D-51 Use of the environmental index as a warning signal for disease incidence in shrimp grow-out ponds

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Health aspect of shrimp farming has become a major issue in the shrimp culture industry in Sri Lanka.

This concern is both in terms of the impact of pond environment and pathogen population on shrimps. The relationship between environment, shrimp immunity and pathogen in the pond environment needs to be investigated. Of some interest are those bacteria that produce hydrogen sulphide (H_2S) in anaerobic pond bottom sediments.

This study was undertaken to establish the relationship between the Environmental Index (EI) and disease outbreaks and between the EI and H_2S, in order to use these as warning signals for disease outbreaks. These parameters were measured in a number of growout ponds belonging to different management levels. To determine the relationship between both the EI and H_2S and disease incidences regression analysis of the pooled data was performed.

There was a significant($p<0.05$) positive relationship between both EI and H_2S, with disease incidences.