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Mapping Potential Distribution of Tuna with ArcGIS and RS Techniques

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Paper Abstract

Archival tags mainly applied to marine animals for long-term tracking provide data related sunrise and sunset used to estimate the geo-location of the animals each day. Although light-based longitude estimates have proven to be fairly robust, latitude estimates are far less reliable. We have developed an algorithm to refine the latitude estimations by matching sea surface temperature (SST) measured by satellites and SST measured by the tags. We also analyzed the relationships between tuna locations and various environmental factors and mapped the potential distribution area of tuna.

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