Study of Atmospheric Forcing Influence on Harbour Water Renewal

Supplementary information

Figure S1. Time series and scatter plots of model results and observations. This is complementary information to chapter 2.5. Validation.

First column: Time series of atmospheric pressure, meteorological tide and currents at the mouths of the ports of Huelva, Gijón and Cartagena. The observations correspond to the blue lines and the results predicted by the SAMOA model are the black dots.

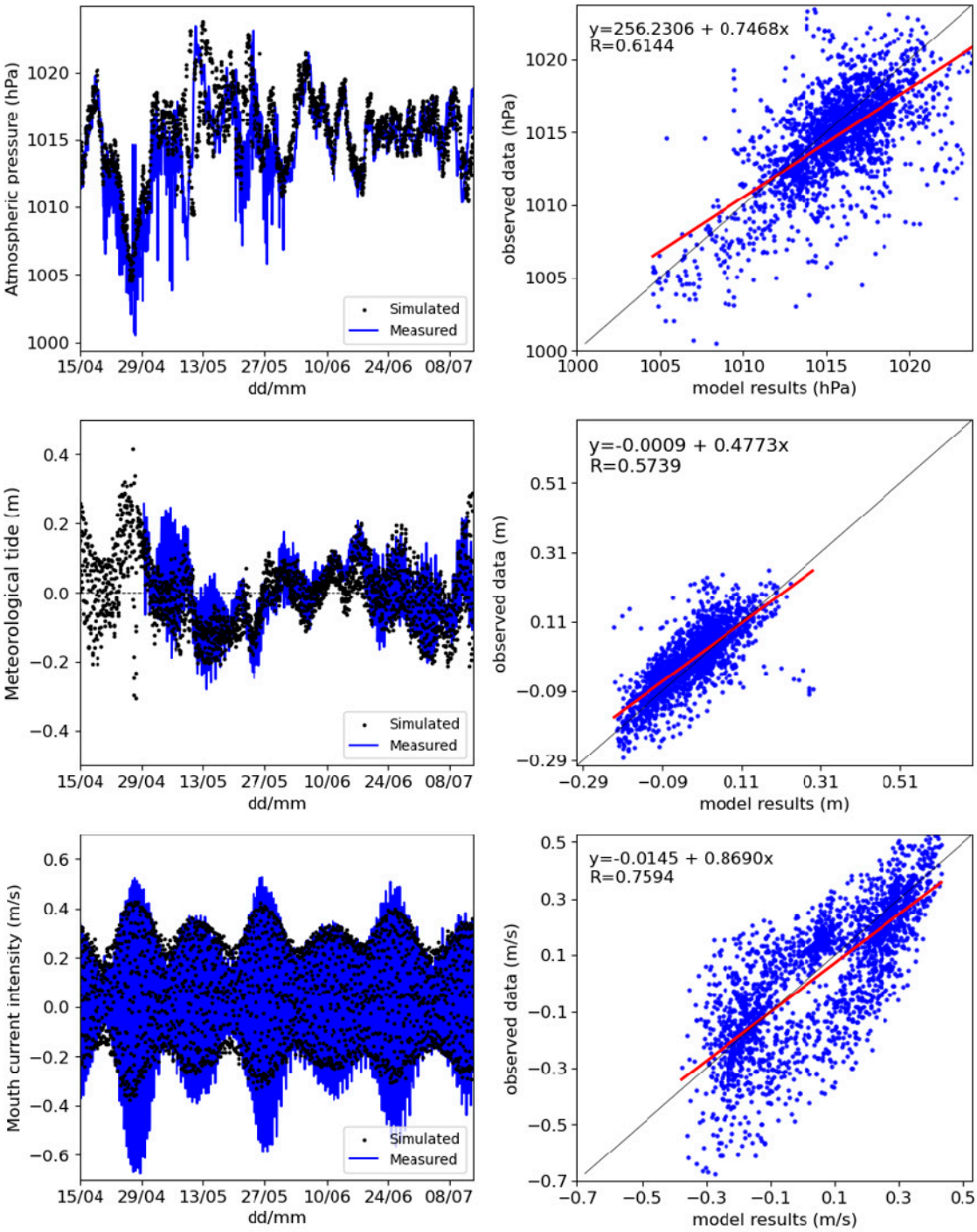
In the manuscript, three of these plots have been selected as examples.

Second column: Plots x=y of atmospheric pressure, meteorological tide and currents at with forecasted data by SAMOA and the measurements data. The straight red line corresponds to the regression line.

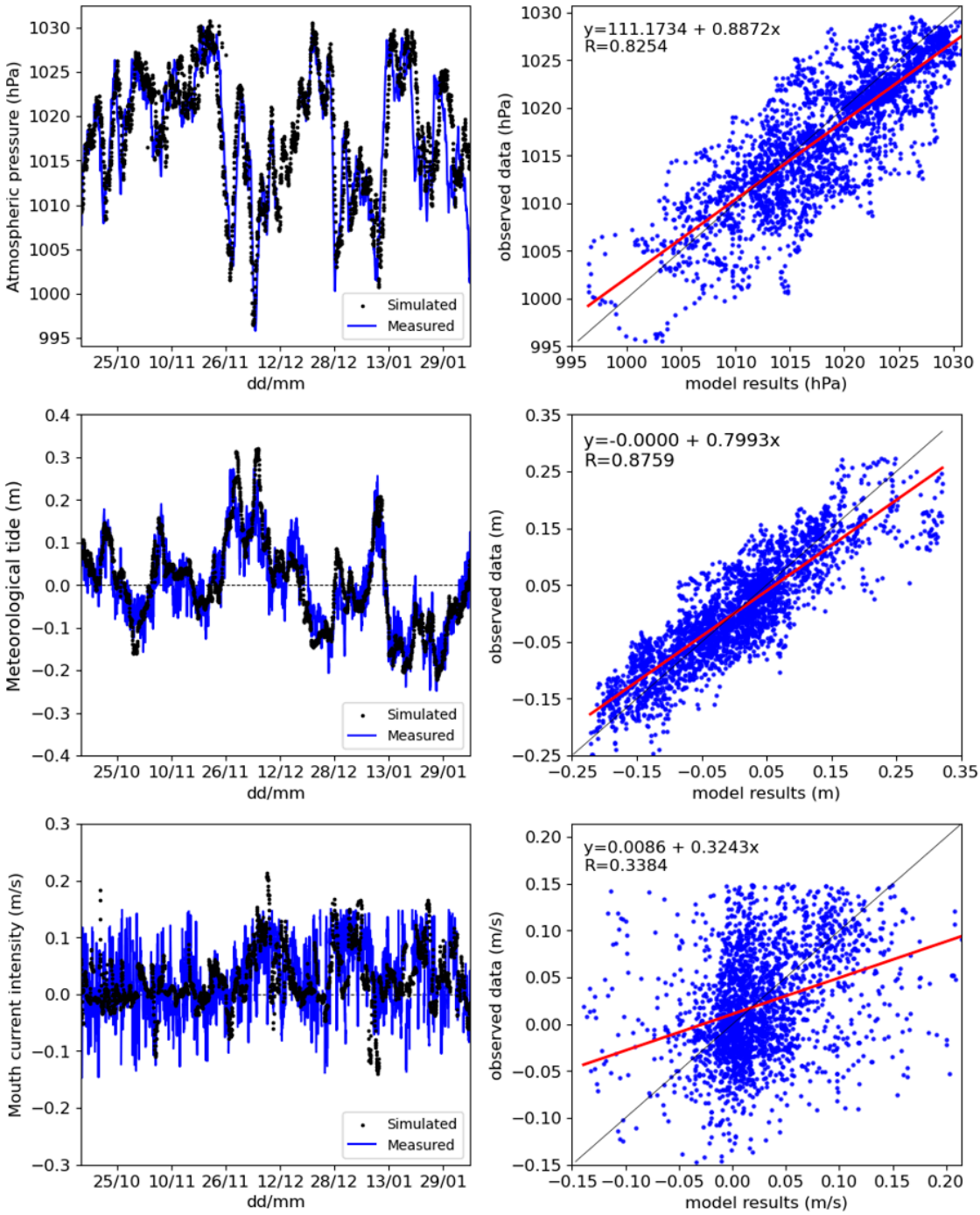
It is important to highlight the better fit of the model representing the currents in Huelva harbor. This may be due to the location of the study area of the port in the center of the estuary, which has the shape of a straight and narrow channel. In this way, the currents present two dominant directions that can be more precisely reproduced by the model.

Figure S2. Histogram of renewal time distribution in the ports of Huelva, Gijón and Cartagena. The columns in red correspond to the days above the average renewal time in each case. This information complements table 5 (chapter 3. Results).

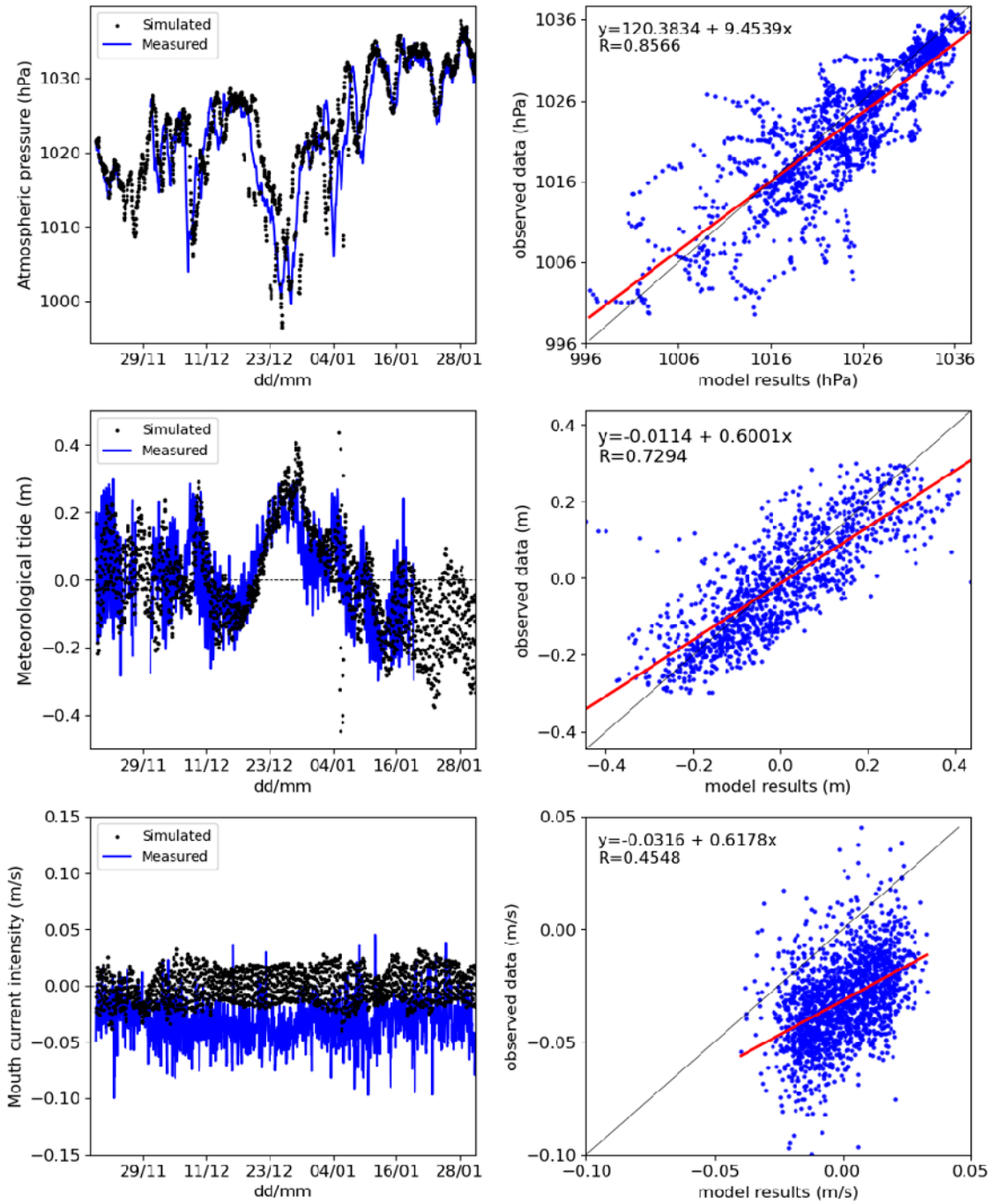
HUELVA HARBOUR



GIJÓN HARBOUR



CARTAGENA HARBOUR



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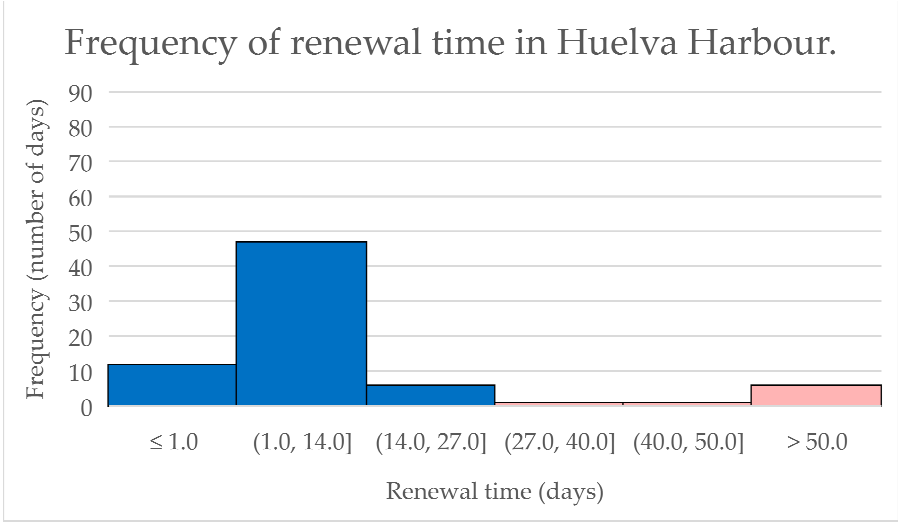

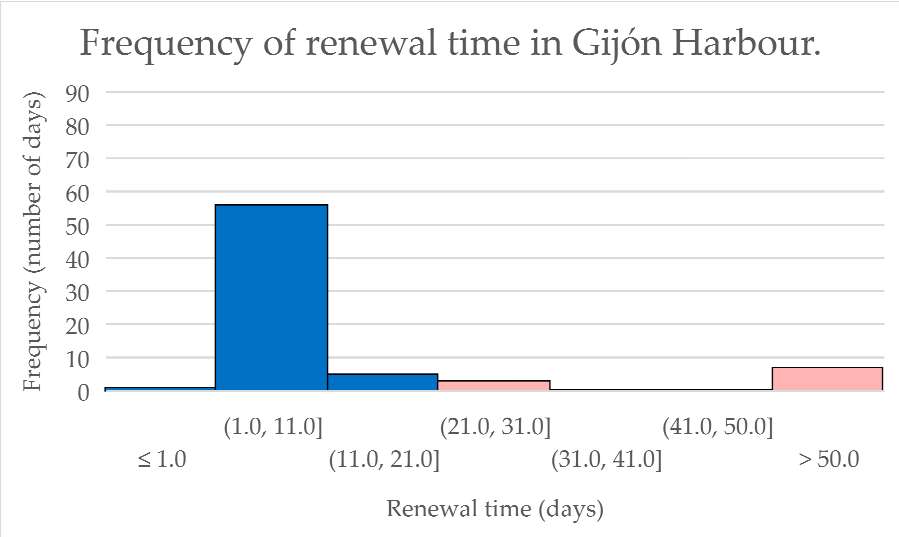

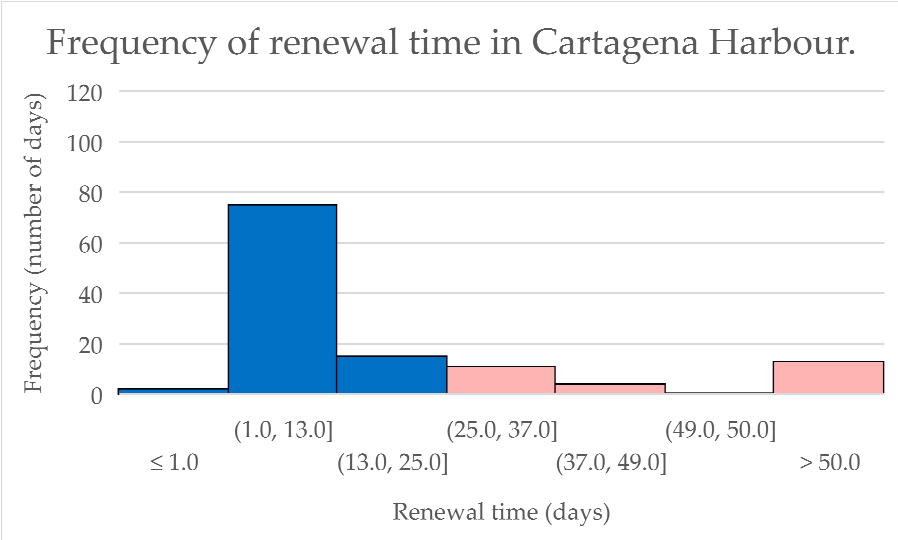

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