

PREFACE

The physico-chemical parameters of water bodies influence directly or indirectly the aquatic organisms in various ways. Mainly air and water temperature, transparency, pH, dissolved oxygen, free carbon dioxide, alkalinity, hardness, chloride and BOD determine the hydrological condition of water body and any alteration of it influences the outbreak of diseases and production level of fishes. In fish farming, fish disease is one of the major constraints globally for the adequate production.

Fishes are the major food resource for protein and are available throughout the world. There are rich fresh water resources and high potentiality of fish and fisheries in Nepal where traditionally majority of people consume fish as food. The use of artificial feed, fertilizer in the semi-intensive and intensive culture and indiscriminate use of insecticides and pesticides in agricultural fields may adversely alter the physico-chemical properties of water and other environmental conditions create the diseases' outbreak.

Several intensive works have been done in other countries focusing on fish disease but very less superficial works have been done in Nepal concerning the fish diseases. EUS fish disease spread from eastern Terai Jhapa, Morang, Sunsari to different parts of Nepal since 1989 and still prevalent in Morang and Sunsari districts and recurring every year. So far no detailed works on the physico-chemical parameters of water bodies and on the fish diseases have been carried out in Nepal. Under this circumstance, it was considered worthwhile to carry out this research in order to study the physico-chemical parameters of some water bodies of eastern Nepal and fish diseases prevalent in this area which provides some knowledge to fish farmers to prevent from heavy loss.

In the present study, an attempt has been made to know whether some physico-chemical parameters of water bodies have any correlation with the EUS outbreak and to find out the effect of pathogenic bacteria and fungus isolated from the ulcers of EUS affected fish of eastern Nepal.