O129. INTEGRATED ALGA-CULTURE IN INUNDATED COASTAL FARMLANDS OF INDIAN SUNDARBANS AS A SUSTAINABLE ADAPTATION FOR MARGINAL COMMUNITIES TOWARDS CLIMATE RISK REDUCTION

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Algae has a great potential for quick capture of biological carbon and its storage in saltwater-inundated coastal wetlands and can also be introduced as a climate adaptive alternate farming practice. An intervention with native algal flora *Enteromorpha sp.* in enclosed coastal Sundarbans in India on two open water culture techniques, viz. U-Lock & Fish-Bone, shows that growth in native algal stock is influenced by seasonal variations of salinity and other limnological factors. Sundarbans, facing the odds of climate change is fast loosing arable lands to sea level rise. Algaculture in inundated coastal areas can be an adaptive mitigation for the same. Perusal of results show that daily growth rate (DGR%) increases with increasing salinity of the intruding tidal waters to an extent and biomass increment under salt stress results in accumulation of metabolites those are having nutrient values and can yield bio-diesel as well. Algal growth recorded mostly in post monsoon period, has impacts on pH and Dissolved Oxygen (DO) of the ambient water to facilitate integrated pisciculture. The paper suggests that alga-culture has unrealized potentials in carbon sequestration and can be significantly used for extraction of Biodiesel.