# Generalized Additive Models Inference of Oceanographic Indicators for the Presence of Anchovy Eggs

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## Abstract

Three generalized additive models were applied to the distribution of anchovy eggs and oceanographic factors to see the prevalence of anchovy spawning grounds in Korean waters and to spot the indications of their prevalence mistreatment survey information from the spring and summer of 1985, 1995, and 2002. Binomial and mathematician varieties of generalized additive models (GAM) and quantile generalized additive models (QGAM) unconcealed that

[text largely illegible] ⬚ : ⬚, ⬚, ⬚ DO ⬚ 10 ⬚, ⬚ 10 ⬚ 50 ⬚ ⬚, ⬚, ⬚ DO ⬚ ⬚ 18. ⬚ z ⬚ ⬚ A ⬚ ⬚, ⬚, ⬚ J ⬚ A ⬚ -⬚ ⬚ ⬚ (MANO A). E ⬚ J ⬚ A ⬚ ⬚ ⬚ MANO A ⬚ 2 19 .

⬚ PCA ⬚ GAM ⬚ : ⬚, ⬚, ⬚ DO ⬚ 10 ⬚, ⬚ 10 ⬚ 50 ⬚ ⬚, ⬚, ⬚ ⬚ ⬚. PCA ⬚ ⬚ ⬚ ⬚, ⬚ ⬚ ⬚ (L ⬚. 2017; L ⬚. 2019). I ⬚, ⬚ ⬚ PCA ⬚ ⬚ - ⬚ ⬚ ⬚ 20 . PCA- ⬚ GAM ⬚ ⬚, ⬚ ⬚ (PC ). F ⬚ ⬚ ⬚ - ⬚ ⬚ PC ⬚ -⬚ PCA.

⬚ GAM ⬚ ⬚ ⬚ z ⬚ ⬚ A ⬚ ' ⬚ (AIC). ⬚ ⬚ x ⬚ (% D ) ⬚ ⬚ ⬚, z AIC, GC , ⬚ BRE, ⬚ REML ⬚ GAM ⬚ QGAM x ⬚ ( 2019) ⬚ ⬚ (F⬚ ⬚. 2020) R-3.4.2.

## Discussion

**Modi cations to anchovy spawning areas:** M⬚ ⬚ ⬚ ⬚ K ⬚ ⬚ ; ⬚ ⬚ ⬚ ⬚ ,⬚ ⬚ ⬚ (L ⬚ O 977; K 1983). F ⬚ ⬚ ⬚ . S ⬚ ⬚ ⬚ ⬚, ' ⬚ ⬚ . A ⬚ ⬚ ⬚ 1-3 ⬚ ⬚ (K ⬚ L 2001). ⬚, ⬚ ⬚ ⬚ ⬚ ⬚ ⬚ 21 .

I , ⬚ , ⬚ ⬚ , G ⬚ ⬚ ⬚ A ⬚ ⬚ ⬚ 1985 ⬚ 2002, ⬚ ⬚ ⬚ 1995. H ⬚ - ⬚ ⬚ ⬚ ⬚ , ⬚ ⬚ ⬚ K ⬚ ,⬚ ⬚ ⬚ ⬚ (J ⬚. 2009; K ⬚. 2010; S ⬚. 1999; K ⬚. 2011).

GAM ⬚(⬚ ⬚ )0.5( ⬚ ) ⬚J0.307 ⬚N 201⬚ (I ⬚ ⬚ ⬚ ⬚ 0 ⬚ E

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