

## Project Update: October 2018

### Principle Outcomes from Fourth Phase of Project:

Additional five feeding trail samples and eight non-feeding trail samples were collected around Sibu-Tinggi Archipelago in June and July 2018. However, the underwater searching effort for suitable sampling sites became more difficult due to the fact that the seagrass meadow coverage had declined in those areas. We have been monitoring the spatial changes of the seagrass meadow since mid-2016, and the seagrass density started declining after the northeast monsoon (November 2016 to March 2017). Since then, we have observed the meadow became sparser and patchier from time to time. The dieback and recovery cycle of the seagrass meadow is still unclear; therefore, it is important to investigate the processes behind this phenomenon in order to protect the habitat as an important feeding ground for dugongs and other fauna like green sea turtles and herbivorous fishes.

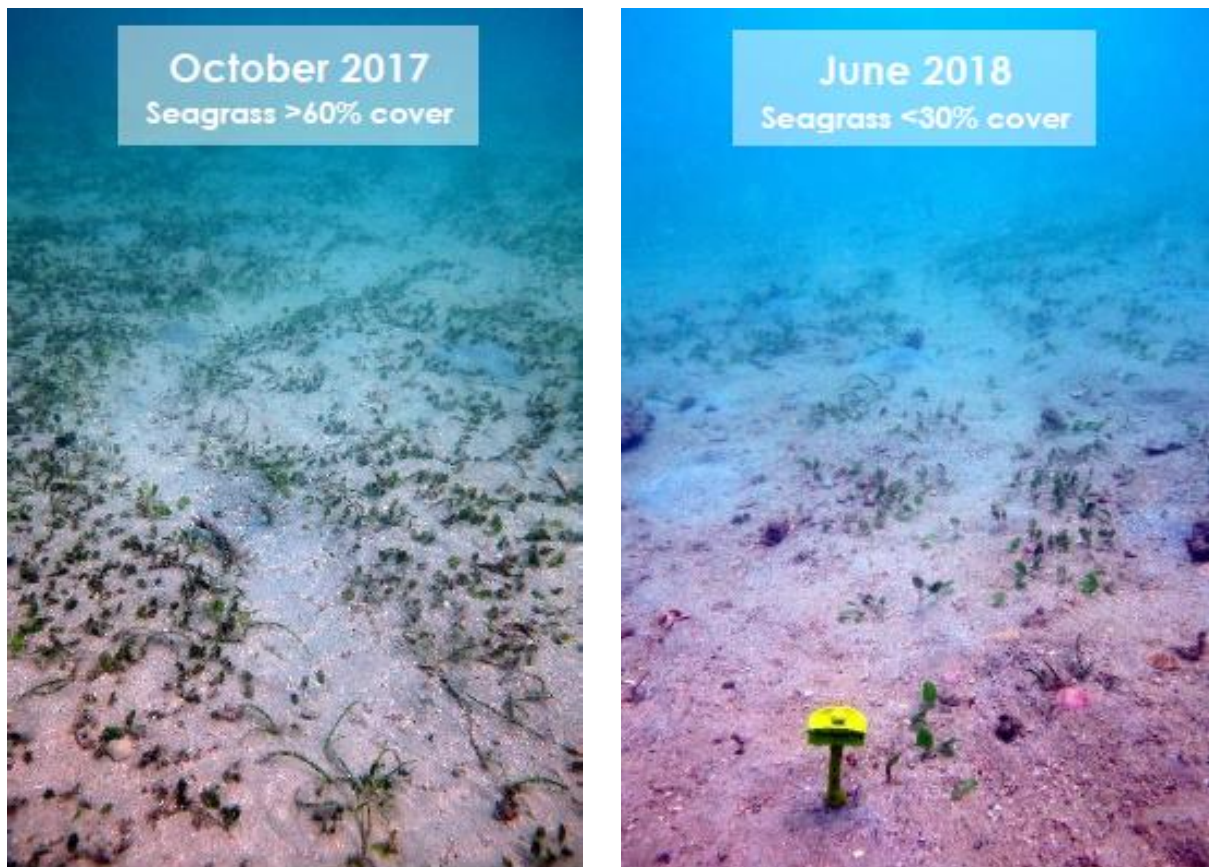


Fig. 1 Seagrass is sparser during June 2018 as compared to October 2017. Feeding trail was relatively harder to determine in a sparse meadow.

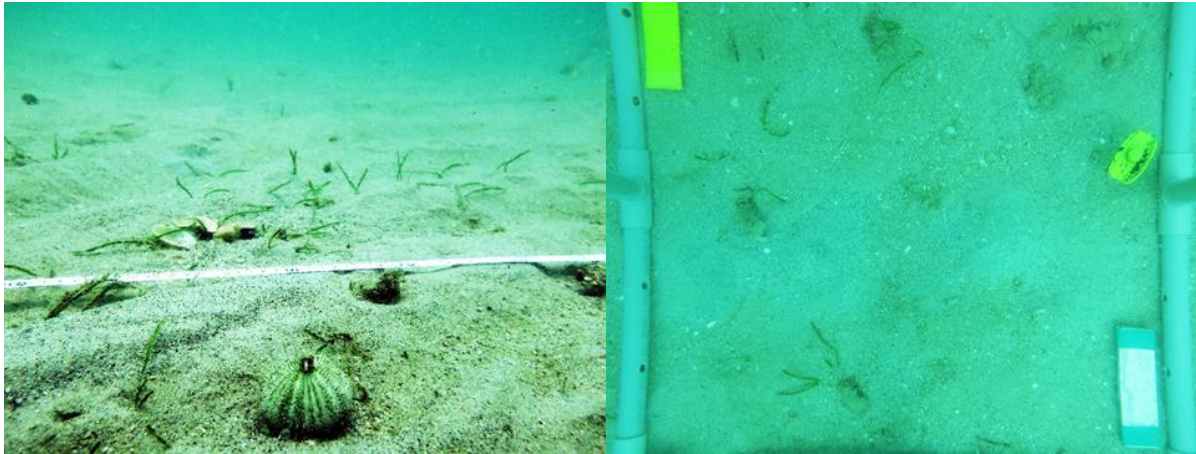


Fig. 2 Seagrass coverage assessment was done briefly by using transect and quadrat methods to record the changes over time.

Together during the sampling trip, we deployed for the very first time our Underwater Monitoring System for Dugong (UMS-D) prototype in the dugong feeding hotspot areas to capture the evidence of dugong feeding in a fully subtidal seagrass meadow. The field testing and actual recording were both successful despite the extreme weather and sea condition. Two dugongs (or one returning individual) were captured on two consecutive days to forage at the same feeding spot. Data collection was repeated during September, unfortunately only other marine faunas were recorded such as sea turtle, spotted eagle ray and etc. We believed that the chance was slimmer on this month due to the low seagrass coverage and less feeding trails observed than before (our speculation based on preliminary result: the abundance of spoon grass is playing a role in determining feeding preference of dugongs).



Fig. 3 (left) First dugong individual caught in the camera system, which was feeding at the hotspot area on day-1. (right) Second dugong (or returning individual) feeding at the same hotspot area on day-2. Both were recorded feeding at around noon time.

### Presentation and Sharing of Works

1. Oral Presentation "**HABITAT USE BY DUGONGS IN THE SIBU-TINGGI ARCHIPELAGO, JOHOR, MALAYSIA**": Rufford Small Grants Conference – Vietnam 2018, 19 October 2018, Hanoi, Vietnam.



2. Our project's latest achievement and poster were featured in **Convention on Migratory Species (CMS) - Dugong** website (Link: <https://www.cms.int/dugong/en/news/dugong-poster-wins-award-coral-symposium>).