

Supplementary Materials

Relationship between the Spatial and Temporal Distribution of Squid-Jigging Vessels Operations and Marine Environment in the North Pacific Ocean

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1. The GAM at different spatial resolutions

1.1. Spatial resolution of $0.1^\circ \times 0.1^\circ$



Citation: Fei, Y.; Yang, S.; Fan, W.; Shi, H.; Zhang, H.; Yuan, S. Relationship between the Spatial and Temporal Distribution of Squid-Jigging Vessels Operations and Marine Environment in the North Pacific Ocean. *J. Mar. Sci. Eng.* **2022**, *10*, 550. <https://doi.org/10.3390/jmse10040550>

Academic Editor: Francesco Tiralongo

Received: 31 January 2022

Accepted: 12 April 2022

Published: 17 April 2022

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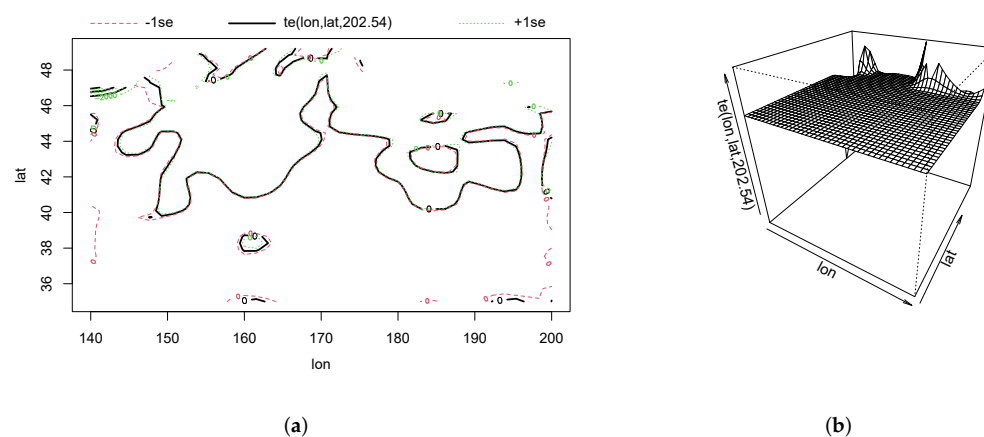


Figure S 1. (a) The plan of the impacts of latitude and longitude on fishing effort. (b) The three-dimensional diagram of the impacts of latitude and longitude on fishing effort.

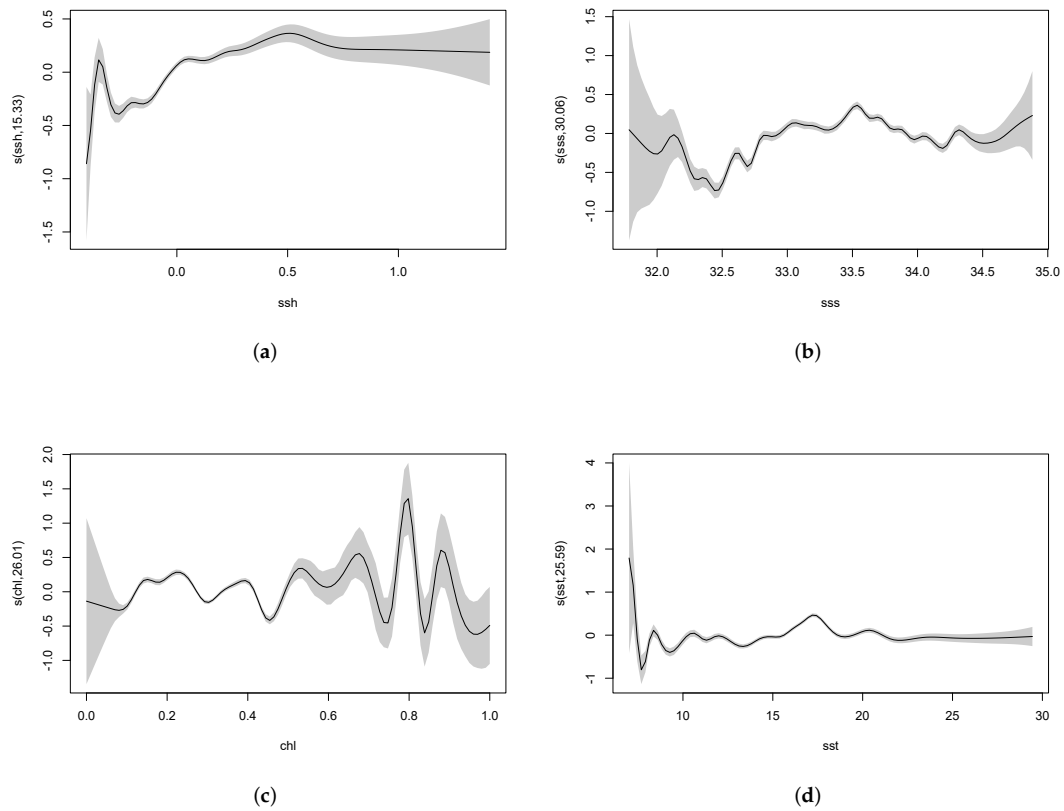


Figure S 2. (a) Impacts of SSH on fishing effort. (b) Impacts of SSS on fishing effort. (c) Impacts of Chl a on fishing effort. (d) Impacts of SST on fishing effort.

1.2. Spatial resolution of $0.25^\circ \times 0.25^\circ$

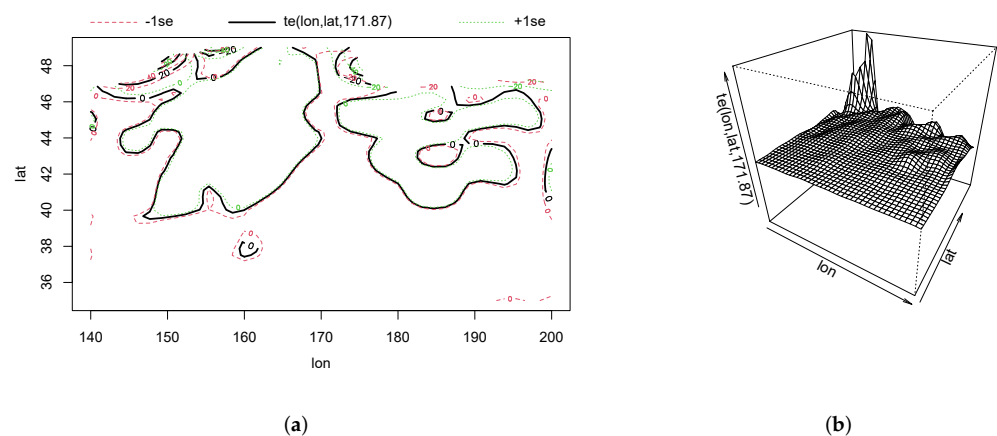


Figure S 3. (a) The plan of the impacts of latitude and longitude on fishing effort. (b) The three-dimensional diagram of the impacts of latitude and longitude on fishing effort.

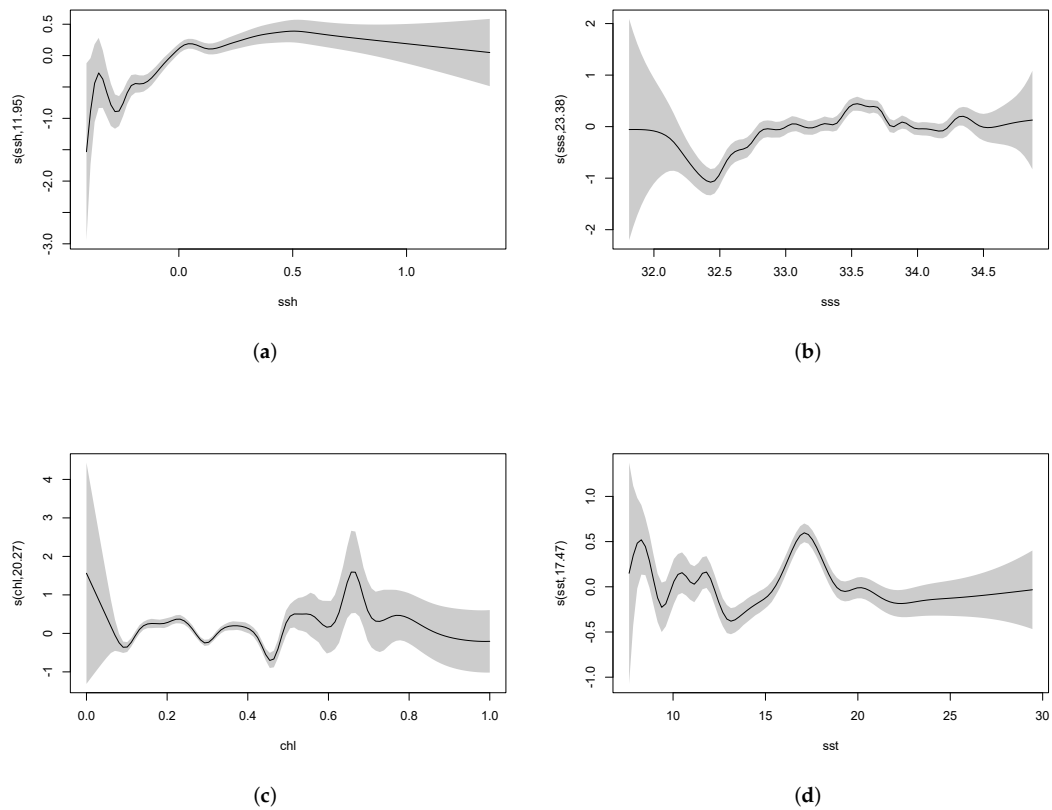


Figure S 4. (a) Impacts of SSH on fishing effort. (b) Impacts of SSS on fishing effort. (c) Impacts of Chl on fishing effort. (d) Impacts of SST on fishing effort.

1.3. Spatial resolution of $1^\circ \times 1^\circ$

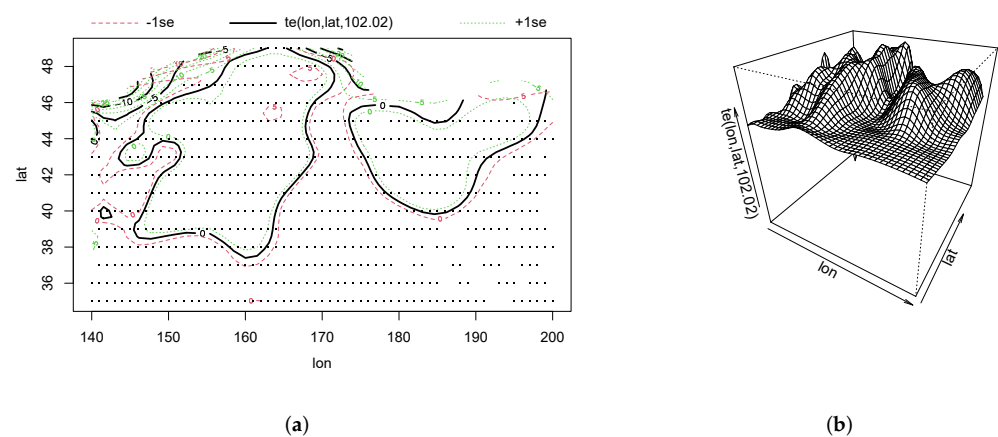


Figure S 5. (a) The plan of the impacts of latitude and longitude on fishing effort. (b) The three-dimensional diagram of the impacts of latitude and longitude on fishing effort.

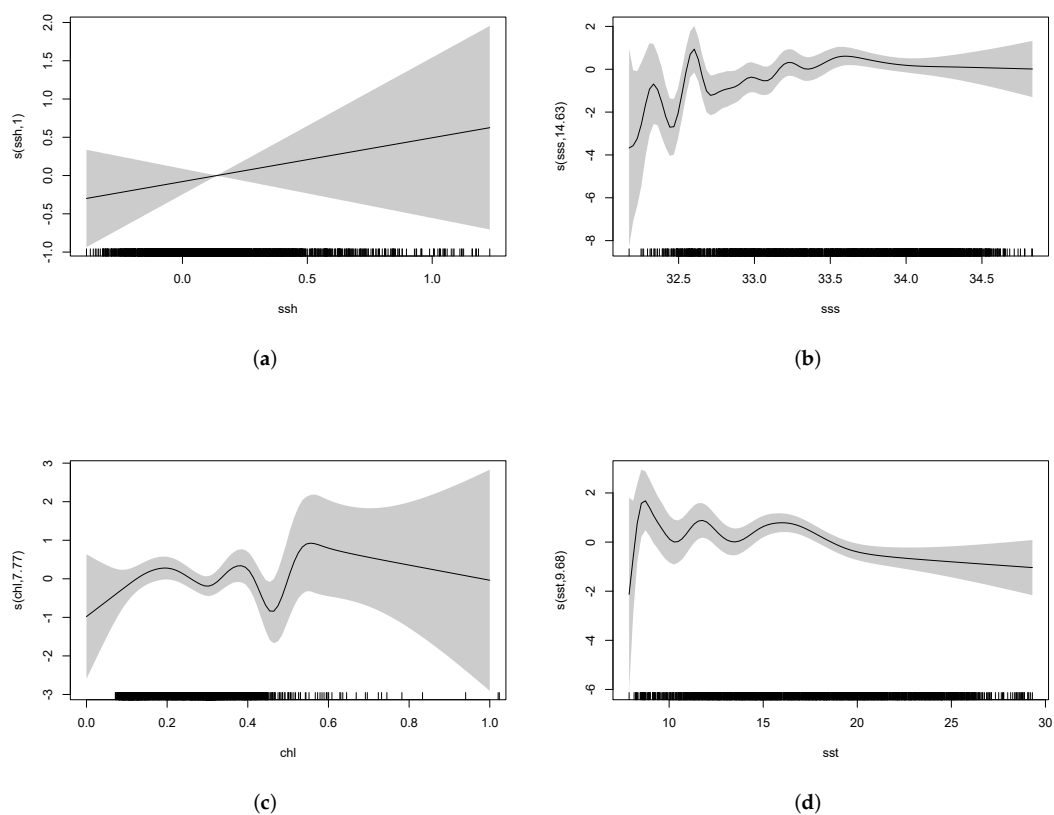


Figure S 6. (a) Impacts of SSH on fishing effort. (b) Impacts of SSS on fishing effort. (c) Impacts of Chl on fishing effort. (d) Impacts of SST on fishing effort.

2. The results of GAM without latitude and longitude

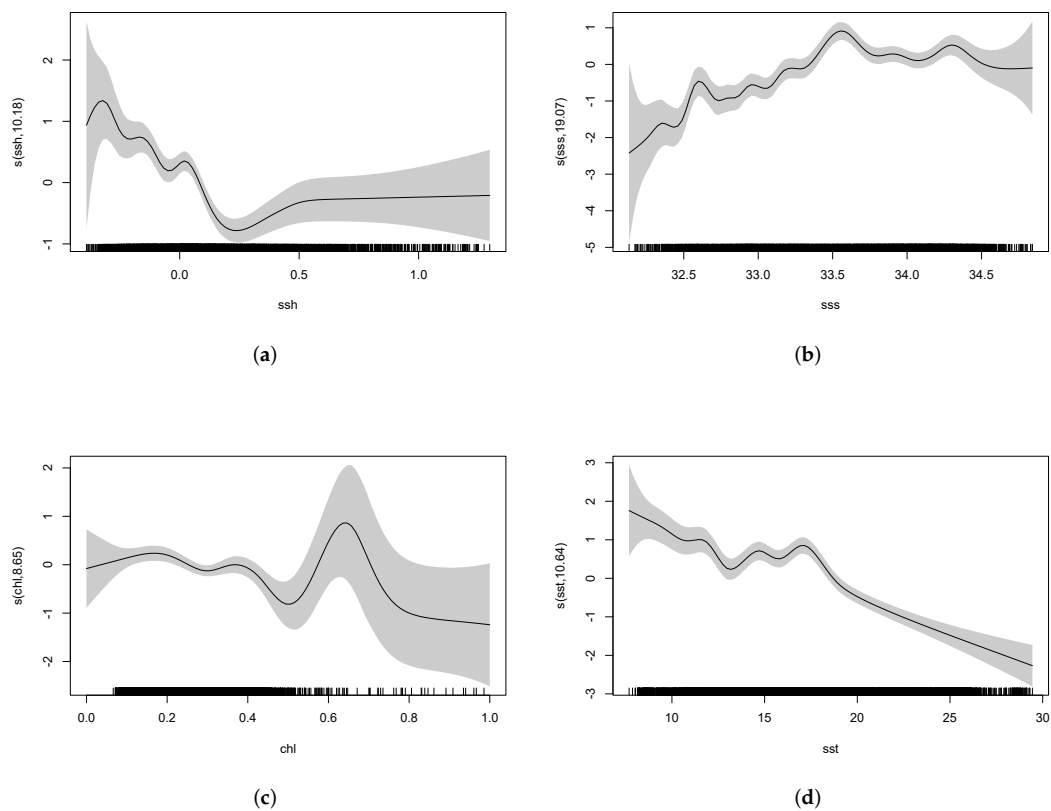


Figure S 7. (a) Impacts of SSH on fishing effort. (b) Impacts of SSS on fishing effort. (c) Impacts of Chla on fishing effort. (d) Impacts of SST on fishing effort.