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The overtides generation in a shallow tidal estuary : Pertuis Charentais, Bay of Biscay, France.

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The semi-diurnal tides in the Bay of Biscay are highly distorted when passed through the small shallow passages from the ocean to the coast called the Pertuis Charentais. The overtides generated in the Pertuis are rather strong according the tide gauges data. A 2D numerical model uses the TELEMAC software to resolve the shallow water equations. The model is run to examine the influence of the coastline geometry, bathymetry and bottom friction on the tide propagation in the Pertuis Charentais. The results of this investigation give an insight into the role of the drag coefficient variability on the overtides generation in shallow embayment.