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Biodiversity of Tamirabarani River Estuary

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ABSTRACT

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Keywords

Estuarine Diversity, Study Area Diversity. Estuarine diversity is one of the important aquatic diversity. It is a connecting link between the fresh water and marine water resources. Around 70 % of living organism particularly aquatic organism and human beings were presented in the bank of Estuarine. So it's called as rich habitat or livelihood area for all organism and also otherwise called as cradle of culture. Most of culture originated from the bank of rivers and estuarine area. In recent days estuarine diversity has been affected by various aspect like hydro biological activity and seasonal fluctuations, polluting factors and other man made activities. Due to this reason estuarine diversity has been changed and de-promoted their nature. In this reason most of aquatic organism especially estuarine diversity decreased their nature of quality and quantity. This study mainly observed the study area diversity and the usage of nearby peoples.

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Introduction

Tamirabarani river estuarine is one of the most important system in India especially in Tamilnadu. It is one of the richest biodiversity in Gulf of Mannar Region. The species richness of given estuary depends on the combination of hydrological factors and biodiversity. In the study area is one of the best nursery ground for all aquatic organism like fishes, mollusks, crustaceans and aquatic plants like Avicenna. In this study area we observed several crustaceans, fishes, molluscs, craps etc.

Biological diversity

Biological diversity or Biodiversity is defined as the variety and variability among living organisms from all sources including terrestrial, marine and other aquatic ecosystems. Aquatic biodiversity includes variety of life and ecosystems of freshwater, brackish water and marine environment. The human societies had long been depending upon aquatic biodiversity for food, medicine and other uses including commercial and industrial nature. The economic value of aquatic biodiversity is immeasurable and immense.

In recent times, the factors like over-exploitation, pollution, habitat alteration and destruction, introduction of alien species etc., are mainly factors for causing impacts and threats to aquatic biodiversity.

Major threats to Biodiversity

While non-recognition of the importance of biodiversity remains the principal and threat to conservation initiatives, the following are agreed to be the major threats to biodiversity:

- Uncontrolled commercial exploitation of natural resources
- Habitat destruction, including destruction of forests, reclamation of wetlands etc,
- Adhoc extension of high input agriculture
- Conversion of rich biodiversity sites for human settlement and industrial development
- Destruction of coastal areas

Study Area

Tamirabarani River Estuary is located at Punnaikayal Village and Palayakayal Village, Tuticorin District. The latitude and longitude level is 8.63420 N, 78.11510 E and 8.66740 N and 78.09060 E. In Northern and Southern of these area, many saltpans and many mangrove plants are presents, In Eastern side the sea source and in Western side boatyard or jetty. During the monsoon time, this area receives high level of fresh water. Some time mouth is closed with effect of tidal power, wind velocity and sand deposition. Immediately local people come and open this mouth because local area peoples mainly utilize this mouth for fish capturing purpose and other transport from boatyard to Gulf of Mannar sea source and vice versa.

In this area, a large level of mangrove plants are present. These plants are the major nourishment for aquatic organism like crustaceans etc. This area play livelihood for all aquatic plants and animals.

Mangrove Plants: In the study area Avicennia marina, Avicennia officinalis Acanthus illicifolius and Rhizophora mucronata were identified.

Fishery: fishery assessment was direct observation in the study area especially by Punnaikayal and Palayakayal fish landing area.

Conclusion

In the present study area number of aquatic species are observed. In this study area is permanent resident for a few species and most of species are using the temporary feeding and breeding ground because of hydro biological activity and some other factors. In the past 15 years, quality and quantity of aquatic organism level has been gradually degreased due to the above said reason. In the study area mainly contaminated or changed by industrial effluents, waste from salt pans, agricultural field and other man made activities. Government and Non-Government sectors given the awareness to local peoples and regularly monitoring this area and we can protect and conserve the diversity.

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Phytoplankton	Zooplanktons	Crustaceans	Molluscs
Cyclotella	Acrocalanus	Crabs	Gastropod
striata	species		
Skeletonema	Corycaeus	Portunus	Cerithium
costatum	danae	sanguinolentus	morus
Coscinodiscus	Paracalanus	Portunus	Drupa
centralize	species	pelagicus	margatigola
Coscinodiscus	Sagitta species	Scylla serrata	Trochus
gigas			radiatus
Coscinodiscus	Evadne species	Scylla	Harpulina
radiatus		tranquebarica	lapponica
Rhizosolenia	Gastropod Shrimpa	Shrimpa	Agaronia
styliformis	larvae	Similips	nebulosa
Triceratium	Lamellibranch	Penaeus	Strombus
favus	larvae	indicus	marginatus
Thalassionema	Fish egg &	Penaeus	Tonna
nitzschioides	Fish larvae	semisulcatus	dolium
Thalassionema	Penaeid	Penaeus	Turbo
lineatum	nauplii	monodon	bruneus
Thalassiothrix	Copepod nauplii		Bivalves
frauenfeldii			
Pleurosigma	Zoea larvae		Donax faha
elongatum			Donax Iaba
Nitzschia	Mysis stage		Donax
closterium			spinosus
Ceratium tripos			
Calothrix			
species			

Reference

• Ajithkumar.T.T, Thangaradjou.T and Kannan. L, (2006). Physicochemical and biological properties of the Muthupettai mangrove in Tamilnadu. J. Mar. Biol. Ass. India, 48; 131-138.

• Ananthan.G, Ganesan.M, Sampathkumar.P, Matheven Pillai.M and Kannan.L, (1992) Distribution of trace metals in water, sediment and plankton of the Vellar estuary. Seaweed Res. Utiln., 15, 69-75.

• Asha.P.S and Diwakar, (2007), Hydrobiology of the seashore waters of Tutcorin in the Gulf of Mannar, J. Mar Bio, AssIndia 49, 7-11

• Ashok Prabu,V, Rajkumar.M and Perumal.P, (2008). Seasonal variations in physico-chemical parameters in Uppanar estuary, Cuddalore Southeast coast of India. J. Marine Biological Association of India, 50: 161-165.

• Rajasegar, M., (2003). Physico-chemical characteristics of the Vellar estuary in relation to shrimp farming. J. Environ. Biol., 24, 95-101.

• Vinoth, S, Ravindran and Rajesh.S, (2013). Physico-Chemical Charecteristics and Distribution of Heavy Metals along the Punnakayal Estuary, SE Coast, India International Journal of Current Research Vol. 5, Issue, 02, pp. 141-147.