**Assessment of environmental quality and contamination of Vibrio bacteria in aquaculture from coastal area of Chanthaburi and Trat Provinces**

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Since the 1982 to present Thailand's eastern coast has been developed with eastern seaboard project to Eastern Economic Corridor (EEC). The marine ecosystem of Chanthaburi and Trat Provinces was polluted from anthropogenic activity such as agriculture, transportation, tourism, fisheries and urban communities. Hence, this study investigated environmental quality and marine bioindicator was determined the contamination of the genus *Vibrio* (*V. cholera, V. parahaemolyticus*, *V. vulnificus*). Environmental sampling areas were designated at seven stations from Tamai to Klongyai (about 150 km long stretch). The quality of seawater and sediment were calculated by multiple regression analysis of Pb, Cd, Cu and Zn. The physicochemical parameters like pH, conductivity, salinity, dissolved oxygen (DO), $NH_3$ and major anions e.g. $NO_2^-$, $PO_4^{3-}$ of seawater samples were measured at designated stations. Bivalve samples including cockles (*Anadara granosa*), mussels (*Perna viridis*) and oysters (*Saccostrea cucullata*) were collected from the coastal area of Chanthaburi, while white shrimp (*Litopenaeus vannamei*) was selected from aquaculture community both Chanthaburi and Trat with simple random sampling. Our studies revealed that relationship between heavy metal concentrations and influential environment. The physicochemical properties indicated that seawater environmental quality has varied within the marine quality standard for recreation. *V. parahaemolyticus* and *V. vulnificus* showed in all samples of bivalve lower than 0.3 to 12 MPN/g and 0.3 MPN/g, respectively, whereas *V. cholera* demonstrated positive 7.81 percent. White shrimp samples also found *V. parahaemolyticus* at 3.0±2.4 MPN/g from Laem Ngob District, whereas *V. cholera* and *V. vulnificus* were not detected.

**Keywords:** environmental quality, *Vibrio*, Chanthaburi, Trat

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