

**DIAZ ACUÑA, ERICH ENRIQUE.**2005. Eficiencia de la flota de cerco en función a la distribución espacial de la anchoveta peruana (*Engraulis ringens*) entre 1998 y el 2001.

### **ABSTRACT**

Assessment of fish – fishermen interaction allows a better interpretation of CPUE and exploited fish population relationship. The mid-term aim is to validate this fishing index as an abundance or density fish stock index. Lower cost and larger covering in space – time scales are some advantages. Therefore, state of each one of components in Anchoveta Population – Purse Seine Fleet interaction were expressed in a quantitative and synthetic way. Related to anchoveta, indexes of state of the population like Mean Acoustic Back – Scattered Energy by the surface unit ( $S_{A+}$ ). Standard Deviation of  $S_A$  ( $ds S_{A+}$ ) and Spatial Aggregation Index (IAE) were proposed as complement to the regularly used indexes Biomass (B), Stock Range (S) and Density (D). Related to purse seine fleet, three types of fishing vessels were identified according to construction and operations characteristics, Efficiency was expressed using technical, time and space variables. Related to interaction the way fish occupied the space was decisive to interpret differences in efficiency between groups and tested to be most important than fishing power differences in each group. However, the interpretation was not absolute at all. It was closely related to level or space scale observation (stock, patchiness and schools). In practice this level will depend on the scientific question to respond.