This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 776661.

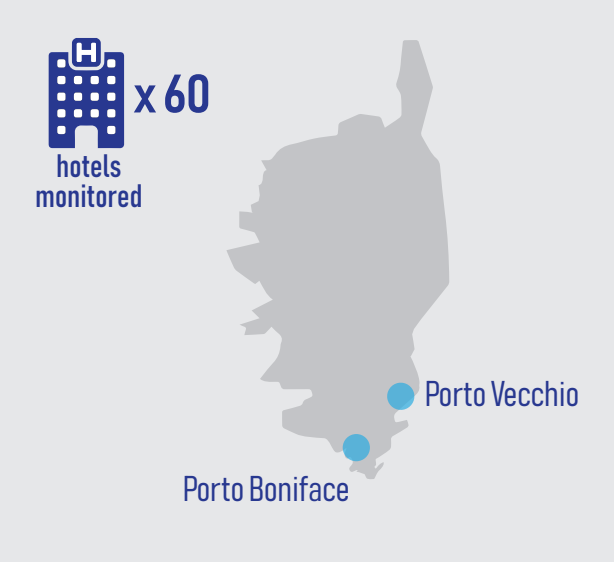
HOW DO INCREASING TEMPERATURES (AND HEAT WAVES) IMPACT HOTELS' PRICES AND REVENUES FOR COASTAL AREAS IN ISLAND DESTINATIONS?

METHODOLOGY

We monitored current weather conditions posted on several weather forecast providers and daily prices posted on Booking.com by hotels. We then estimated the link between daily temperature and daily price, controlling for all the other factors affecting prices.

We finally applied these estimates to the increase in the number of days with excessive temperature projected for the future in two scenarios (RCP2.6 and RCP8.5) and in two time horizons (near future, about 2050; distant future, about 2100).

As thermal stress is delimited in the summer months, and this is when the great majority of tourists arrive in these islands, the whole analysis has been carried out in six months only: from May to October included.



Actual share of days in which humidex > 35 degrees	Future scenario considered	Days in the corresponding scenario in which humidex > 35 degrees	Increase in the average price	Increase in the tourism overnight stays	Increase in tourism revenues
7.89%	rcp26near	14.85%	2.6%	0.5%	3.2%
	rcp26far	14.85%	2.6%	0.5%	3.2%
	rcp85near	15.84%	3.0%	0.6%	3.6%
	rcp85far	39.51%	12.0%	2.4%	14.7%

Source: Report D5.3

At present, 7.89% (column 1 of the table below) of "summer" days (days in the period between 1 May and 31 October) have a HUMIDEX higher than 35 Celsius degrees in the area under investigation (Bonifacio and Porto Vecchio). In absolute terms, this is about 14 days. In the future, this share (column 3) will almost double to 14.85% in rcp2.6, double (to 15.84%) in rcp8.5 near, and increase of four-fold (to 39.51%, about 71 days!) in rcp8.5, distant. Consequently, demand for holidays in Corsica will increase and the new equilibrium shows an increase in the average price posted by hotels in the destination (column 4) and an increase in overnight stays (column 5, this is estimated using the past correlation between average prices and occupancy rates in hotels, data provided by STR). The joint impact of price and demand will lead to an increase in hotels revenues (last column of the table) and, assuming that the change in revenues spreads to the other tourism products in a similar way, an increase in tourism revenues for the whole destination will be recorded. Hence, the estimation reported in the last column of the table below can be interpreted as the percentage increase in tourism revenues for the island.