D31 BATHYMETRY AND SOME OCEANOGRAPHIC PARAMETERS OF THE HIKKADUWA MARINE SANCTUARY

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As part of the Hikkaduwa Marine Sanctuary survey a bathymetric and oceanographic survey was carried out in February 1985.

The bathymetry of the area indicates that most of the seafloor West of Woal Islels is covered by a ridge and valley topography which runs at right angles to the shoreline. Patchy coral reefs were located at depths of 7 - 28 m West of the lagoonal reef and the fishery harbour breakwater. The remainder of the area is generally smooth. The seafloor seawards of the fringing and lagoonal reef is covered with greenish wilty sand and sandy silt and composed of mainly coral debris. The seafloor within the lagoon reef is covered with medium to fine sand.

Analysis of the temperature and salinity values of the seawater samples in general show that the surface temperatures are fairly homogeneous with values of 28° - 29°C. Salinity measurements indicate that the surface water in the nearshore areas are diluted with fresh water from the Hikkaduwa river and small outlets that drain into the area. A slight decrease in temperature and a slight increase in salinity is observed with depth.

Current measurements made for the first time within the lagoon reef using float drogues have indicated a strong sub surface current. This current flows from inside the lagoon reef towards the fishery harbour breakwaters and then out to sea at an average speed of 8 m/s and 28 m/s respectively.