

Supplementary appendix

A - Characteristics of the 3-hour period model of coast-wide life-risk prediction

Table A1 Factors associated with water adverse events during 3-h periods.

Univariate and multivariate analyses performed with the aid of logistic regression models for water adverse event risk along the Gironde coast during 3-h periods using retrospective data from 2011–2013. OR, odds ratio; CI, 95% confidence interval.

	Crude OR (95% CI)	Adj. OR (95% CI)	χ^2
Sea height, m			8.8
≥ 1.5	Ref.	Ref.	
< 1.5	1.66 (1.12, 2.43)	2.18 (1.33, 3.72)	
Wave factor, m \times s			22.1
≤ 4.7	Ref.	Ref.	
4.7–8	3.12 (1.78, 6.13)	3.71 (2.00, 8.67)	
> 8	2.14 (1.25, 4.31)	5.44 (2.74, 14.3)	
Wave incidence factor	1.98 (1.56, 2.66)	2.18 (1.56, 3.21)	15.9
Air temperature, °C			50.7
≤ 20.5	Ref.	Ref.	
20.5–23	7.48 (3.67, 20.6)	5.04 (2.35, 15.1)	
> 23	24.99 (13.9, 66.7)	15.11 (7.76, 48.0)	
Water temperature, °C			
≤ 19	Ref.		
> 19	0.15 (0.08, 0.25)		
Interval (local time)			31.3
9:30 am–12:29 pm	Ref.	Ref.	
12:30 pm–3:29 pm	3.9 (2.10, 8.64)	2.87 (1.60, 6.69)	
3:30 am–6:29 pm	5.10 (2.94, 11.8)	5.48 (2.95, 14.0)	
6:30 am–9:30 pm	1.06 (0.44, 2.58)	1.45 (0.62, 3.95)	
Wind speed, m/ s			
≤ 4.3	Ref.		
4.3–6.3	1.30 (0.87, 2.00)		
> 6.3	0.97 (0.60, 1.54)		
Season			16.6
Low	Ref.	Ref.	
High	8.71 (5.45, 17.2)	3.82 (2.09, 7.47)	
Type of day			17.9
Weekday	Ref.	Ref.	
Weekend	1.90 (0.85, 3.97)	3.17 (1.35, 7.69)	
Vacation	5.74 (3.64, 10.9)	3.62 (2.02, 7.80)	

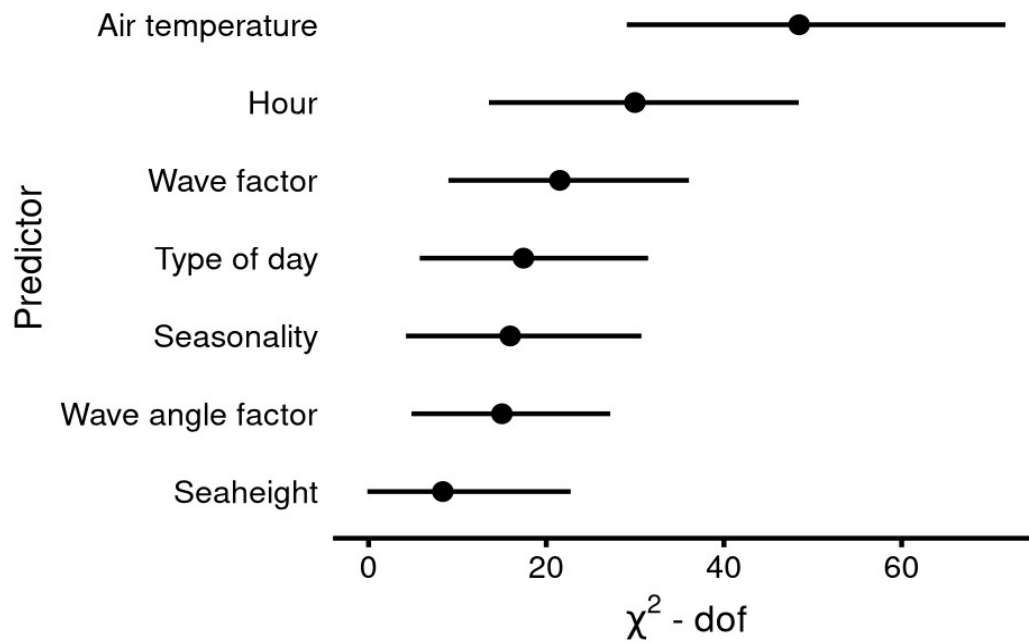


Fig A1. Importance of predictors in coast-wide life-risk along Gironde surf beaches during 3-hour periods. Importance of predictors is assessed using Wald statistics minus two degrees of freedom, their 95% confidence interval given by bootstrap estimations, multivariate logistic regression model.

Table A2. Days with and without water adverse events according to the prediction delay and the risk levels. Number of days with an event/number of days without any event, according to the coast-wide life-risk level prediction and the delay of forecasts, using daily risk model along Gironde surf beaches and data of years 2015-2017.

Risk level	Delay	Risk level prediction 3 days in advance				
		1	2	3	4	5
1	1 day	1/140	0/11	0/3	0/1	0/0
	2 days	1/152	0/10	0/2	0/0	0/0
2	1 day	0/21	6/79	2/10	0/3	0/0
	2 days	0/13	7/85	1/4	0/3	0/0
3	1 day	0/8	1/7	5/48	1/6	1/3
	2 days	0/4	1/5	11/53	2/8	0/1
4	1 day	0/0	1/5	3/14	17/39	3/14
	2 days	0/0	0/3	1/16	19/42	4/6
5	1 day	0/0	0/2	4/3	5/15	60/60
	2 days	0/0	0/1	1/3	2/11	60/70