

Supplementary Material

Assessing collision risk between humpback whales and multiple vessel fleets in Brazil

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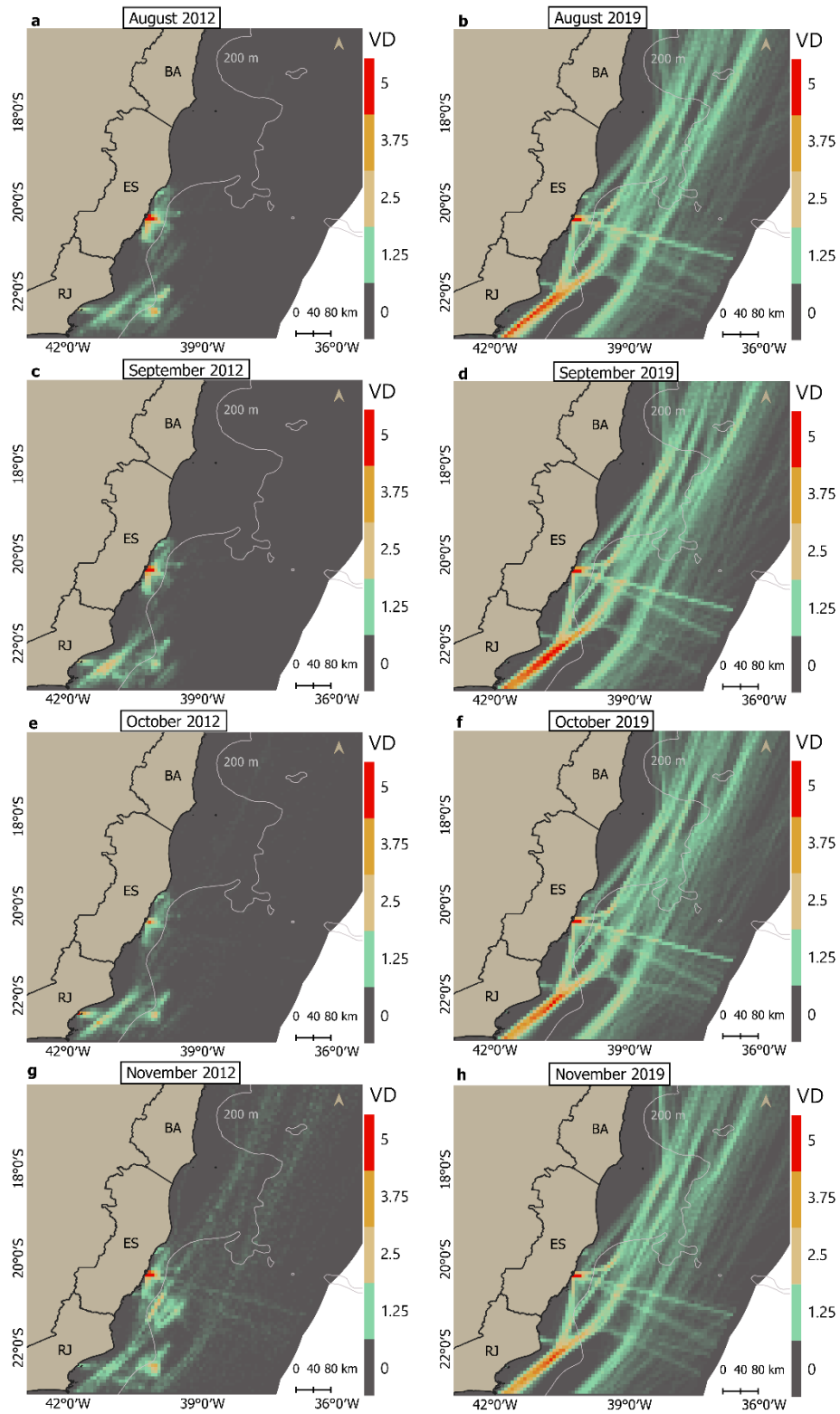


Figure S1. Monthly vessel density (VD) for cargo fleet. VD is the average number of vessels crossing grid cells of $0.072 \times 0.072^\circ$ ($\sim 8 \times 8$ km) daily, depicted to each month between August-November 2012 and 2019.

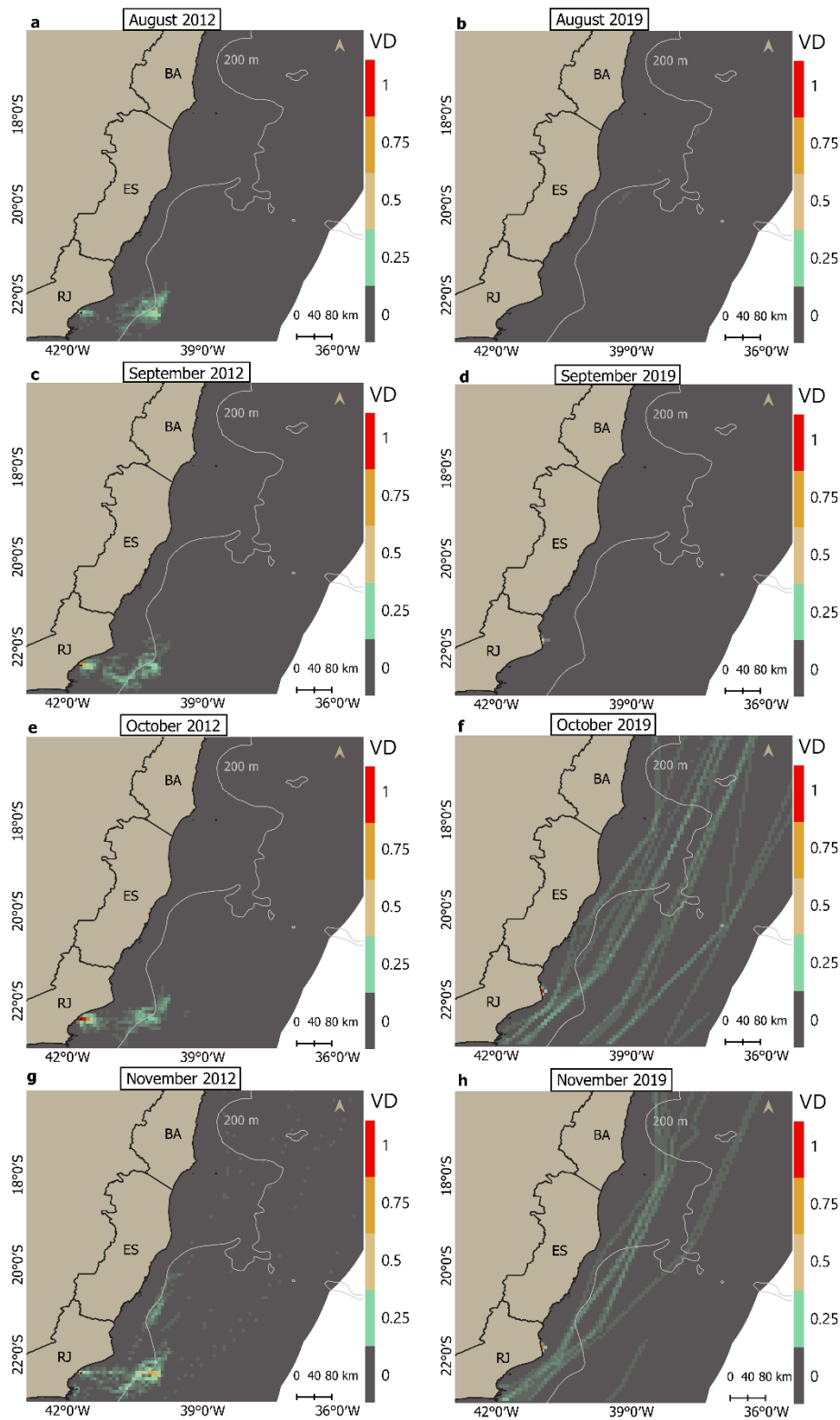


Figure S2. Monthly vessel density (VD) for passenger fleet. VD is the average number of vessels crossing grid cells of $0.072 \times 0.072^\circ$ ($\sim 8 \times 8$ km) daily, depicted to each month between August-November 2012 and 2019.

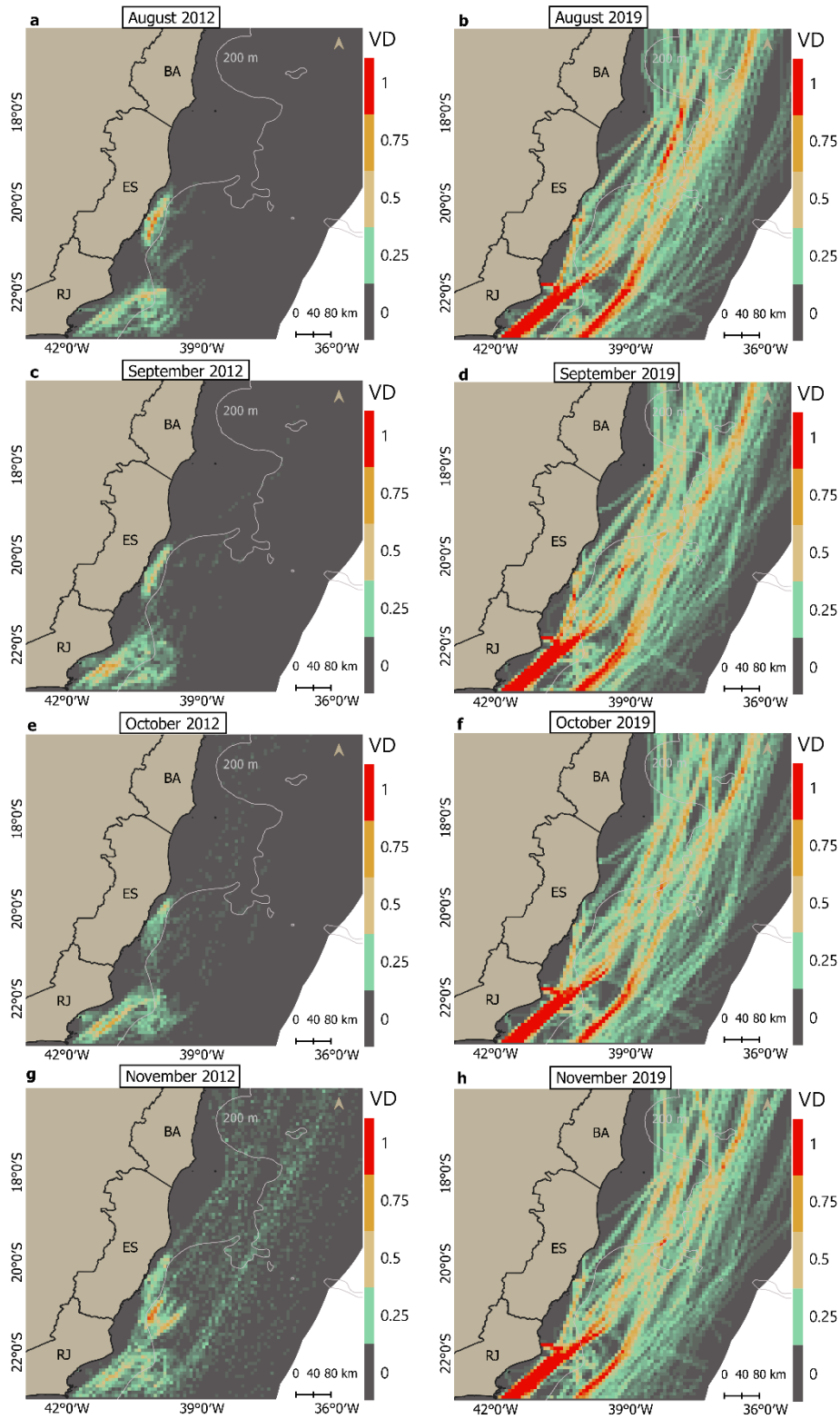


Figure S3. Monthly vessel density (VD) for tanker fleet. VD is the average number of vessels crossing grid cells of $0.072 \times 0.072^\circ$ ($\sim 8 \times 8$ km) daily, depicted to each month between August-November 2012 and 2019.

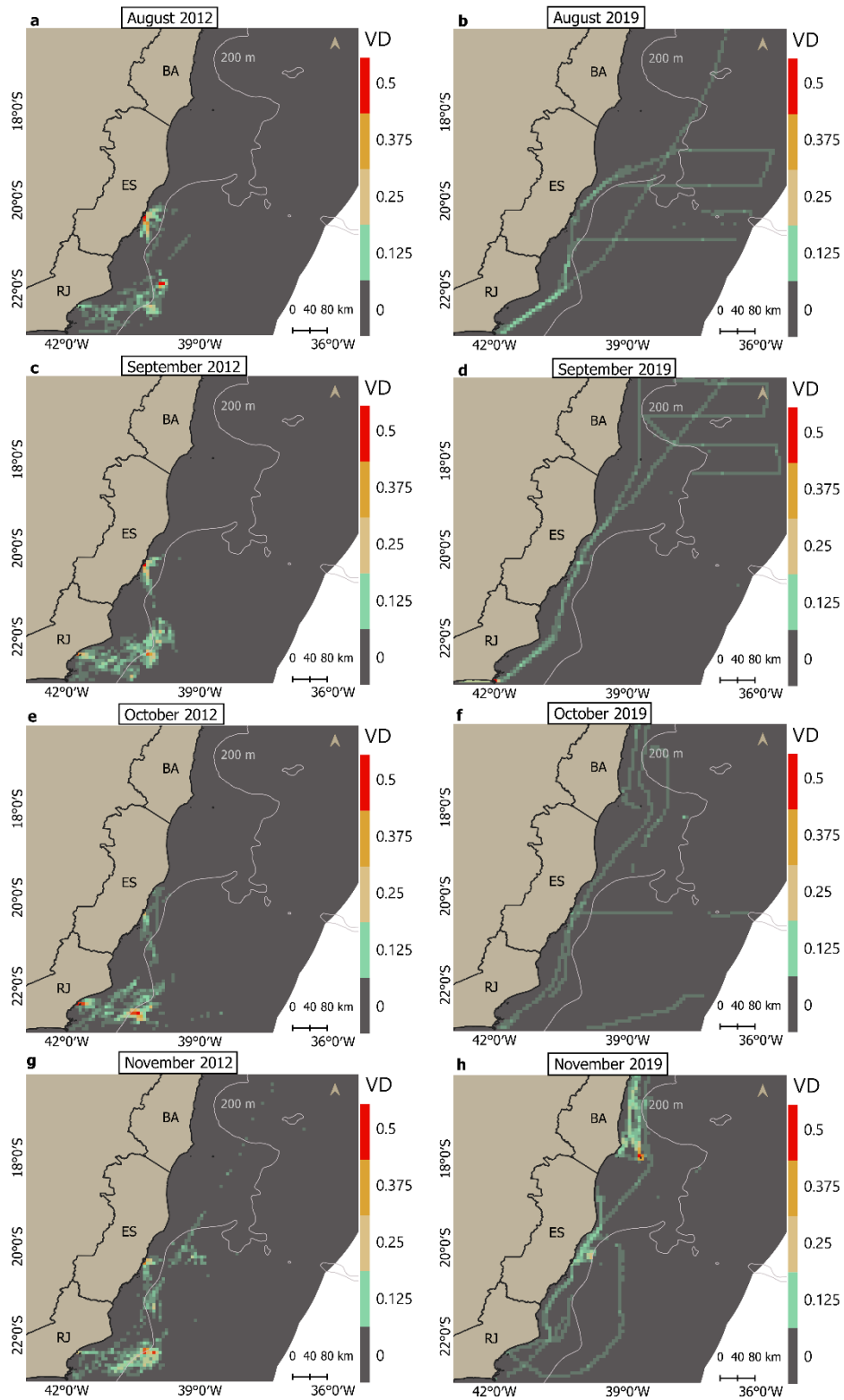


Figure S4. Monthly vessel density (VD) for military fleet. VD is the average number of vessels crossing grid cells of $0.072 \times 0.072^\circ$ ($\sim 8 \times 8$ km) daily, depicted to each month between August-November 2012 and 2019.

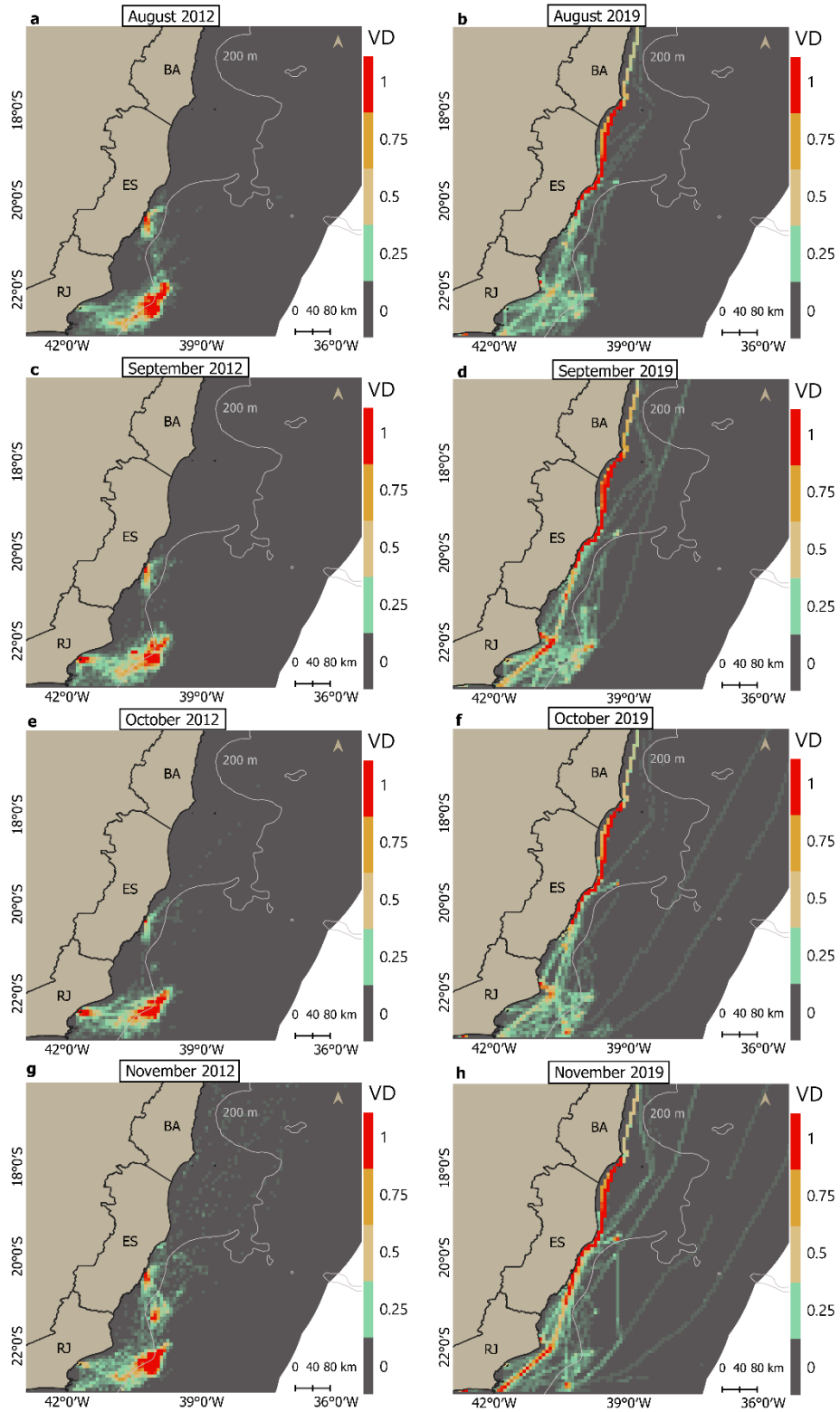


Figure S5. Monthly vessel density (VD) for tug fleet. VD is the average number of vessels crossing grid cells of $0.072 \times 0.072^\circ$ ($\sim 8 \times 8$ km) daily, depicted to each month between August-November 2012 and 2019.

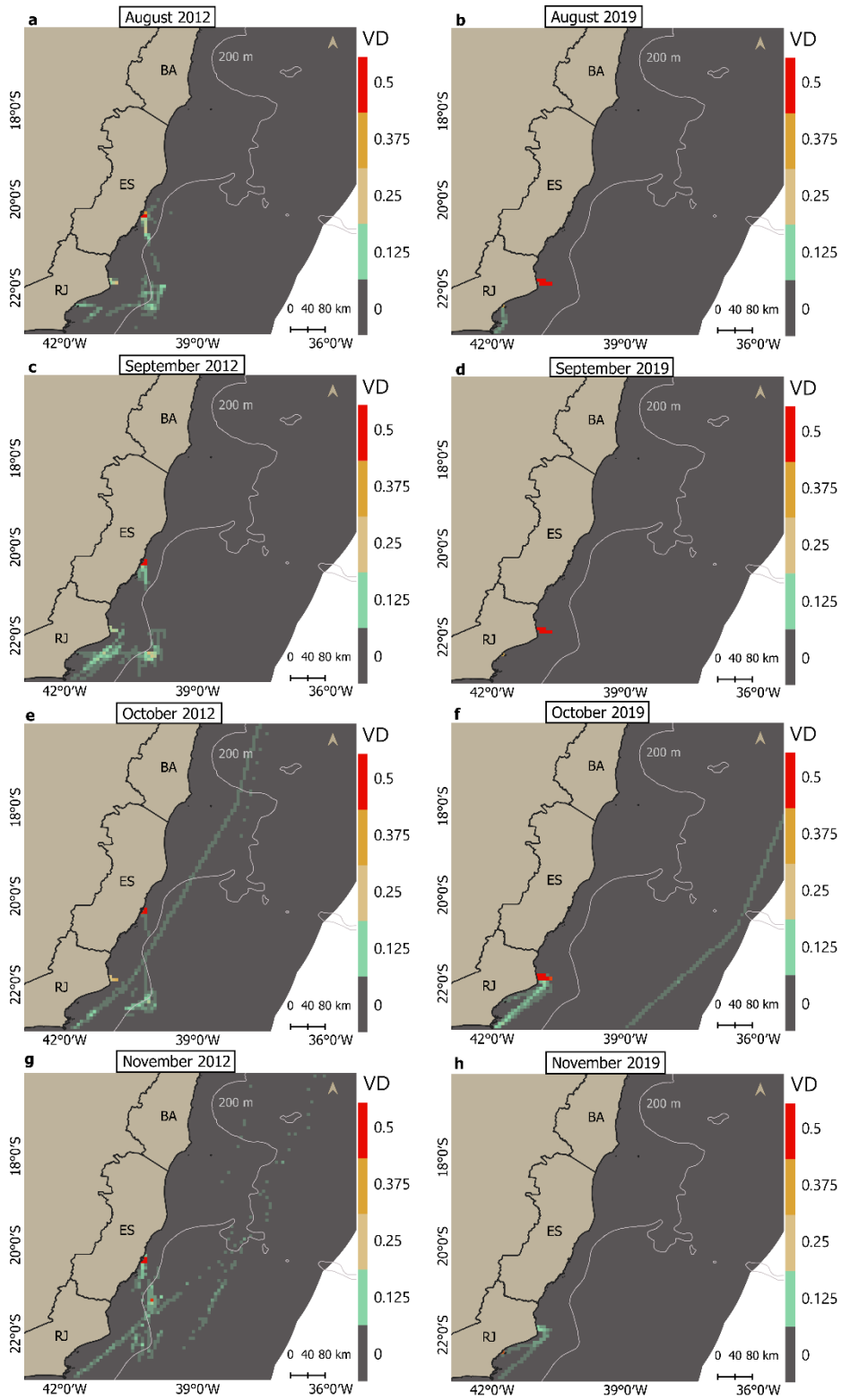


Figure S6. Monthly vessel density (VD) for dredger fleet. VD is the average number of vessels crossing grid cells of $0.072 \times 0.072^\circ$ ($\sim 8 \times 8$ km) daily, depicted to each month between August-November 2012 and 2019.

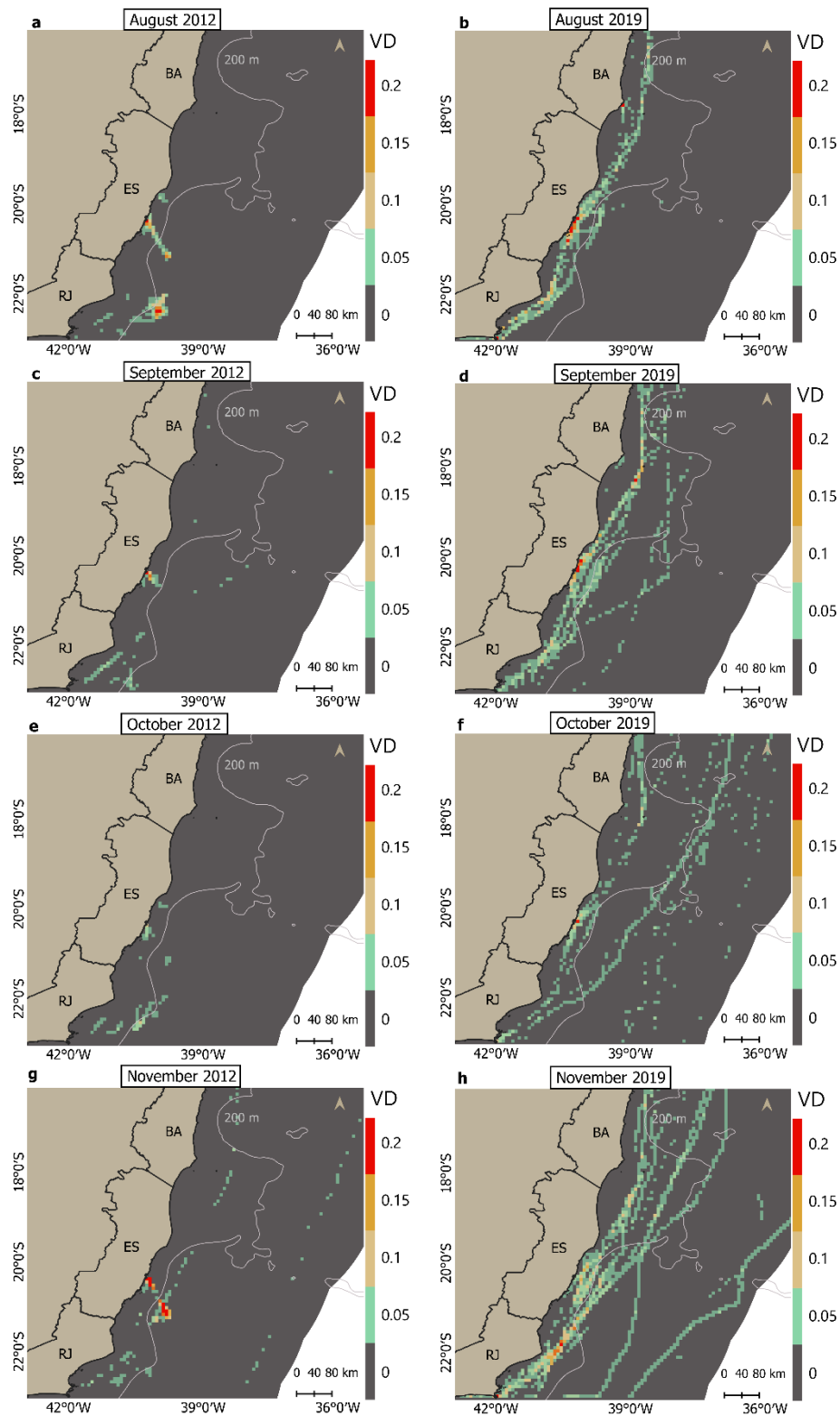


Figure S7. Monthly vessel density (VD) for sailing fleet. VD is the average number of vessels crossing grid cells of $0.072 \times 0.072^\circ$ ($\sim 8 \times 8$ km) daily, depicted to each month between August-November 2012 and 2019.

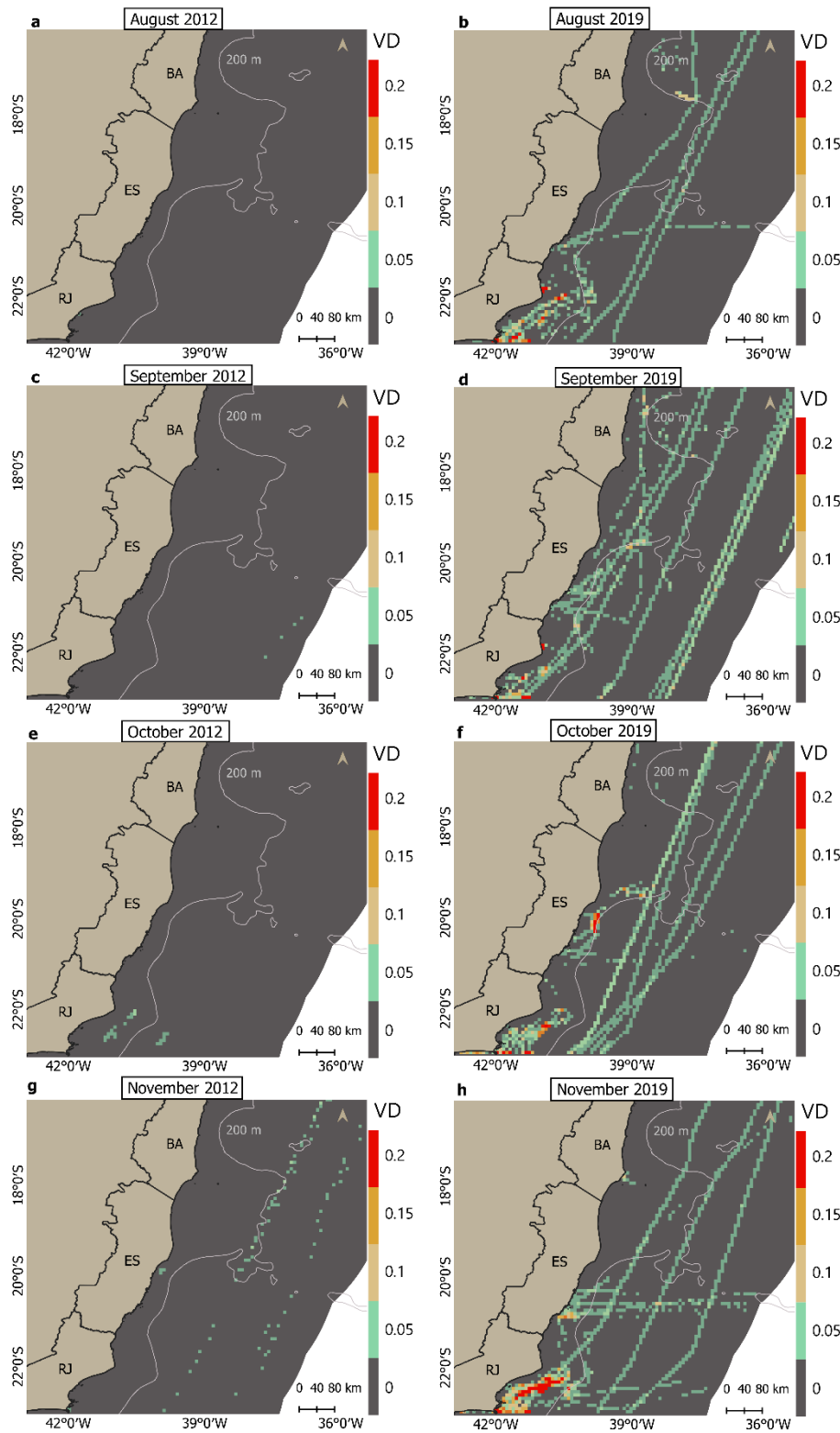


Figure S8. Monthly vessel density (VD) for fishing fleet. VD is the average number of vessels crossing grid cells of $0.072 \times 0.072^\circ$ ($\sim 8 \times 8$ km) daily, depicted to each month between August-November 2012 and 2019.

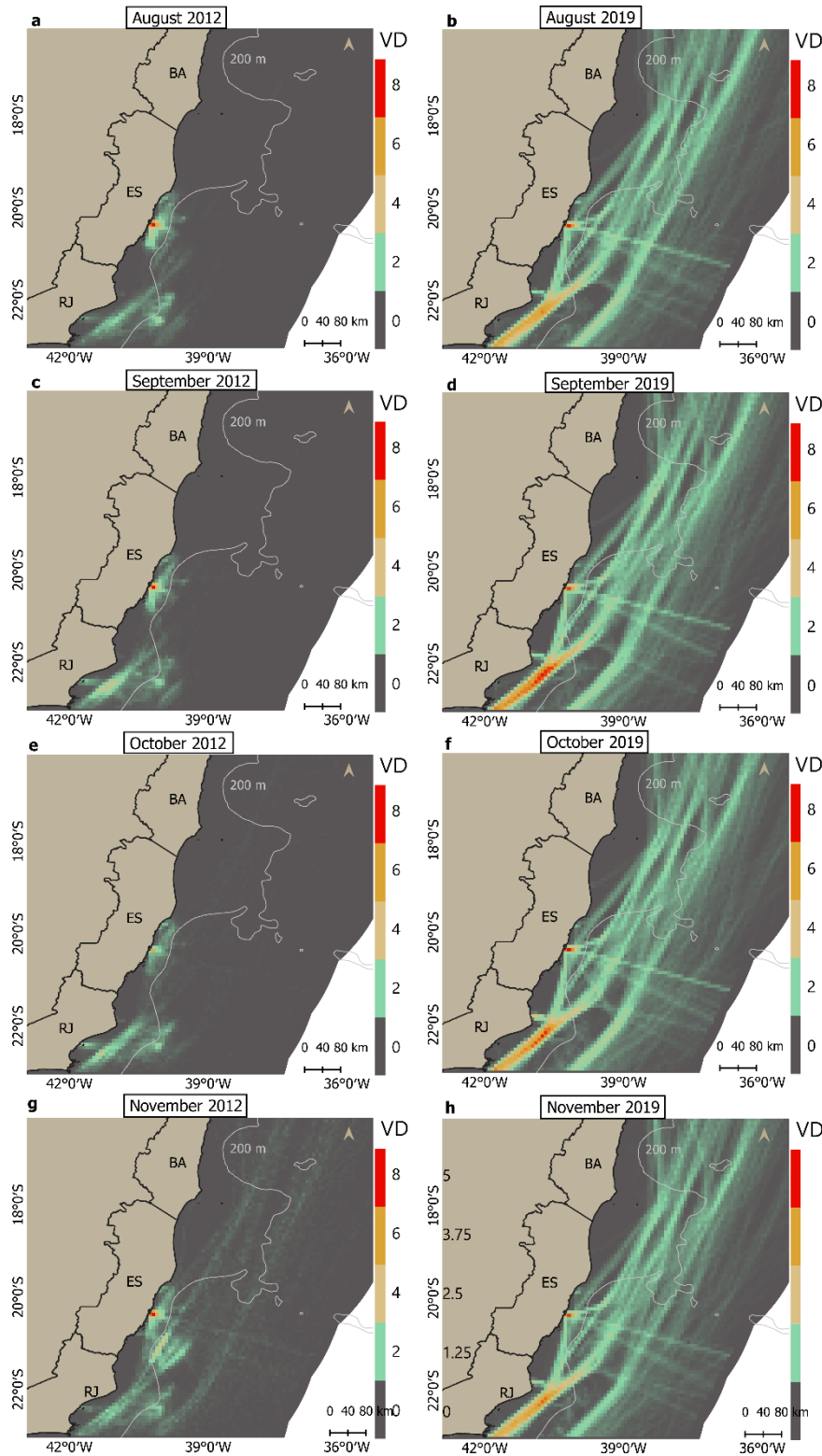


Figure S9. Monthly vessel density (VD) for vessels >80 m in length. VD is the average number of vessels crossing grid cells of $0.072 \times 0.072^\circ$ ($\sim 8 \times 8$ km) daily, depicted to each month between August-November 2012 and 2019.

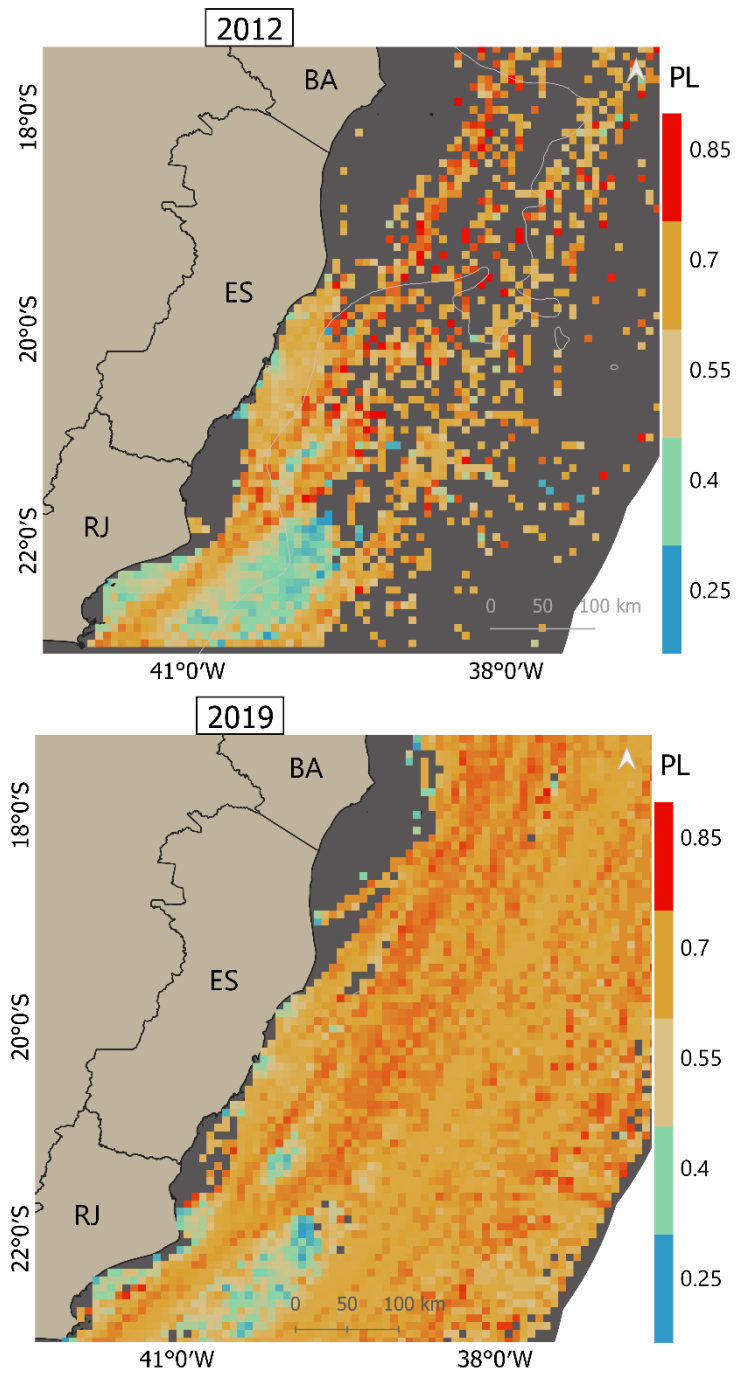


Figure S10. Probability of a whale suffering a lethal injury during an encounter (PL) in $0.072 \times 0.072^\circ$ ($\sim 8 \times 8$ km) grid cells in the study area for 2012 and 2019. This information is depicted for vessels >80 m in length.