

Distribution and abundance of submerged aquatic vegetation in East Hammar marsh in relationship to environmental factors changing

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A B S T R A C T

The distribution of submerged aquatic vegetation (SAV) were studied in three station of East Hammar marsh during October 2015 to September 2016. Five species belongs to three families were existed in the whole study period. Monthly sampling was conducted for vegetation cover, biomass, physical and chemical characteristics of water and soil in each station. CANOCO ordination program (CCA) was used to analyze the data statically. There is negative relationship between *Ceratophyllum demersum*, *Myriophyllum spicatum* and the depth, salinity. It also shows the negative relationship between *Potamogeton* and turbidity. Decreasing in the abundance of SAV was largely occurred in contrast with historical data. Species richness and abundance at all stations were analyzed for the same period using biodiversity indices. There were differences in species richness among stations. It can be concluded that decreasing of abundance and distribution of SAV due to increasing of salinity and nutrient in addition to human impact. Keyword: distribution, submerged aquatic plant, East Hammar marsh

Introduction Most communities of submerged aquatic vegetation (SAV) inhabit in freshwater environment are particularly dynamic. High changing in limited numbers of factors such as increasing of nutrient, salinity concentrations in the water body because of direct or indirect human impacts, which increasingly affected the ecology of SAV communities in their ecosystems (Knight&Hauxwell, 2009). SAV contribute to the support of biodiversity through the provision of habitat and food for many aquatic organisms. It is also a source for the processing of the water medium by the necessary oxygen for other aquatic organisms as well as for the treatment of waste and sewage and its use in biological treatment (Warfeand Barmuta, 2006; Hemminga and Duarte 2000; Solano et al., 2004).