

**Environmental communication for mangrove restoration and conservation: A case study in Anaiwasala a fishing village in Kalpitiya**

**Extended abstract**

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**Background**

Mangroves are confined only to a narrow strip along the coastal belt including lagoons and estuaries in Sri Lanka. Environmental communication has been played a major role in mangrove restoration and conservation in Puttalam estuary where one of the survived restored mangrove areas exists. Anaiwasala is a fishing village located in Kalpitiya peninsula where the 90% of replanted mangroves are survived (Ranasinghe, 2012). Technically restored mangroves have not received regular observations and some of socio-economic factors affect for the destruction of restored mangroves in Anaiwasala (Gunathilaka, 2016). As a result, the environmental communication process becomes failure. Therefore, it is important to improve the environmental education and communication to protect both dependents and the ecosystem.

**Objectives**

Mangroves as an important ecosystem supply all forms of ecosystem services to the villagers in Anaiwasala. As a fishing village the education level of residents are generally poor. The aim of the study is to evaluate the contribution of environmental communication on mangrove restoration and conservation in Anaiwasala.

**Methodology**

The study is mainly based on primary data obtained by conducting a questionnaire survey based on the random sampling method. The sample size is 30. Field survey was carried out to find out the diversity and success of restoration efforts. Secondary data were collected using details of past restoration programs. Data were analyzed qualitatively and quantitatively.

**Results**

The periphery along the lagoon in the study area had not much mangroves in the past. Mangrove along the periphery of the lagoon are recently restored mangroves. Only *Rhizophora* species are selected for mangrove restoration in Anaiwasala. As a perfect salt tolerant species *Rhizophora* are used to select for restoration. Because of this there is no diversity of mangroves in the area. *Rhizophora* species are the most important species to the village as it supplies a breeding ground for crustaceans, molluscans and much brackish water for fish species.

63.3% of women in households in Anaiwasala have participated in mangrove restoration and conservation programs. Only 52% of participated women have a considerable knowledge on mangroves. Environmental communication on mangroves between stakeholders and women in the area can be seen significantly. But the fishermen or the sole breadwinners of the families are not much concerned on newly planted mangroves as the plants limited to the area for boat yards. According to the freirean perspective (Wekesa and Aswani, 2015) the environmental communication should touch all residents with interpersonal communication not only group communication. Production of mangroves and socio-economic variables are the main factors to participate for such programs while knowledge and conservation on mangroves are not affecting for the participation. 99% of residents are fishermen and their children also become fishermen. 83.3% of residents in Anaiwasala only have secondary education between grade 6 to grade 10. Only 10% have sit for ordinary level examination they are not aware on mangroves. The stakeholders currently engaged in the area the National Aquatic Resources Research and Development Agency and Small Fishers Federation in Sri Lanka are playing an important role on mangrove conservation and restoration and the environmental communication is considerably good.

**Conclusions and Recommendations**

More fishermen have low space for mangroves along the periphery of the lagoon. Therefore, the education level should be expanded by supplying more education facilities to the area to create new job opportunities. The environmental communication should be increased among women

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in the area. The education level affect for high degree of environmental communication and the both stakeholders and participants should have environmental education. As the villagers survive through the ecosystem it is their responsibility to protect the ecosystem. Not only Rhizophora species but also other species should apply for restoration projects otherwise the diversity and the abundance of mangroves will lost.

**Keywords:** Anaiwasal, Ecosystem, Environmental Communication, Mangrove, Restoration,

### References

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