



*Supplement of*

**Influence of wind stress and the Isonzo/Soča River outflow on surface currents in the Gulf of Trieste**

**Davide Lombardo et al.**

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Supplementary materials

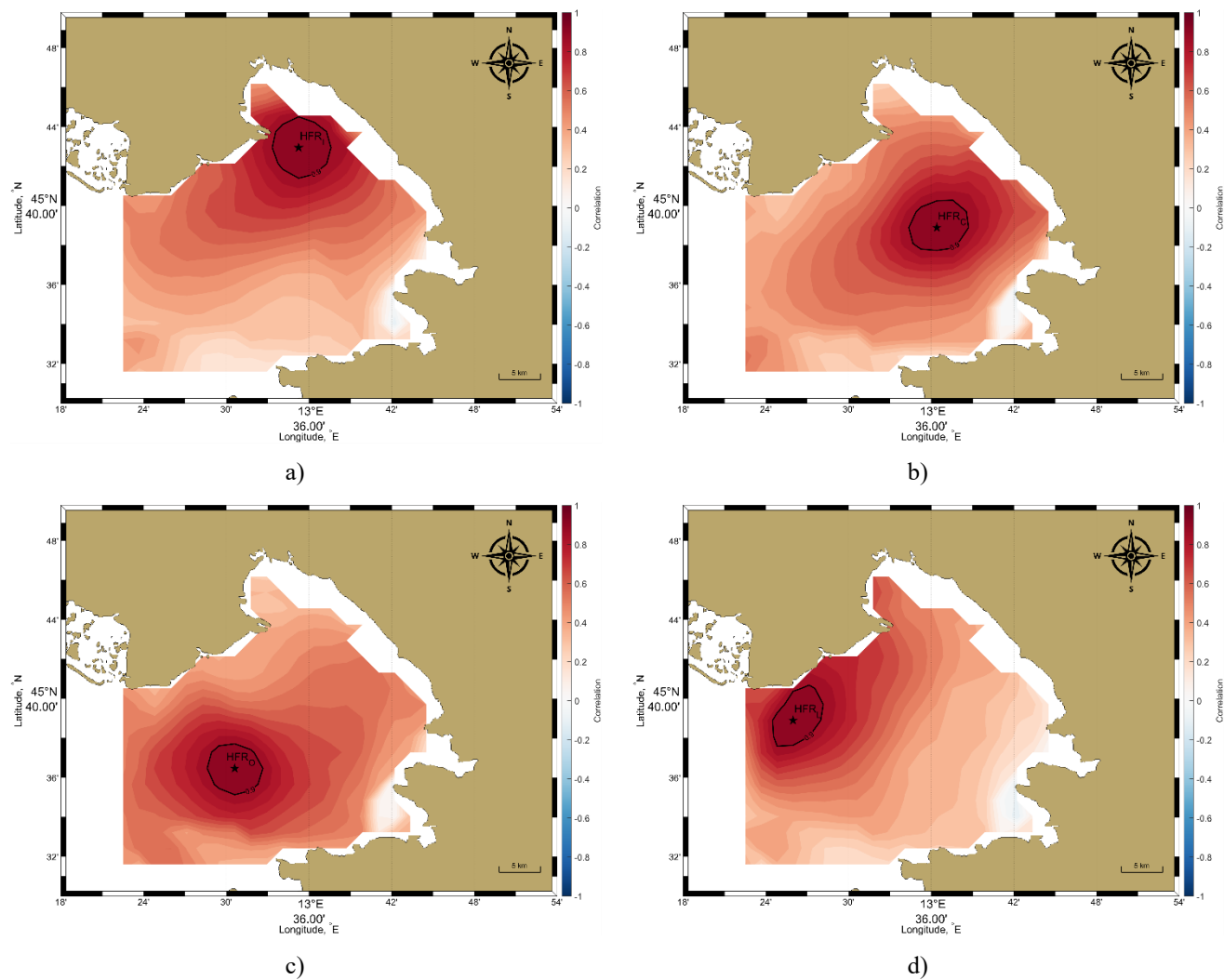
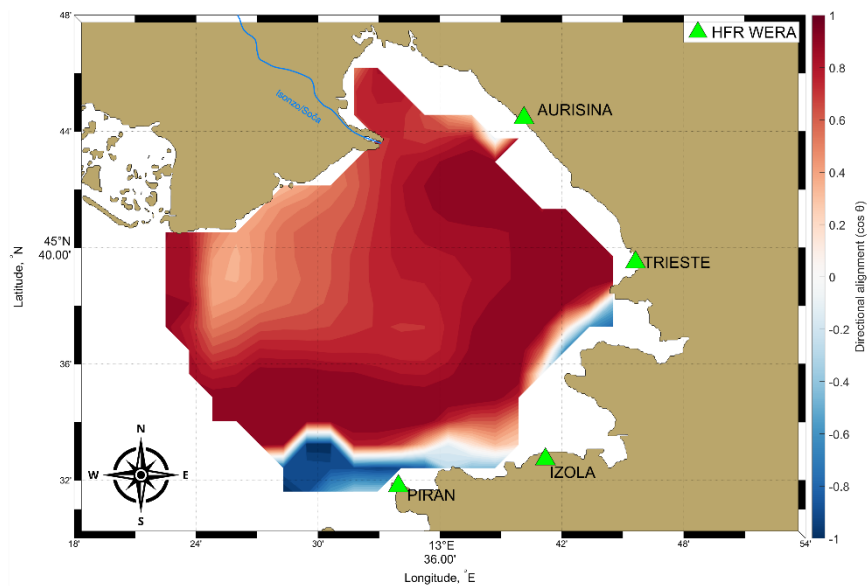
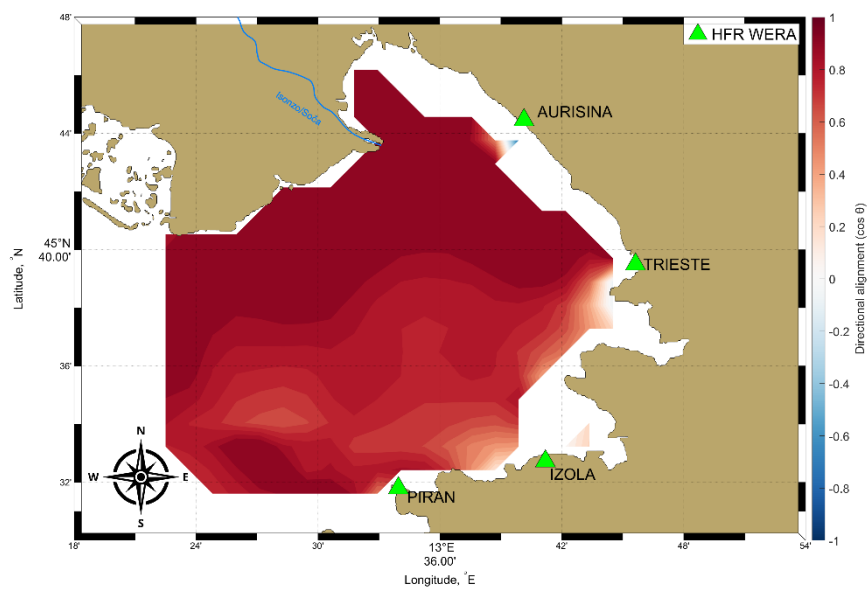


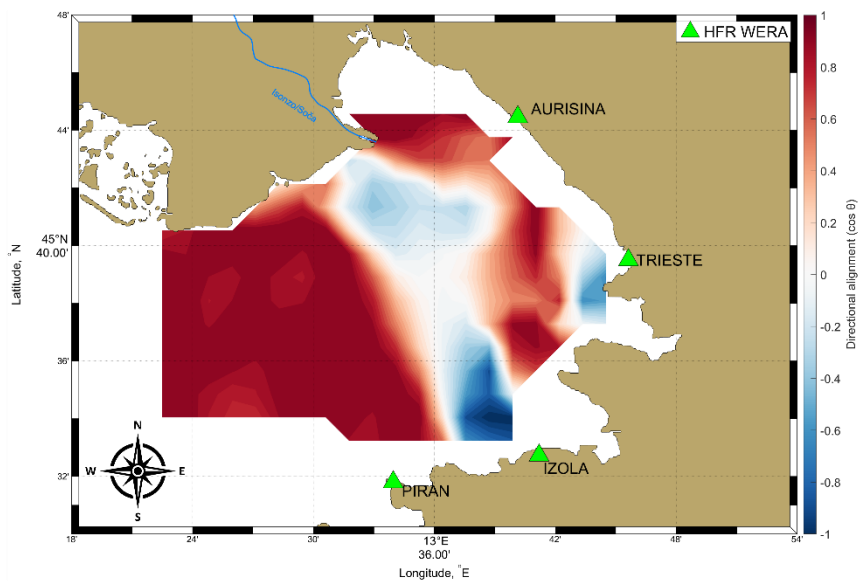
Figure S1: (a) Correlation map centred on HFR<sub>I</sub>. (b) Correlation map centred on HFR<sub>C</sub>. (c) Correlation map centred on HFR<sub>O</sub>. (d) Correlation map centred on HFR<sub>L</sub>.



a)

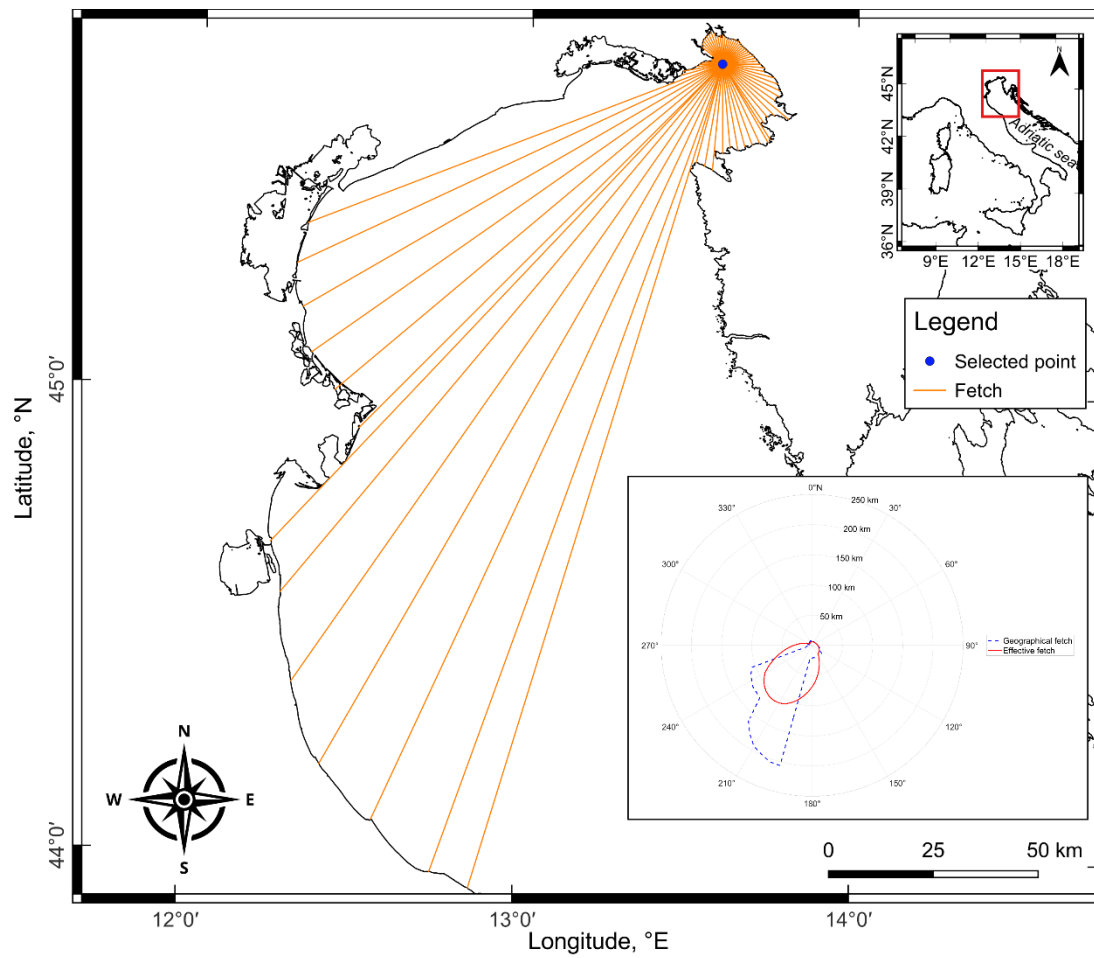


b)

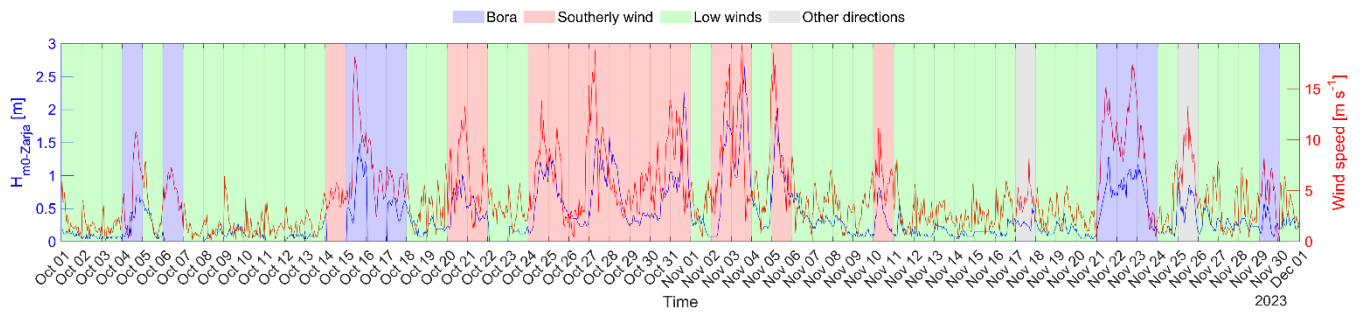


c)

**Figure S2: (a) Directional alignment ( $\cos \theta$ ) map on 15th October 2023 19:00 UTC (Bora event). (b) Directional alignment ( $\cos \theta$ ) map on 27th October 2023 05:00 UTC (Southerly wind event). (c) Directional alignment ( $\cos \theta$ ) map on 28th October 2023 01:00 UTC (Southerly wind and strong river outflow event).**



10 **Figure S3: Fetch and selected point.**



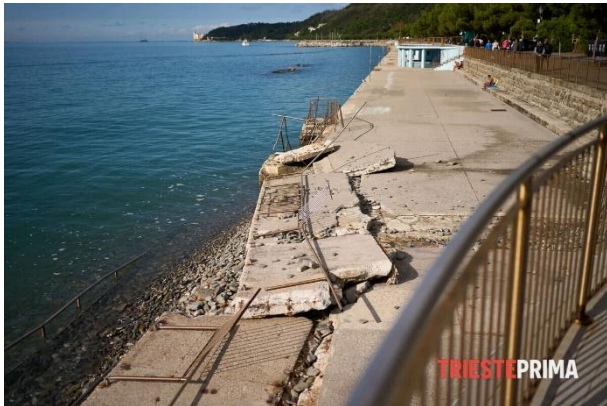
15 **Figure S4: Time series of significant wave height,  $H_{m0-Zarja}$ , from Zarja wave buoy (blue), wind speed in  $WRF_0$  point (red). The coloured bands represent the same (daily averaged) wind regimes described in the previous paragraph, extracted from the  $WRF_0$  point.**



a)



b)



c)



d)

**Figure S5: Coastal storm (a-b) and storm damage (c-d) in Barcola coast from <https://www.triesteprema.it/foto/cronaca/mareggiata-a-barcola-i-danni-4-novembre/>.**