

Title : ACCUMULATION OF SOME HEAVY METALS IN TIGER PRAWN
(*Penaeus monodon*) RAISED AROUND OUTER PART OF THE
SHONGKHLA LAKE.

Author : Mr.Piya Wanpen

Adviser : Assoc.Prof.Dr. Sumalee Suthipradit

Type of Work : Thesis (M.Sc. in Environmental Science) Naresuan University, 2000.

Tiger prawn (*Penaeus monodon*) raising around outer-part of the Shongkhla Lake has been largely increased since early 1985, causing an diverse impact on environment. Moreover wastewater released from agro-industries and plants into several canals then to prawns farms may also has large impact on qualities of water, on soil and hence, the quality of the prawns raised nearby. The accumulation of heavy metals in soil and water may occur as well as in the prawns. The contamination of some heavy metals in prawns above toxic threshold may cause industrial callapse. The major aim of this study is to find the amount of some heavy metals which may contaminate in the abdomen and the sephalothorax of tiger prawns, in water and surface soil in the ponds utilized to raise the tiger prawns. The sample prawns, sediment and water were randomly sampled twice at 45 and 90 day old prawns from the 11 small holder ponds around outer-part of the Shongkhla Lake then heavy metals i.e. cadmium, copper, chromium, iron, manganese, nickel, lead, and zinc were determined in the sephalothorax, abdomen, surface sediment and water.

The results showed that all the heavy metals determined were accumulated much higher in the sephalothorax than in the abdomen of the prawns and the amounts of the heavy metals found in the sephalothorax were generally increased with increasing age of the prawns with the exception of nickel. Fortunately, the amounts of all heavy metals studied in the abdomen of the prawns were not exceed the toxic threshold reported by other researchers. It was concluded that in order to prevent-intake of phytotoxic elements ones should avoid to consuming the sephalothorax portions of the prawns. The amount of heavy metals in sediment and water were some what lower when compared with the sephalothorax and the abdomen of the prawns.