



Educational Perspectives, Awareness, and Knowledge of Mangrove Ecosystems: A Baseline Assessment among Selected Educational Groups

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Mangrove ecosystems provide critical ecological and socio-economic services. However, inadequate public understanding on mangrove ecosystem services remains a major challenge for effective conservation and sustainable management. This study evaluated the awareness and knowledge on mangrove ecosystems among different educational groups most frequently visiting the National Aquatic Resources Research and Development Agency, Regional Research Center, Kadolkele, Negombo in 2025. As a pilot study, a structured questionnaire survey was conducted involving 620 school children and 314 undergraduate students to assess awareness on mangrove ecology, ecosystem services, threats, species identification, and conservation practices. Data was analyzed using Minitab 14 statistical software. The results indicated that the general knowledge on mangroves was relatively high in both educational groups, but there were substantial differences in the depth of knowledge. Among school children, 73% demonstrated basic knowledge on mangrove ecosystems, while 27% had less knowledge. Among respondents, 89% of undergraduate students were aware of the mangrove ecosystem, and 11% were not. In addition, nearly 80% of undergraduates were able to describe the ecological importance of mangroves and identify major threats impacting these ecosystems. However, both groups had less knowledge of the identification of true mangrove species and the legal framework related to conservation. Participants knew that mangroves were important in general, but detailed knowledge on ecosystem functions was limited, especially among school children. These findings indicate a critical need for the Kadolkele Center to realign its educational strategy from broad environmental messaging toward specialized, practical capacity building. Strategic recommendations include the implementation of interactive, field-based capacity building programs targeting true mangrove species identification, alongside structured seminars detailing local coastal zone management regulations and environmental protection laws.

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