

Matariya Laehyeb 2011: Composition and Distribution of Benthic Marine Algae Along the Coast of Trat Province. Master of Science (Fisheries Science), Major Field: Fisheries Science, Department of Fishery Biology. Thesis Advisor: Associate Professor Anong Chirapart, Ph.D. 133 pages.

Species composition and distribution of benthic marine algae were investigated along the coast of Laem Tien, Laem Sok and Ao Laen in Ban Ao Cho, Trat province from July 2008 to June 2009. Nineteen genera and twenty one species of the algae were identified. Of which 17 genera 18 species were collected from Laem Tien, 12 genera 13 species from Laem Sok and 18 genera 20 species from Ao Lane. The green alga *Cladophora fastigiata* and the red alga *Hypnea hamulosa* were dominant throughout the study period. Species composition of the marine algae was decreased as compare to the previous report at the same areas; particularly the gracilarioid red algae were found only 2 species: *Hydropuntia changii* (syn *Gracilaria changii*) and *Gracilaria salicornia*. Distribution and coverage of *Cladophora fastigiata* and *C. laetivirens* were found in most of the year, while the brown algal species were rare. In general the brown algae mostly found when low water temperature and rare or disappear when high water temperature. In this study seawater temperature tend to increase as compare to the past with the highest value of 39-40°C in summer season. Salinities at Laem Tien, Laem Sok and Ao Lane were varied from 10-25 ‰, 10-27‰ and 13-31‰, respectively, and tend to decrease as compare to the past (~25-34‰). Turbidity was rather high to very high with the highest value of 3637.74 NTU at Laem Tien. Coverage of the marine algae found in these three study sites showed positive and negative correlation with the environmental factors. Decrease in species composition and distribution of the algae in the study sites is cause by human activities, land and tourism development, as well as over-exploitation of coastal resources. On the other hand, increase in water temperature indicated effects of global warming occur during the period in the study areas.

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Student's signature

Thesis Advisor's signature