

Assessment of Coral Health along the Eastern Coast of Sri Lanka

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Corals are called as most diverse and valuable ecosystems on the earth, disclose their productivity and ecological benefits. Today coral community is degraded and diseases are the distinguishing factor that affects coral health conditions. Absence of the proper health level with any kind of abnormalities called as a disease. In the sense of the view, some are infectious and others are not (genetically-based or toxicant-induced disorders). Lesions or mutations and significant color changes occur due to disease of the coral reefs. Since there is no scientific health assessment on reefs in Sri Lanka has been undertaken to this date, a study was carried out in the final quarter of 2019, using visual observation method by snorkeling and diving over transect lines of most significant & prime fringing coral reefs; Passikudha, Kayenkerni, Adukkuparu, Parrot rock and Pigeon Island reefs of the Eastern coast. 30 transect lines consisted of 50 m length were surveyed per site. The result of the study showed that 07 coral diseases from the Eastern coast were identified under Tissue Loss, Tissue Discoloration, Growth Anomalies and Compromised Health disease categories. 104 of coral species were recorded under 13 families and 65 species out of them were possessed any kind of diseases. All coral reefs were highly threatened due to “compromised health problems and tissue discoloration (white; bleaching) diseases. Most disease vulnerable coral families were, Acroporidae, Agariciidae, and Pocilloporidae. *Acropora valenciennesi*, *Coeloseris mayeri*, and *Pocillopora damicornis* from each family encounter the higher correlation with disease vulnerability. Adukkuparu and Parrot rock reefs were respectively the most and least diseased sites. Considerable natural and disagreeable anthropogenic effects may be the reason for these utmost outbred health problems. Augmentation of ecosystem management and conservation plans with more researches on health issues may help to protect above coral communities.

Keywords: Coral diseases, Tissue loss, Tissue discoloration, Compromised health problems, Natural and anthropogenic effects