

Table S1. General Additive Mixed Models (GAMMs) chosen based on the minimization of the Akaike Information Criterion score. WS: Wind Speed; wave\_m: Wave Height; ID: Fish ID. DE (%): Percentage of deviance explained

GAMM Models	DE (%)
GAMM no. 1 with weather-related variables	
GAMM_weather_k <- gam(EVHMs_count_pd ~ s(WS, k = 6) + s(wave_m, k = 4) + s(ID, bs="re"), family = nb, data=EVHMs_var_count_without0)	34.9
GAMM no. 2 with spawning-related variables	
GAMM_spaw_without_HighWS <- gam(EVHMs_count_pd ~ s(potential.temp, k = 3) + s(Moon_index, k = 3) + s(Light_Hours, k = 8) + s(ID, bs="re"), family = poisson(), data=EVHMs_var_count_without0_new)	47.1

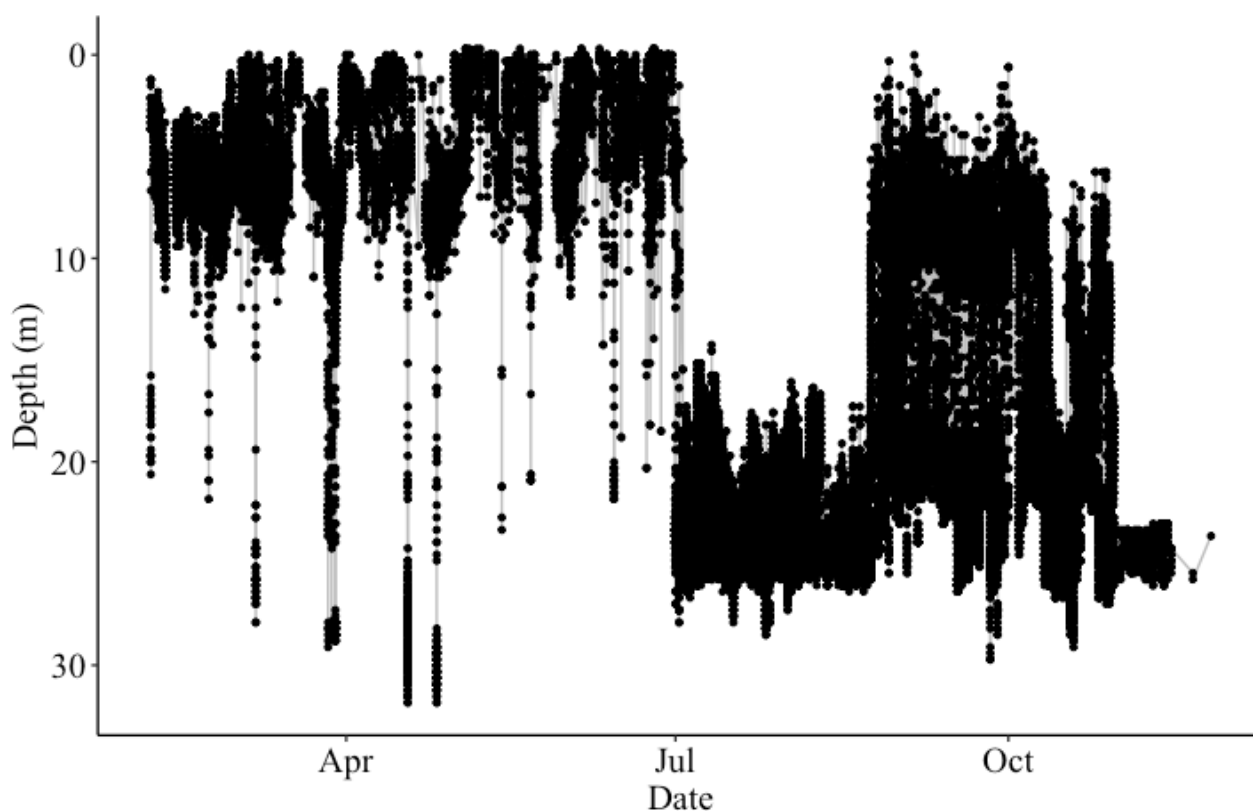


Fig. S1. Depth profile of individual #4749

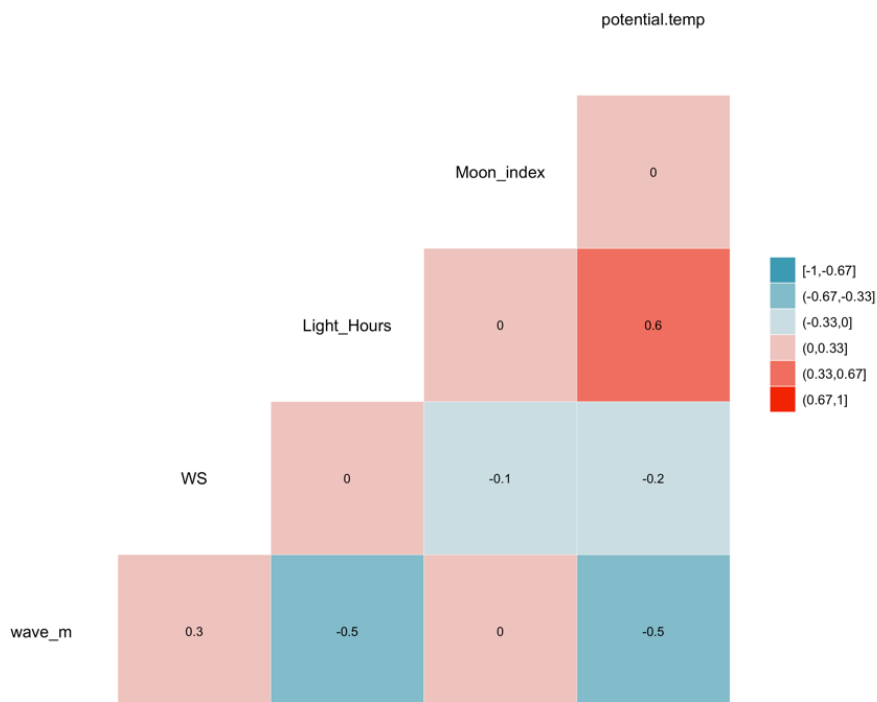


Fig. S2. Correlation matrix showing the Spearman’s rank correlation coefficients between all environmental variables used in the GAMMs (Generalized Additive Mixed Models).

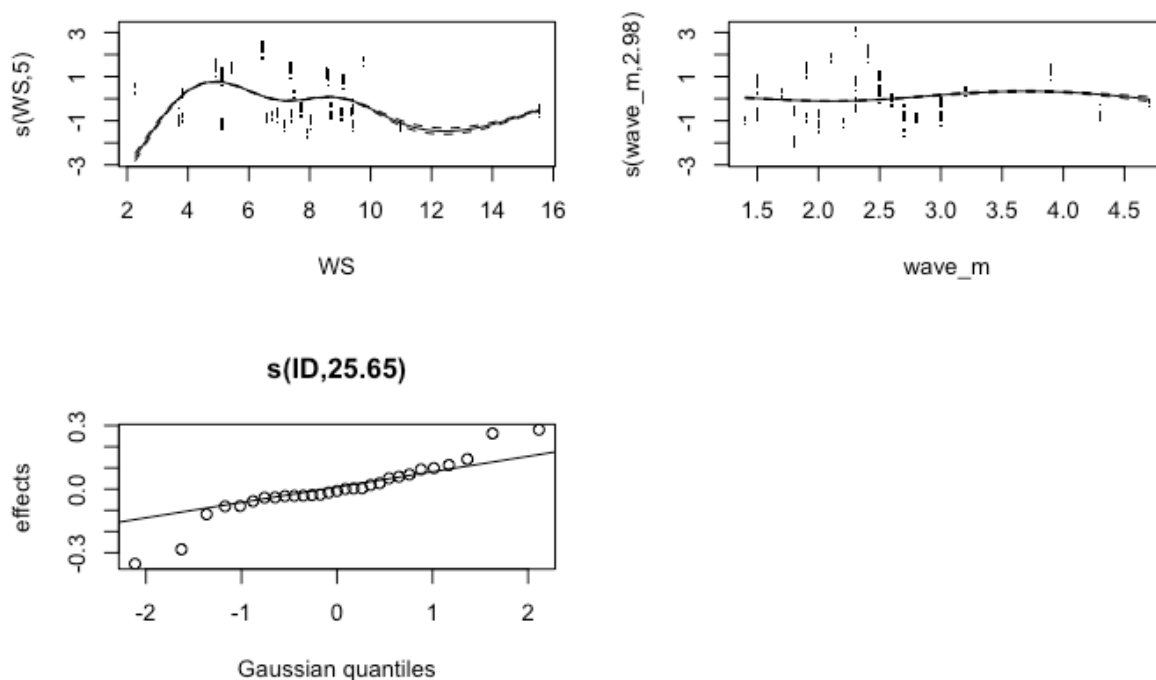


Fig. S3. GAMM plots representing the effect of the smooth effect of the wind speed (on the top left) and of the wave height (on the top right) on the daily count of extraordinary events. QQ-plot of the GAMM on the bottom left.

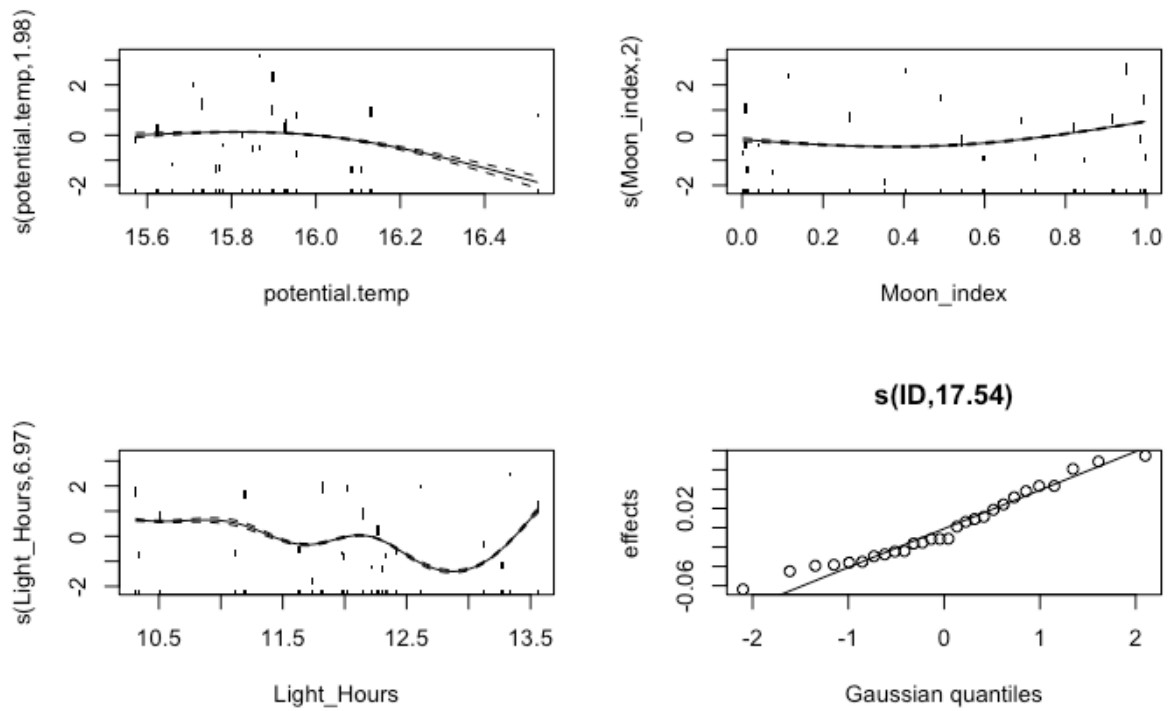


Fig. S4. GAMM plots representing the effect of the smooth effect of the sea surface temperature (on the top left), of the moon illumination (on the top right) and of the photoperiod (bottom left) on the daily count of extraordinary events. QQ-plot of the GAMM on the bottom right.