

Natural Recovery of A Seagrass Community in the Gulf of Thailand After Installation of Submarine Cable

Chaiyaporn Lochaya¹, Thamasak Yeemin¹

¹*Department of Biology, Faculty of Science, Ramkhamhaeng University, Huamark, Bangkok 10240, THAILAND*

Correspondence: lochaya@hotmail.com

Temporal variation of a seagrass community in the south of Samui Island, Gulf of Thailand, in the affected area of submarine cable installation, has been examined with focusing on diversity, density, and impacts of certain environmental factors. There are three seagrass species found in the area, i.e. *Halodule uninervis*, *Enhalus acoroides*, and *Halophila minor*. The most dominant species was *Halodule uninervis*. The seagrass community was about 3-5 m. in depth with muddy-sand substrate. In coastal areas, the cable was laid directly on the sea floor and buried using a post lay jetty system in which a remotely operated vehicle with high-volume, low-pressure water jets would jet the cable into the sediment. This system liquefied the substrate directly beneath the cable, causing the cable to sink into the substrate. The cable installation caused a groove about 2-4 m. in width and 1.5 m. in depth. Over 90% of seagrass in the groove died and decayed within one month after the cable installation. Sediment suspension caused by the water jetty system for cable installation also affected on seagrass communities near the groove (0-4 m.). However, there was no observed sediment on seagrass after two months. The seagrass covers were in a range of 10-88%. The groove became narrower and shallower. The seagrass would recover within a year. The present study highlights the importance of seagrass recovery processes for coastal habitat management.

Keywords: seagrass, recovery, Thailand