

**Effects of physicochemical parameters on the reproductive pattern of sea cucumber
Holothuria scabra in Sabah**

ABSTRACT

Sea cucumber *Holothuria scabra* is one of the species that can produce high quality beche-de-mer. It has been overexploited and overfished nowadays due to high demand from the local and international markets. It is one of the most valuable species and has become a source of income for small scale fishermen in Sabah, Malaysia. This study aimed to describe the influence of physicochemical parameters on the reproductive biology of *H. scabra* at two sites, Kudat and Kunak, Sabah, Malaysia. The study was conducted for 14 months and samples were collected monthly, between July 2015 and August 2016. Gonad index and data on the physicochemical parameters (temperature, salinity, chlorophyll *a*, and organic matter) were recorded to determine the relationships that can affect the reproduction of *H. scabra*. An annual reproductive pattern was recorded in Kudat with the spawning period from July to November 2015. A continuous pattern in Kunak was recorded with a maximum gonad index in September 2015. The gonad index showed no significant ($P>0.05$) correlation with the selected physicochemical parameters in either Kudat or Kunak. Since maturity is influenced by environmental parameters, other environmental parameters that may regulate reproduction should be studied.