

GROWTH OF *SONNERATIA CASEOLARIS* AFTER PLANTING AT VARYING WATER DEPTHS OF SONGKHLA LAKE

NOPARAT BAMROONGRUGSA¹ AND CHOATHIP PURINTAVARAGUL²

¹Director, Wetlands Research Center, Faculty of Environment Management, Prince of Songkhla University

²Biology Department, Faculty of Science, Prince of Songkhla University

The experiment was carried out to investigate seedling growth of *Sonneratia caseolaris* planted in Songkhla Lake with varying in water depths. To avoid submergence in water during flooding at the rainy season, the root balled-seedlings of slightly more than 1 meter tall were selected for planting. Since the water salinity of the lake varies with the seasons, planting operation was made when the lake water was fresh. In order to observe the effect of water depths, the planting rows were arranged seaward and perpendicularly to the shoreline with varying in water depth from 0-60 cm. It was observed that the intrusion of seawater into the planting site during the dry season stunted seedling growth and caused broken branches and stem tips. This disadvantage was remedied when the lake water changed to fresh or brackish. The results showed that seedling grown in deeper water levels produced greater root (pneumatophore) development i.e. root length, root number as well as the distance from the main stem. As a result it was possible that such better root characters in deep water brought about greater numbers in plant height, branch number, stem diameter as well as the survival rates. The results from this experiment will provide an efficient tool for mangrove restoration programme in the Songkhla Lake.