

สัญญาเลขที่ DBG6080009

โครงการ : การศึกษาโครงสร้างประชากรของสาหร่ายฟุนสีน้ำตาลชนิด *Sargassum plagiophyllum*  
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#### Abstract

*Sargassum* is the largest brown alga in the tropic. In Thailand, there were 14 species reported, which widely distribute in both the Andaman Sea and the Gulf of Thailand. This research examined population structure dynamic, growth rate, reproduction and biomass of *Sargassum plagiophyllum*; and what environmental factors, which could influence the population dynamic. The study was conducted monthly for 16 months, which covered the Northeast monsoon (NE): December – April and Southeast monsoon (SW): June - October in Klong Hin and Ba Kan Tiang, Ko LanTa, Krabi province, where *Sargassum* was dominant. The study indicated that *Sargassum* population and percentage of polyphenols significantly varied among months and between seasons ( $P < 0.05$ ). *Sargassum* could be categorized into 7 stages of development: 1) Pre-juvenile (PJ), 2) Juvenile (J), 3) non-fertile Adult Plant (A), 4) Fertile Adult Plant (F), 5) Fertile Plant-Senescent (FS), 6) Senescent (S) and 7) Holdfast-Senescent (HS). Stage PJ and J were dominant in the transitional monsoon (May and Nov) while Stage A was dominant in the SW monsoon season. Stage F, FS and S were dominant the NE monsoon season. The highest reproduction was found in NE monsoon (Dec – Mar) and the highest growth rate was found in SW monsoon season (Jun – Jul). The percentage of cover during the NE monsoon was greater than 70% and during early SE monsoon season (Apr - May) the coverage declined, which might be a result from strong waves. These data can be useful for *Sargassum* utilization, which is a potential bio-resource.

**Keyword:** *Sargassum plagiophyllum*, development, population, polyphenols