regions
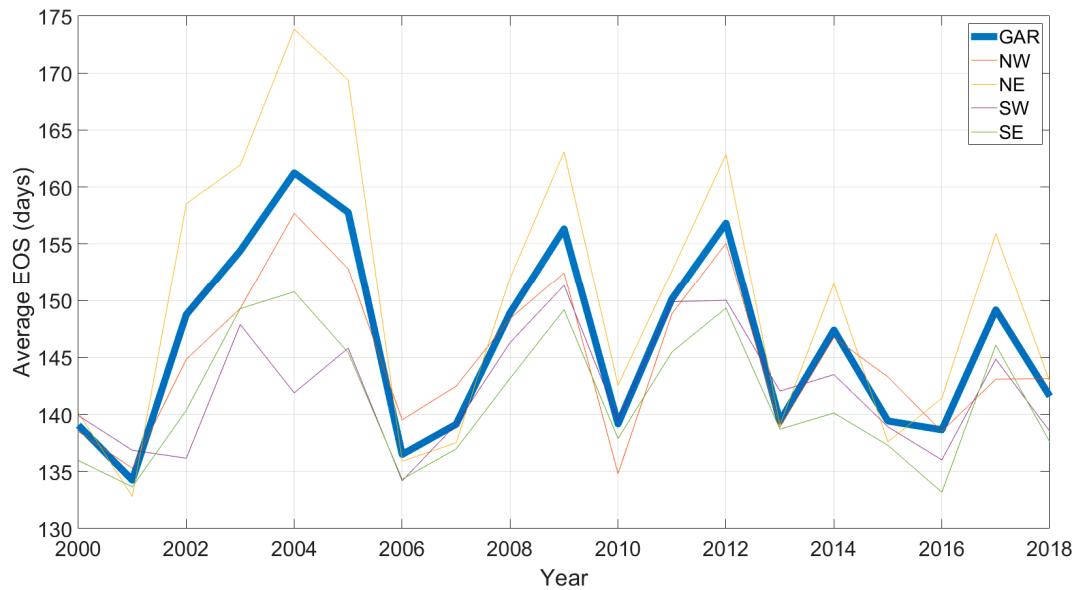
Figure S4: Average Start of Season (SOS) over the GAR and four sub-regions
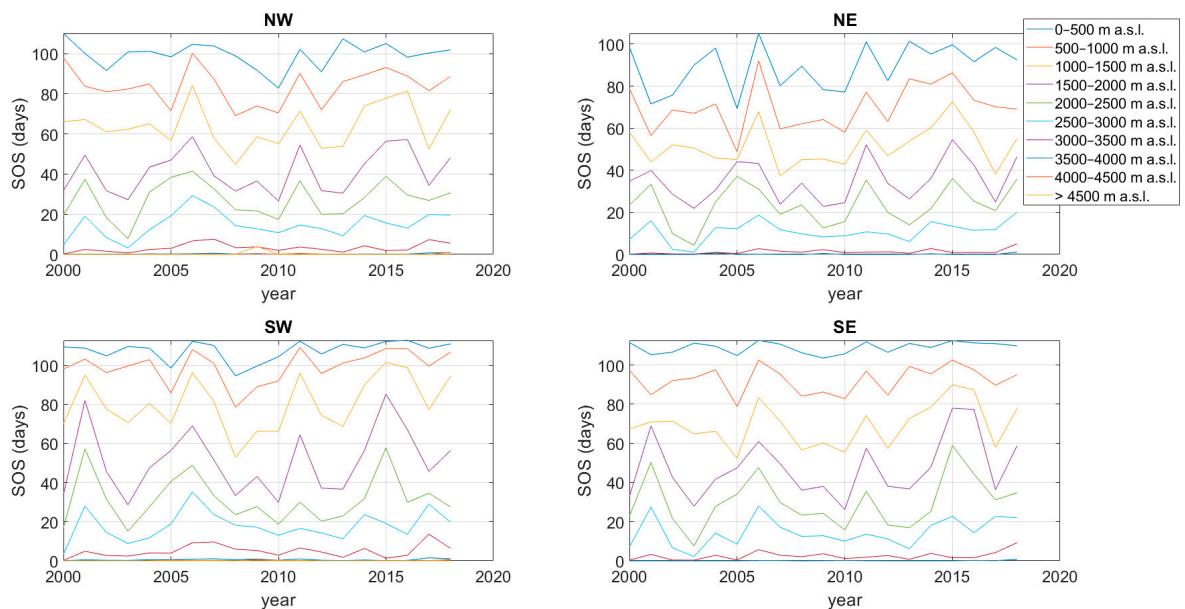
Figure S5: Average Start of Season (SOS) over 2000-2019 in the four subregions of the Greater Alpine Region by elevation band.
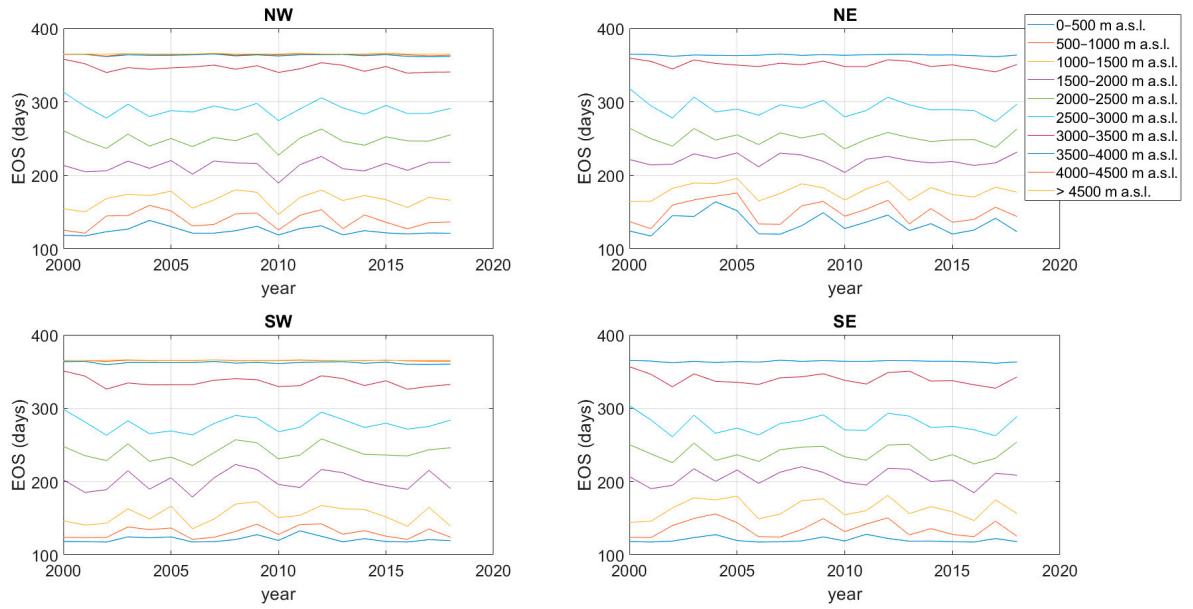
Figure S6: Average End of Season (EOS) over 2000-2019 in the four subregions of the Greater Alpine Region by elevation band.
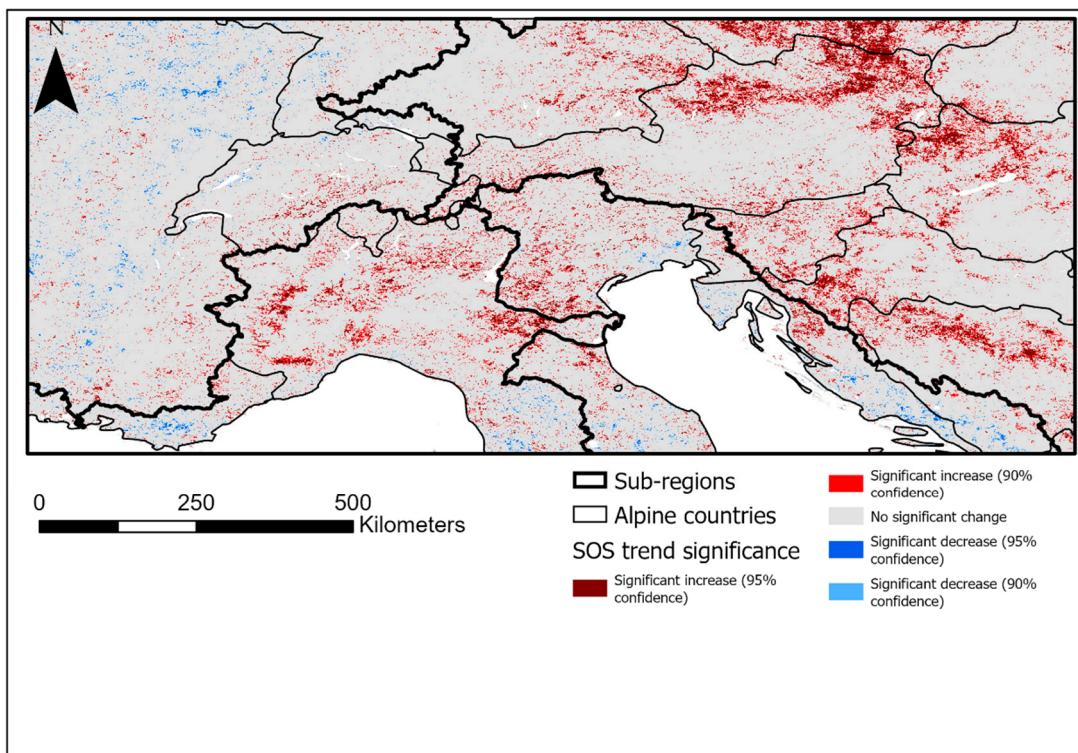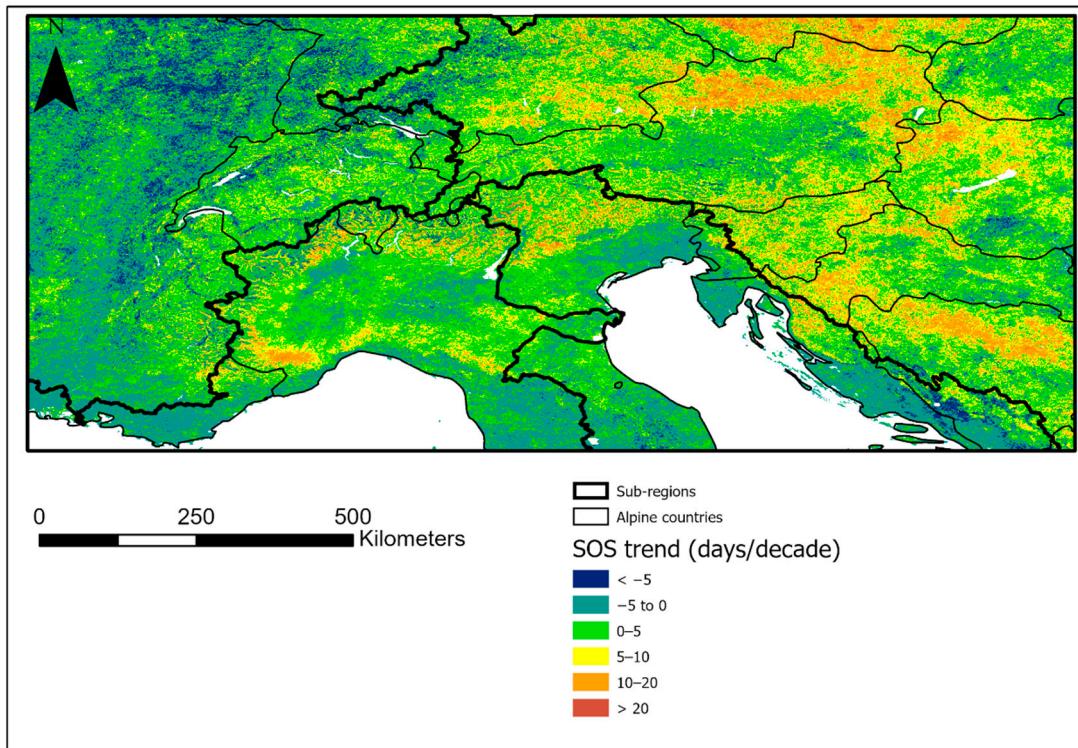
Figure S7: top panel: trend in the start of season (SOS) in days per decade in the Greater Alpine region from 2000 to 2019. Bottom panel: significance of trends in SOS over the GAR.
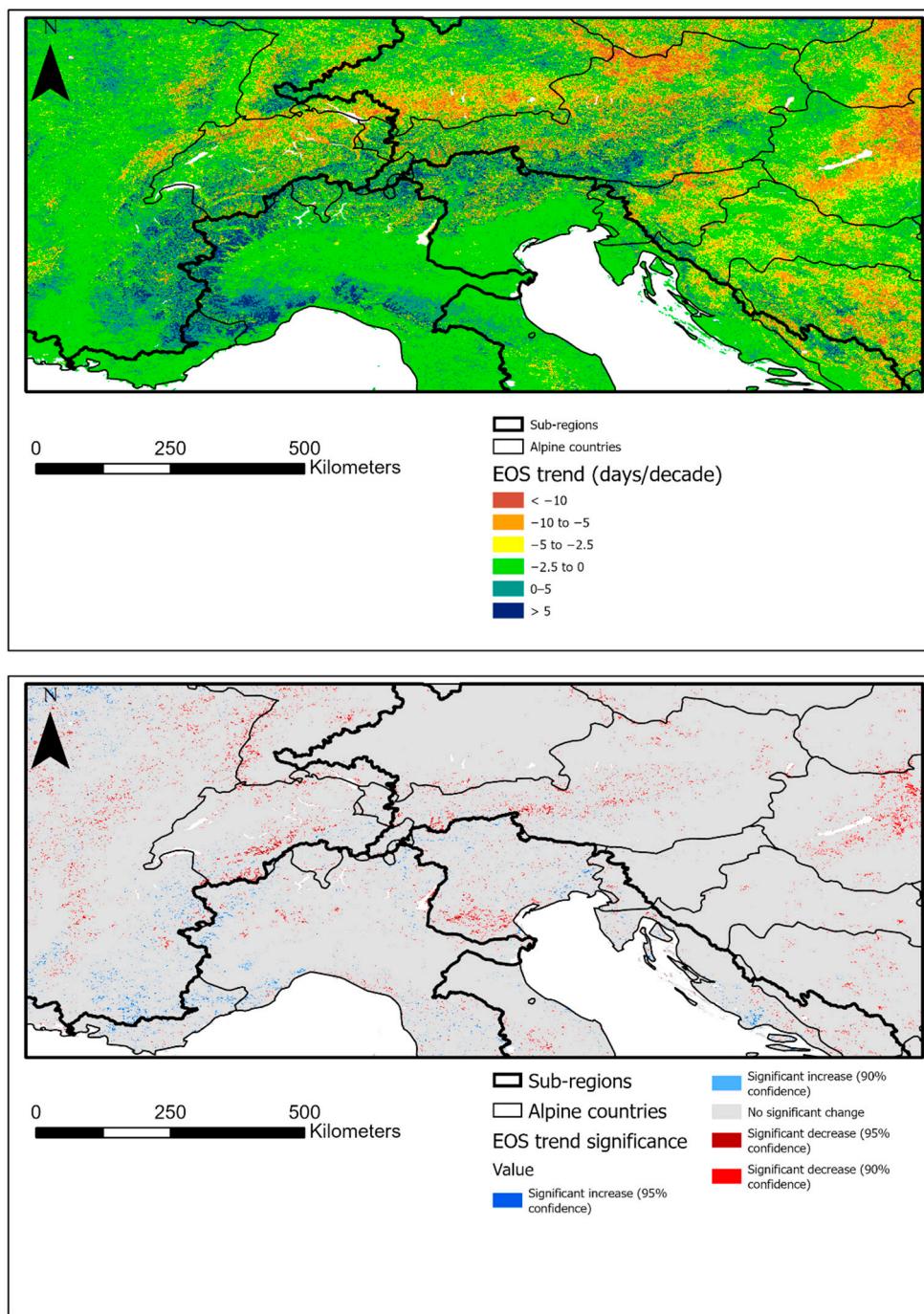
Figure S8: top panel: trend in the end of season (EOS) in days per decade in the Greater Alpine region from 2000 to 2019. Bottom panel: significance of trends in EOS over the GAR.