

Study of Aquatic Plant Biomass Assessment and their relationship with environment parameters in west of Anzali wetland

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Abstract

Aquatic plants play an important role for production of food and habitat of fish, wild life and other aquatic organism in aquatic ecosystem. In the recent years, various parameters such as high entry of organic matter and nutrient and pollution had an influential role in the biological communities of wetland. For more information on quantities and quality variations of aquatic plants, aquatic species of west wetland area (Abkenar) and biomass of most species was evaluated. In the studied area 12 species belonging to 10 genera were identified. The six sampling stations were selected and 72 frames (1 x 1 m²) by Random-systematic sampling method were used to sample aquatic plants. According to the standard methods, Physical and chemical parameters of water were determined. Relationship between aquatic plants and Physical-chemical properties analyzed by using of Canonical Correspondence Analysis (CCA) and CANOCO 4 software. Fresh weight biomass of aquatic plants was determined on 6 stations (126 g.m⁻²). The results indicated that, the high (720 g.m⁻²) and low (30 g.m⁻²) of fresh biomass were detected for *Ceratophyllum demersum* and *Azolla filiculoides* in the plots, respectively. The CCA analysis showed that *Ceratophyllum demersum* plays an important role in increasing of biomass.

Keywords: Aquatic plant, Anzali wetland, Canonical Correspondence Analysis (CCA), Biomass.