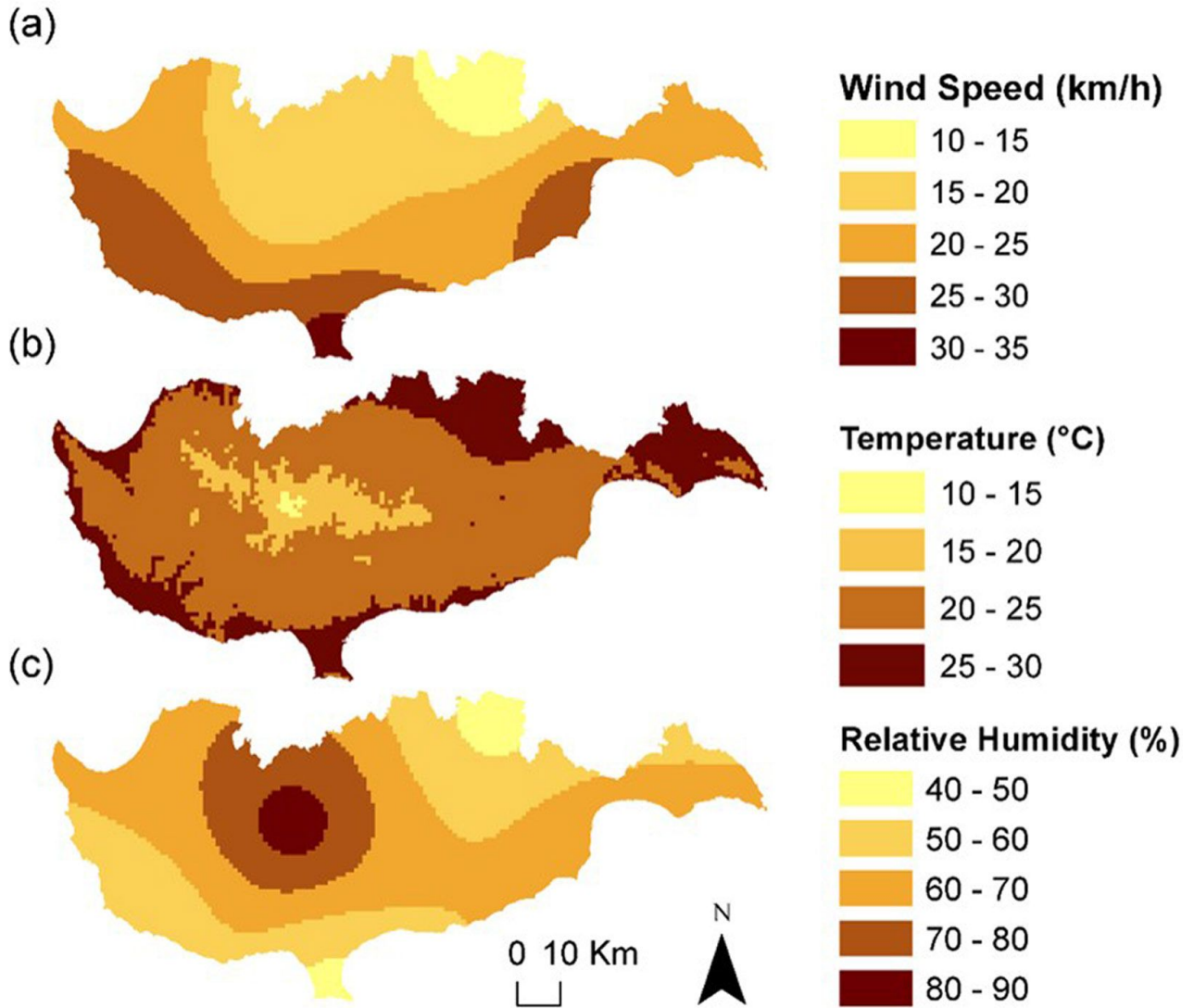
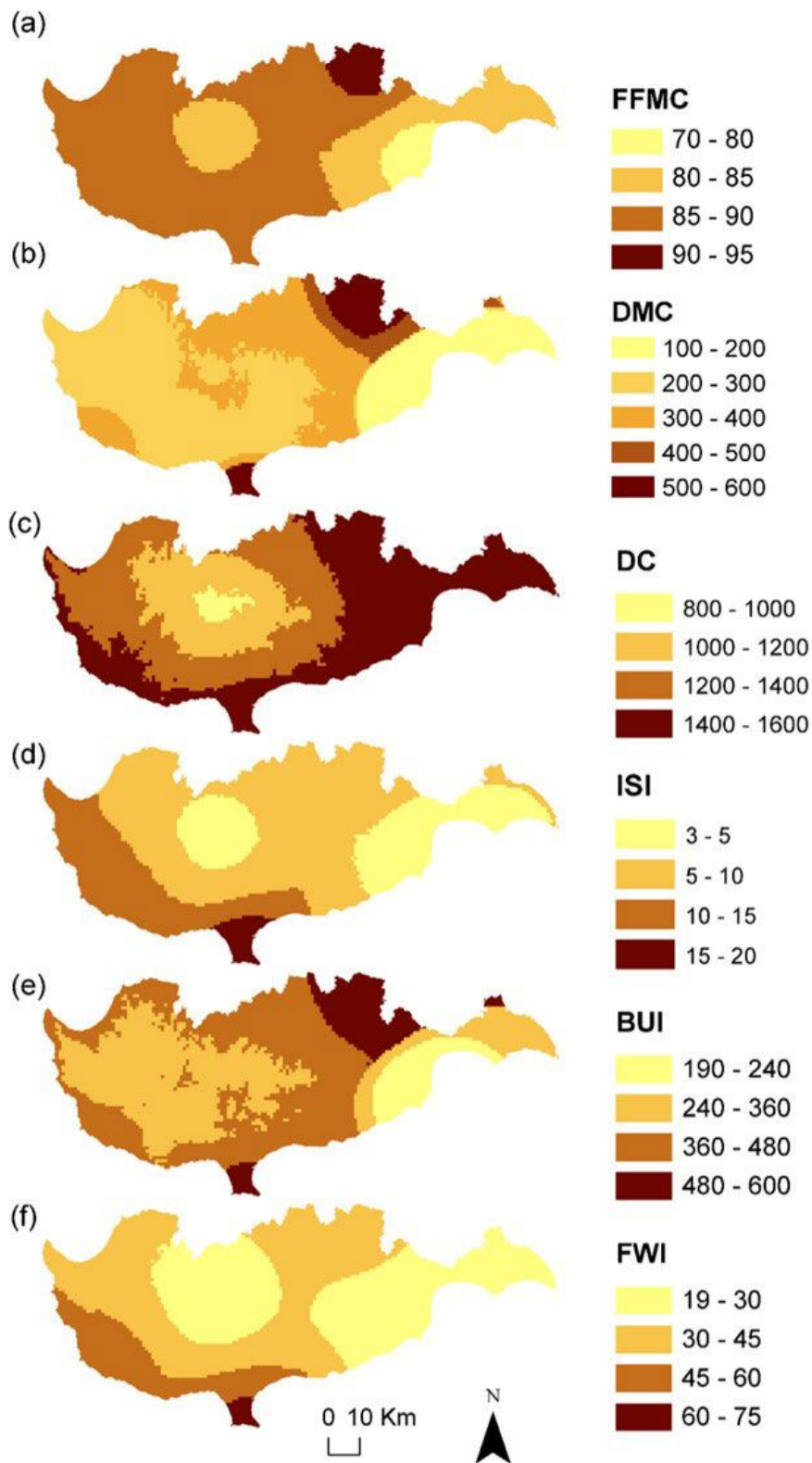


## Supplementary Material

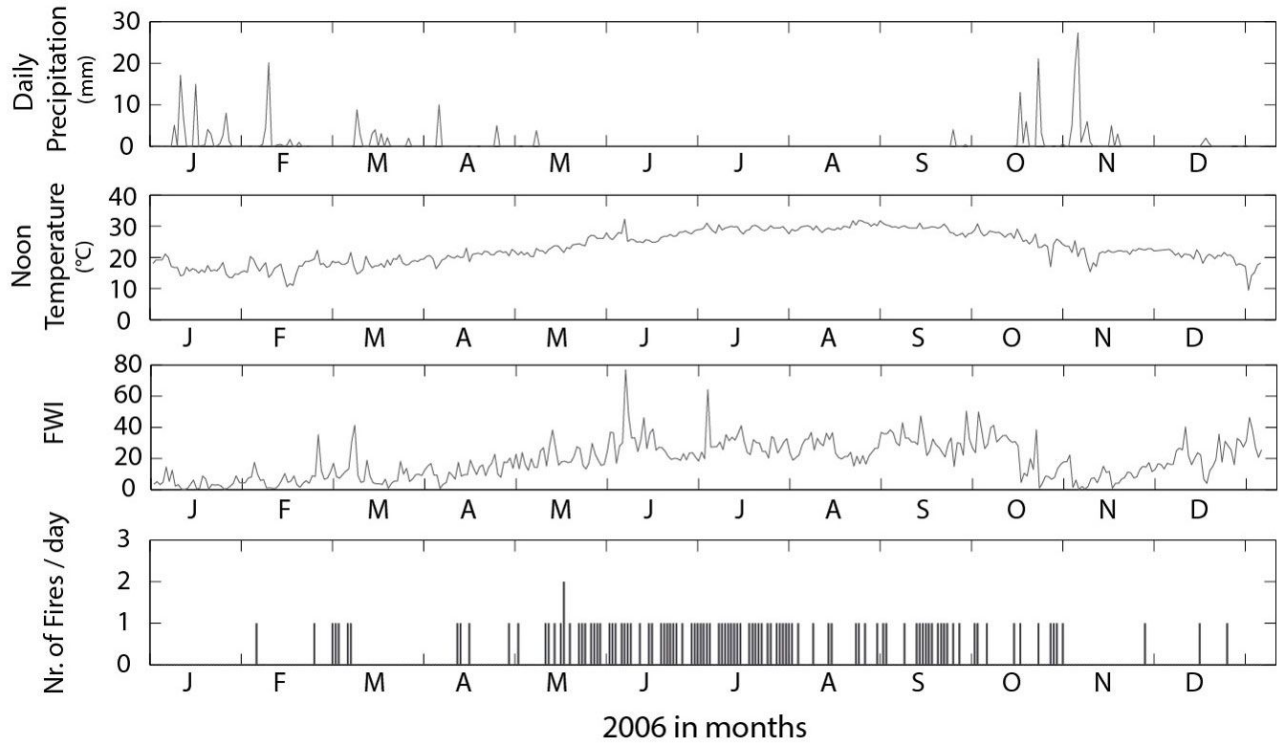
**Fig. S1** - Interpolated weather parameters on 8th October 2010. (a) wind speed (km/h), (b) temperature (°C), (c) relative humidity (%).



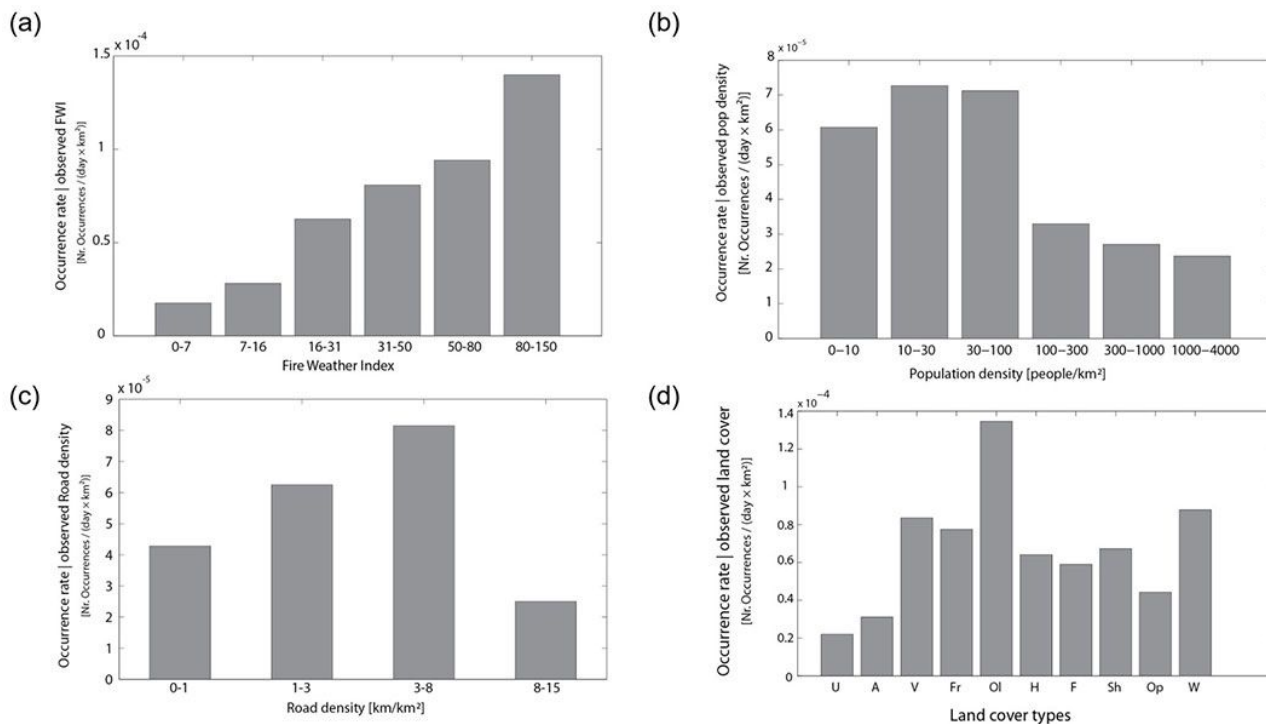
**Fig. S2** - Estimated components of the Canadian Forest Fire Weather Index system on 8th October 2010. (a) Fine Fuel Moisture Code (FFMC), (b) Duff Moisture Code (DMC), (c) Drought Code (DC), (d) Initial Spread Index (ISI), (e) Buildup Index (BUI), (f) Fire Weather Index (FWI).



**Fig. S3** - Daily values of Fire Weather Index (FWI), precipitation (mm) and noon dry-bulb temperature (°C) at Paphos weather station, and daily number of fire occurrences in the investigated area in 2006.



**Fig. S4** - Observed mean occurrence rate (Nr.Fires/day x km<sup>2</sup>) conditional on (a) FWI, (b) Population density, (c) Road density and (d) Land cover types for 2006-2010. U: urban, A: arable land, V: vineyards, Fr: fruits and berry plantations, Ol: olive groves, H: heterogeneous agricultural, F: forests, Sh: shrub and/or herbaceous vegetation, Op: open spaces with little or no vegetation, W: wetlands and water bodies.



**Tab. S1** - Data types, resolution and sources.

Data	Resolution		Source	Additional information
	spatial	temporal		
Digital Elevation Model (DEM)	15m x 15m		ASTER GDEM (Ministry METI Japan & NASA)	Six GeoTIFF data sets
Land cover	250m x 250m		Corine land cover 2006 (European Environmental Agency)	44 land cover types 1:100'000 (version13)
Admin. borders	municipality		Statistical Service of Cyprus	
Population	municipality		Statistical Service of Cyprus	census 2011
Road network			Open Street Map	
Fire Events	X,Y,burnt area	Date 2006-2010	Department of Forests of Cyprus Ministry of Agriculture, Natural resources and Environment	
Temperature Wind Speed Relative Humidity Precipitation		3-6hr/Daily 2006-2010  24hr Daily 2006-2010	Deutscher Wetterdienst (DWD) Cyprus Meteorological Service	Weather Stations: Athalassa, Paphos Airport, Akrotiri RAF, Larnaca Airport, Troodos Square

**Tab. S2** - Alternative models with explanatory variables and estimated parameters (2006-2009).

Explanatory variables	Parameters	Alternative candidate models				
		M_Null	M_BUI	M_ISI	M_BUI_IS I	M_FWI
<b>Intercept</b>	$\beta_0$	-9.88	-10.21	-10.43	-10.50	-10.61
<b>BUI</b>	$\beta_1$		0.0027		0.0016	
<b>ISI</b>	$\beta_2$			0.0637	0.0483	
<b>FWI</b>	$\beta_3$					0.0278
<b>log-likelihood (2006-2009)</b>		-5266.8	-5236.2	-5228.2	-5219.9	-5198.4
<b>AIC (2006-2009)</b>		10536.0	10476.0	10460.0	10446.0	10400.8