

## **Conservation of Biodiversity of the Coastal Resources of Sundarbans, Northeast India: An Integrated Approach Through Environmental Education**

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The Indian Sundarbans, a coastal wetland on the southern fringe of the State of West Bengal, harbor a luxuriant biodiversity and acts as a potential refuge of living marine resources. Fringed with thick mangrove foliage, this estuarine system offers excellent nursery ground for most of the brackishwater finfish and shellfish. Millions of tiny larvae, post larvae or juveniles of several species enter into the ecosystem along with high tides. Since supply of tiger prawn seed (*Penaeus monodon*) produced in the hatchery is highly inadequate in West Bengal, the aquaculture farms largely depend on the supply of natural resources. Being motivated with regular income in cash, the majority of the coastal people of Sundarbans have adopted the profession of prawn seed collection throughout the year as an important source of earning. The users, representing a vicious cycle of poverty, illiteracy and ignorance, are neither trained nor organised at any stage from collection to marketing and are fully dependent on traditional system. They first sort out the tiger prawn seeds (mainly the postlarval stage PL 20) accounting only 0.25 – 0.27% of the total catch and thereafter rest of the haul is thrown away on the beach flats or the tidal mudflats, containing the juveniles of economic and uneconomic varieties of finfish and shellfish along with a bulk of zooplankters ('non-target species'). This practice causes several ecological and occupational hazards, namely, (i) the huge destruction of the pelagic biota would lead to severe stock depletion as well as hamper the energy transference through the food webs spun in the marine ecosystem. (ii) constant dragging of nets along the coast and tidal creeks paves the way for soil erosion, uprooting the mangrove seedlings and saltmarsh vegetation (iii) the water quality is getting deteriorated in the catchment areas due to mud erosion (iv) due to constant touch with the seawater, the collectors are affected with waterborne diseases, skin infections, reproductive tract disease (in women) and many other contagious diseases. Injuries due to shark bites are also associated with this profession. Considering the magnitude of the problem, the authors have initiated mass awareness programme for developing consciousness among the coastal people regarding sustainable use of natural resources. Initiatives are taken for educating coastal people by holding workshop and seminar with the use of educational resource materials. Exclusive awareness camps and grass root level training for coastal people are also being proposed in future course of action. The trend of deteriorating water quality is also assessed by monitoring the physicochemical parameters (temperature, pH, turbidity, dissolved oxygen, salinity and BOD) along with the levels of dissolved trace metals in water (Fe, Zn, Mn, Cu, Cr, Pb and Hg). The authors stress to find out substitute livelihood opportunities and then motivating the people to take up the new ecofriendly occupations.