

# Wavelet analysis among catch of yellow croaker (*Larimichthys polyactis*) and environment effects

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## ABSTRACT

We studied environmental effects on yellow croaker fluctuations based on annual catch from 1971 to 2016 in the South Korea using wavelet analysis [1]. A long-term trend was observed in the annual total catches of the yellow croaker since 1971, with increasing-decreasing fluctuation repeating two times. Two cause were investigated as a variation of fishery conditions of the fishing ground of yellow croaker. First, during the period of decrease in catch, average size of harvested fish decreased and the proportion of juvenile fish in catches has increased [2]. Second, the fishing ground is dominated by the Yellow Sea Bottom Cold Water (YSBCW), when YSBCW expansion is strong, the yellow croaker catch was low, when YSBCW expansion was weak, the catch was high [3]. We analyze the correlation between growth, YSBCW and environmental effects (water temperature, salinity, NAO, PDO, ENSO and so on). Wavelet coherence is used to analyze the fluctuation of the yellow croaker catches based on environment effects.

## REFERENCES

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