

## **Monitoring of Environmental Impacts of Shrimp Ponds Development in Tiab District**

### **Abstract:**

The present survey was conducted for evaluation of environmental impacts of shrimp farm effluents in Tiab district of Hormozgan province. During the growing season of 2003(Jul-Dec) water and sediment samples have taken with monthly intervals from inflow and outflow of the farms and related coastal waters adjacent to Tiab estuary. The samples were carried to the laboratory for physical, chemical and biological analyses.

The results showed that the farms exert significant influence on humidity of surrounding air. Furthermore most of the measured parameters such as pH, salinity, BOD5, COD, ammonia, nitrite, nitrate, phosphate, TP, total phytoplankton and zooplankton numbers in water column and the percentages of the TN of sediments of the outflow waters were adequately higher than inflow water, but reverse results were measured for oxygen content of the water and total macrofauna numbers. There were no any significant differences between inflow and outflow channels in the case of temperature and TN of the water. In the statistical analyses, station effect only showed significant influences on variation of zooplankton numbers, TN, COD and salinity of the water and the percentage of sediment total organic compounds.

The results also showed that during the growing season in the surveyed channels the most values of water and air temperature, air moisture, salinity and COD decreased, but in contrast the magnitude values of pH, BOD5, nitrite, nitrate, phosphate, TP and total phytoplankton and zooplankton numbers increased during the same time. The month effect significantly influenced the preceded noticed parameters, but had no significant effect on variation of other parameters such as: TN and total macrofauna of the water column and percentages of total organic compounds and nitrogen of the sediment.

The results showed that there were no significant differences between the surveyed channels and coastal waters in the case of measured values of water and air temperature, pH and oxygen content. Higher total phytoplankton numbers were measured in the coastal waters, but most of other surveyed parameters were high in the channels.

In the coastal waters the variations of most measured parameters were managed by winds and the related waves and turbulences, so water exchange with Tiab estuary had no significant effect in this respect.