© Volume 2, Issue 11, November 2026 | JATIR
e-ISSN: 2839-5786, p-ISSN: 3139-8464

Beneficial Effects of Environmental Education on Coastal Conservation and Livelihood of Sagar Island

Partha Sarathi Taran
Techno India University

***Abstract*—This study of ours aims to focus on the impact of Environmental Education in the lives of the people of Sagar Island situated in the Sundarban area of South 24parganas West Bengal.**

The Object of this research paper is to find out if the Environmental studies can create awareness about environmental degradation and coastal erosion among the inhabitants of coastal areas of Sundarban areas / Sagar island.The area under our focus experiences coastal erosion particularly in villages like Dhablahat, Muriganga , kirtankhali and Bankimnagar . Coastal degradation in these areas has been heightened by rising sea levels, frequent tidal webs, cyclones like Aayla, amphan, yaas et cetera accompanied by bad weather, deforestation et cetera.

Our study also aims to find out the willingness of the coastal areas inhabitants to learn about environmental science and the available opportunities.

In order to collect the people's views regarding all these facts both structured and unstructured interviews, formal and informal discussions, ten group meetings with the people in the coastal village community and stakeholders, environment activist in the area like were held. The fact that has come to light as a result of all these research works is that most of the participants mainly women are highly interested in getting more opportunities for environmental education.

Further meticulous quantitative research work is necessary for comprehensive understanding and comparative study of the topic

I. AIMS AND OBJECTIVES

It's obvious that General Literacy will increase livelihood opportunities in any place. But there is an urgent lack of data how environmental education can change the livelihood of the coastal villagers. So our research also tries to fulfil the preliminary research gap.

1.To focus on the benefits of environmental education on coastal conservation.

2. To measure the awareness and interests of the inhabitants to learn about their environment and their impacts.
3. To find a preliminary idea of socio-economic effects and livelihood effects of coastal degradation of on the people.

II. LITERATURE REVIEW

Many Walks have been conducted in many parts of the world on related topics. Through significant researches on 'Building children's Awareness with local knowledge-based Mangrove Literacy models in Coastal areas '(article) Harto Wicaksono , Atika Wijaya have tried to show that the conservation of man groups can be restored in a sustainable manner by building inclusive awareness among the people of their area of research central Java, one of the provinces of Indonesia. This study also refers to the concept of conscientization from Paolo Freire which mentions self-awareness for solving effectively the problem of degradation of coastal environment.
In India significant studies have been conducted by Sheikh Omar Fye, Charles Aaron Adams and Sudha Arlikati in their article 'Examining the effects of coastal erosion on livelihoods' (in Kerala) on the objective to examine the awareness of coastal erosion and its effects on the community.

III. METHODOLOGY

This Study used MMR mixed method research approach to explore the effects of environmental education. The questionnaire is used as a tool for collecting data . The questionnaire is divided into 5 sections.
A. Respondent and household
B. Exposure to environmental education
C. Livelihood profile and change
D. Coastal bhalnerability and coping oblique mitigating.
E. Linking environmental education with sustainable livelihood.
These questions were interviewed in both formal and informal face to face interviews. Besides group meetings and informal discussion with women of the Self-Help Group living in the vulnerable coastal area's op Kirtankhali and Bankimnagar villages were also conducted. At least 20 women of different households were interviewed. They mostly live within 500 to 1000 metres vicinity of the beach and dams.

IV. SAMPLE DESIGNING AND

Planning
I wanted to select the participants who possesses these vast experiences and viewpoints about coastal erosion and environment but medium (not huge knowledge like subject experts) relevant

environmental science knowledge so that they can give useful and meaningful responses to my questions regarding environmental education and its effects. So, judgement sampling or purposes sampling technique has been used. The selected people of the two villages were the representative of the coastal area inhabitants of our Sagar island.

V. SURVEY/ EXPERIMENT CONDUCTED

A Survey was conducted in 2 coastal villages namely Kirtankhali(near the East Coast) in Rudranagar panchayat area and Bankimagar (near the West Coast) in Sumatinagar ii panchayat area. 10 villagers each mostly from different families were selected in each village.

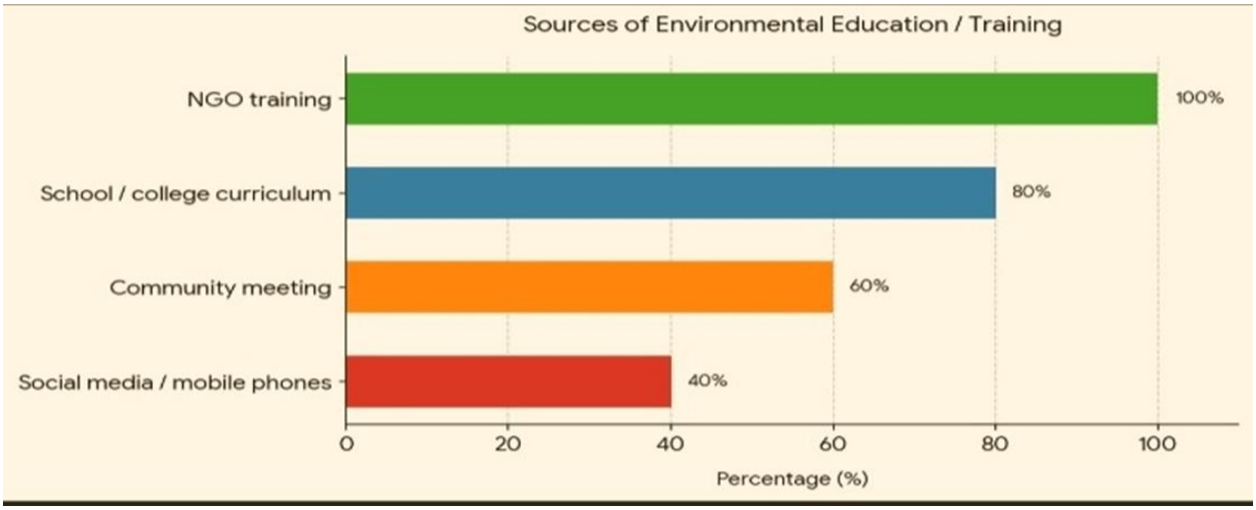
We took the help of both Structured interview and Unstructured interviews. The unstructured interview has been a part of our Qualitative research. The participants were asked open-ended questions about their views to tackle Coastal vulnerability and risks. Most of the people of both the villages have reached the homestead plinth. They also raised their nearest embankment by local collective efforts. Those same people have received informal environmental knowledge from the NGOs which are working there for spreading Environmental awareness and uplifting the livelihood of the people.

The structured interview consisting of closed ended questions was a part of our Quantitative research. The women of different households were asked questions about ttheir exposure to Environmental Education (EE). Their viewpoints about the role of environmental knowledge on their sustainable livelihood activity were assessed using 5-point Likert scale. Most of them indicated either agreement (4) or strong agreement (5) that environmental education has helped them to choose more sustainable livelihood and living and has changed in a better way their ways of using natural resources.

VI. DATA COLLECTION AND ANALYSIS

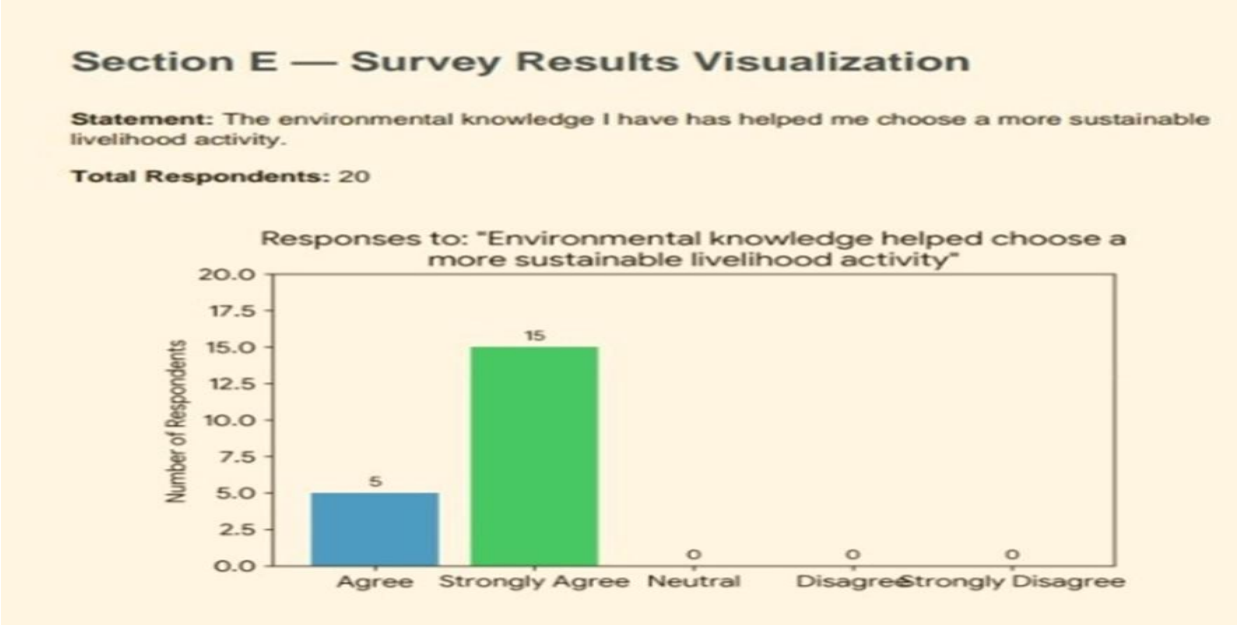
The Data collected suggest that the respondents have received inadequate formal Environmental Education (EE) at the school level. But almost all of them have received some Environmental training through NGOs and Community meeting / Self Help Group meeting.

When they were administered Self-Assessment test it was found that about 60% participants have moderate knowledge about Role of Mangroves in protecting the coast and cyclone flood early warning systems. Only 20% are well aware or very well aware about the local wisdom-based literacy in protecting the environment and Cyclones / flood early warning systems. Similarly, their sources of Environmental knowledge is reflected in the following Bar Graph.



VII. INTERPRETATION OF THE RESULTS

On Careful analysis of our results and Survey Forms it is found that Environmental Education (EE) has a positive and encouraging effects on the lives and knowledge and livelihood of the coastal areas people. Most of the persons in the age group of 25 to 40 approximately are highly interested in Environmental Education and technology and training but they have limited opportunities mainly dependent on the NGOs and occasional community Self Help Group (SHG) training.The government and the panchayat should consider their interest and positive attitudes about environmental education EE as an asset and engage them in mangrove plantation, beach cleaning, educating their next generation. Separate curriculum in environmental education EE specially suited for the Sundarban area school students and adult education can be introduced. In this way awareness about Cleanliness and Pro Environmental Behaviour can be introduced in them.



VIII. FINDINGS AND RECOMMENDATIONS

Most of the families in discussion had suffered losses in the previous cyclone disasters like ayala, amphan either in property or in Crocs. Now they are comparatively better adapted to mitigate them by building strong houses, planting more trees by SHG, building or repairing embankments by the villagers.

More outdoor activities like cultivating mangrove saplings, clearing crashes from beach should be organized basically with the help of Environmental Education. This Environmental Education (EE) is interdisciplinary and should be mixed with basic science, local geography of the delta region it is suggested to provide adequate knowledge and awareness through training workshops and campaigns in future to protect the livelihoods of the vulnerable people of the coastal areas.

IX. LIMITATIONS

This Study has tried to provide an inclusive small model of discourse to analyze socioeconomic and economic problems related to Environment. But this model may be suitable for a particular area not for other areas with different physical features. Environmental Education (EE) is to be the first and foremost education in schools. So, the goals of general education must consider the aims of Environmental Education itself. But for that besides adult survey made in her study the primary students can also be given training on Environmental Education (EE) and their change in attitude if any is to be noted. Broader data about socio economic and demography is also to be collected.

REFERENCES

[1]. Roy, A., & Bhattacharya, D. (2023). Educational impact on livelihood techniques and culture of rural people in the Sundarban coastal area. IOSR Journal of Humanities and Social Science (IOSR-JHSS), 28(1, Series 6), 51–59. https://iosrjournals.org

[2]. Wicaksono, H., Fajar, & Wijaya, A. (2023). Building children's awareness with local knowledge-based mangrove literacy models in coastal areas. Komunitas: International Journal of Indonesian Society and Culture, 15(1), 124–138.

[3]. Mufeeth, M., & Begum, R. (2021). Community perception, awareness and knowledge of coastal erosion with special reference to the southeastern coastal region, Oluvil, Ampara, Sri Lanka. Ruhuna Journal of Science, 12, 128–143.

[4]. Fye, S. O., Adams, C. A., Brown, D., & Arlikati, S. (n.d.). Examining the effects of coastal erosion on livelihoods: The case of a fishing community in Kerala, India. In Geographical approaches to climate change and mitigation: Urban and rural perspectives. Springer Nature Switzerland.