

A Conceptual Framework of Oussudu Lake: A Sustainable Tourism Hotspot in Pondicherry

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ABSTRACT

Pondicherry is one of the major tourism destination in India. One among the attraction of Pondicherry was, Oussudu Lake. It is the most important fresh water lake in Pondicherry. This wetland water body consist of an attractive scenic beauty, and a different species of migratory bird reside in this lake throughout the year. It attracts more than 190 varieties of migratory birds throughout the year. The study examines the key issues of the lake and provides a comprehensive strategy to promote the destination as a Sustainable tourism hotspot with the intensive co-ordination and co-operation of Local community, NGO's, Stakeholders and Government by educating the tourist to be environmentally and socially responsible to the destination.

Keywords: Sustainable Tourism, Wetland Tourism Management, Sustainable Strategic formulation, Preservation and conservation of Bird Sanctuary.

INTRODUCTION

Pondicherry is a tourist destination for a calm and relaxed holiday any time of the year. Tourist know it for its French houses and cafes, but Oussudu lake certainly has its own importance when it comes to must-see places in Pondicherry. With serene water and picturesque landscape and abundance of natural beauty altogether make Ousteri Lake one of those perfect locations in Pondicherry to spend quality time with family. Spread over a large area of 390 hectares of land, this beautiful water body has been recognized by International Union for Conservation of Nature and Natural Resources (IUCN) as one of the most important wetlands of Asia.

Being the only and the largest catchment of fresh water in the city, Ousteri Lake is reckoned to be a popular place of tourist interest in Pondicherry, and hence, is lined by numerous visitors every day. The lake of Ousteri has a bit complex structure which includes wetland, mudflat and water. Despite that, this popular lake in Pondicherry has a variety of flora and fauna. In the floral section, Ousteri Lake is blessed with an array of floral species that varies from trees to small herbs. In relation with that, the region also supports a large avifaunal species that consist of both native as well as the

migratory birds that can be spotted here during the seasons of summer and winter.

Origin of the Study

E. Devabalane (2013) Ousteri lake is situated near the village Ossudu, at 11°57 N, 79°45 E, partly in Puducherry and Tamil Nadu state Figure1 illustrates the exact location of Oussudu lake in the map. Whereas much of the Ousteri lake is located in Tamil Nadu, which consists of rural settlements and in Puducherry the lake is predominantly suburban. Ousterilake is the largest fresh water lake of Puducherry region. The lake extends to about 800 hectares in which 390 hectares lies in Puducherry and the rest in Tamil Nadu. It can store 540 million cu. ft of water, capable of irrigating close to 3800 hectares of land (Abbasi [11]). According to the legend, in recognition of Oosi's selfless service, the lake was named Oosteri which in due course of time rechristened as Ousteri. Ousteri Lake is a man-made lake, which is considered as one of the important wetlands in Asia Different species of migratory birds reside in this lake throughout the year, for which the lake gains significance from the IBA (Important Bird Areas). In 2008 Ousteri wetlands in Puducherry was declared as a bird sanctuary, while the wetlands in Tamil Nadu was declared in 2015. Zhenhua Liu, (2003) The concept of sustainable tourism has its origin in

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the environmentalism that grew to prominence in the 1970s. The explicit idea of sustainable development was first highlighted by the International Union for the Conservation of Nature and Natural Resources (IUCN, 1980) in its World Conservation Strategy. In 1987, the Brundtland Commission report defined sustainable development as 'development that

meets the needs of the present without compromising the ability of future generations to meet their own needs'*(WCED, 1987:43). The resulting lake had 7 kms, circumference and 15 km² of catchment area. During the rainy season, the lake would appear like an ocean with a vast span of bluish water (Eshwar [8]).

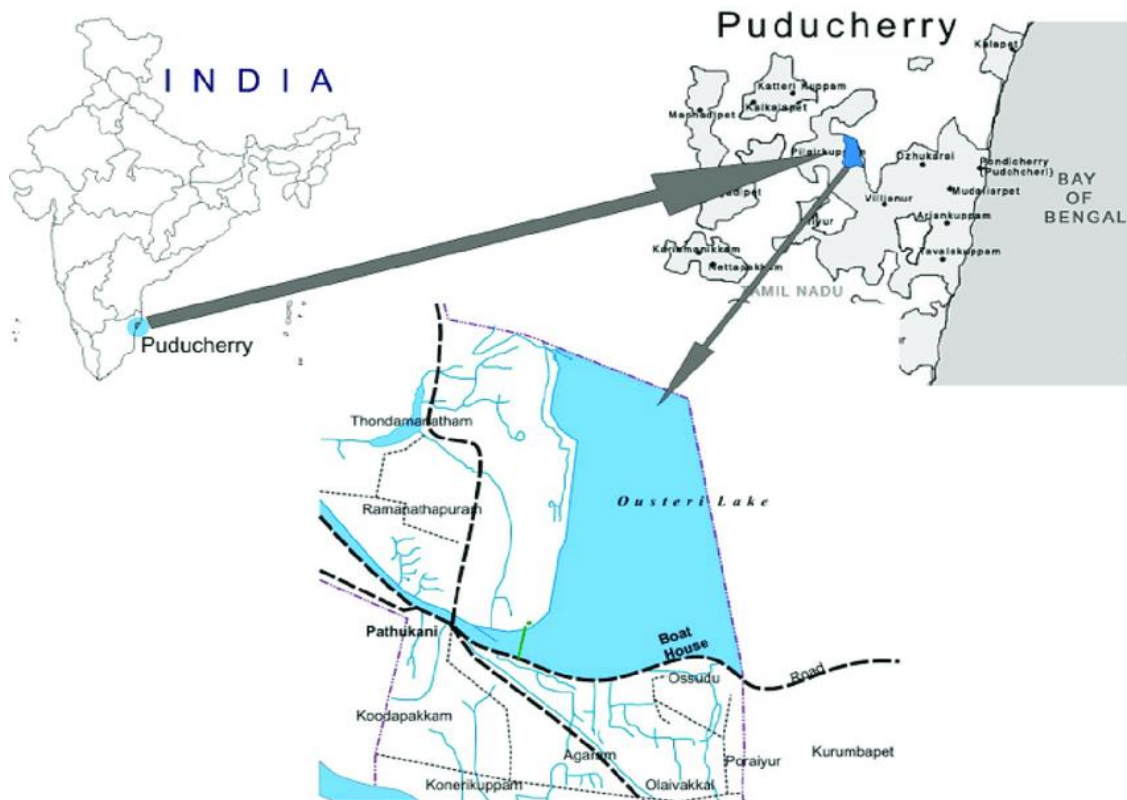


Figure 1. Location of Oussudu Lake and Birds Sanctuary, Pondicherry part (Source: M. Murugesan¹, P.R. Arun² & B.A.K. Prusty³, 2013)

The Commission further emphasised that sustainable development is not a fixed state of harmony, but rather a dynamic process of changes which 'are all in harmony and enhance both current and future potential to meet human needs and aspirations' (WCED, 1987:46).

In tourism there are a multitude of definitions of sustainability and sustainable development (Butler, 1999b; Page and Dowling, 2002). The World Tourism Organisation (WTO, 2001) prefers the following definition of sustainable development: Sustainable Tourism Development meets the needs of present tourists and host regions while protecting and enhancing opportunities for the future.

It is envisaged as leading to management of all resources in such a way that economic, social and aesthetic needs can be fulfilled while maintaining cultural integrity, essential ecological processes and biological diversity and life support systems.

The Objectives of the Study

The major objectives of the present study are,

- To study about current tourism status of the Oussudu lake.
- To address the key issues of the destination and
- To develop a comprehensive strategy to promote the destination as a Sustainable tourism hotspot.

METHODOLOGY

The methodology adopted during the study is through the secondary sources. Due to the lockdown because of COVID-19, the report has been conducted using only the secondary source of Information. These secondary information on various aspects was collected from various line departments of Government of Puducherry,

websites and other published research articles and reports.

Oussudu Lake Bird Sanctuary

Ousteri Lake is also referred to as Osudu Lake and is situated about 10 kms from Puducherry town and has been recognized as one of the important wetlands of Asia by the International Union for Conservation of Nature and Natural Resources (IUCN) and it is the most important freshwater lake in the Pondicherry region. The structure of the lake is complex - consisting of water, wetland/marsh and mudflats; it acts as the single largest catchment of fresh water in Puducherry.

In 1995 the lake recorded some 20,000 birds and in 1998 it went up to 25,000 birds of 44 species according to Bombay Natural History Society (BNHS, 2004). In addition to residents like Little Cormorant and Common Coot, Cotton Teal, Spot-billed Pelican, Spoonbills, White Ibis; migratory species like the Eurasian Wigeon were recorded in large numbers (up to 4600 individuals!). Various species of ducks, herons, cormorants, hawks, kites, darters, terns, kingfishers, lapwings, flycatchers were abundant.

Ousteri Lake has been designated as one of the important wetlands of Asia by the International Union for Conservation of Nature and Natural Resources (IUCN). Bombay Natural History Society has also nominated it as an Important Bird Area. The lake has also been declared as a bird sanctuary by Government of Pondicherry in 2008. The lake, however, faces numerous threats. Dredging and de-silting by the authorities has caused removal of some useful weeds that the birds would nest on. Trees have been uprooted to make the spot suitable for a children's park; only a few trees stand on the lakeside giving just a handful of tree-nesting birds the opportunity to breed here. The lake is also facing problems of poaching, fertilizer poisoning, plastic waste pollution and inflow of various other pollutants that also flow in from nearby manufactories. Motor and pedal boats regularly ply in the lake when the water level is sufficiently high and that also happens to be the bird season. A big hospital has been constructed nearby and a restaurant-cum-bar has grown ostentatiously. Further urbanization, as has been proposed, around the lake will only add to the commotion and noise and additional pollution. Apathy and reluctance on the part of the authorities to run it as a real bird sanctuary are visible.

Although the Government declared it a bird sanctuary in 2008, no positive action was taken to match the declaration. The Government has formed a committee that will take suitable action and will look into rights of different individuals and groups around the lake.

Here, you can expect to get a glimpse of more than 40 migratory birds, and hence, bird watching is one of the most significant things to do at Ousteri Lake which is loved by many tourists. Painted stork, Openbill Stork, Golden Oriole, White Ibis, Spotted Owlets and Tailor Bird are some unique migratory species of birds that reside here at Ousteri Lake. Apart from birdwatching, one can also choose to indulge in boat riding which is a unique experience in itself. A lot of tourists can also be seen picnicking with their friends and families at this place. Furthermore, Ousteri Lake is also an ideal tourist place in Pondicherry for all the shutterbugs to showcase their clicking skills.

Tourism in Oussudu Lake

Presently Ousterilake is one of the locations in the Puducherry region which draws considerable number of tourists both nature lovers as well as commercial tourists. The 390 hectares lake (part of it lies in Tamil Nadu) supports a variety of fauna and flora. The vegetation ranges from small herbs to trees, which supports migratory avifauna as well as native birds during summer and winter.

Ousteri Lake will be developed on the lines of Vedanthangal water bird sanctuary near Chennai. More than forty migratory birds reside throughout the year at the Ousteri Lake. According to the Tourism Department, different species of golden oriole, open-bill stork, tailor bird, painted stork, white ibis, white-breasted water-hen and spotted owlets visit the water-body particularly after November every year. The forest department has decided to document the varieties of birds visiting Pondicherry to update and prepare a comprehensive database about the winger visitors. Under the government's renovation plan the region near the lake will be made litter-free so that it becomes favourable of the migratory birds.

The lake region will be declared as no-horn and plastic free zone. They will take care of the maintenance of the newly declared bird sanctuary. Sign boards with complete details of birds and eight feet by six feet multicolour paintings of birds will be set up at different places of the sanctuary. The department will

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also plant more trees near the water body. Apart from these, a three-floor interpretation centre with library and audio-visual room and a small park will also be established. The centre will enable visitors to attain complete information about the birds visiting the water body.

Two telescopes are also proposed to be set up at the top of the centre to watch the birds. The government has planned to develop the region as a complete eco-tourism tourist destination. The tourism department has proposed to ban motor boating and fishing in the lake. Instead, pedal boating is introduced for visitor's leisure. The best time to visit here is from October to March.

PTDC operates a small boat club at the lake. The 20-seater boats offer a 30min ride that allows visitors to enjoy the cool breeze and visual treats. If lucky, one could spot birds rarely seen in the region. The government of Pondicherry is proposing to set up an Ousteri National Park in the region acquiring land from neighbouring villages.

Infrastructure for Sustainable Tourism

Devabalane. E(2013) Tourism infrastructure is the essential requirements for the development of sustainable tourism in Puducherry. The facilities is not adequate for the tourists, though the site is well connected by roads, 10 Km distance from Airport and railway station. A well planned infrastructure should be put in place near the lake area which is very much required to attract lot of tourists. Before creating infrastructure the other basic amenities should be created like toilets, parking places, bird watching tracks, camping grounds, picnic zones, children's playground, walking and cycling trails. Since it has been an important bird sanctuary, tourists can stay for a while to watch varieties of birds from multiple countries. To satisfy their needs standard and supplementary accommodation can be created like resorts, lake view hotels, green hotels. The present infrastructure is not sufficient to accommodate more number of tourists, due to lack of minimum facilities. So the need of the hour is to facilitate with recreational facilities like cafes, restaurant's, bird watching trails, binoculars and boating facilities with minimum pollution to the lake keeping in view the sustainability factor of the lake area.

Artificial Islands in Oussudu Lake

In a fillip to the Forest Department's efforts to improve habitat for birds in the biodiversity rich

Oussudulake, Puducherry-based Indigenous Biodiversity Foundation (IBF) and Aaranyam Foundation have initiated steps to recreate habitats and artificial islands on the lake to woo winged visitors. The Oussudulake is identified as a wetland of national importance under the National Wetland Conservation Programme of the Ministry of Environment and Forests (MoEF), and has also been declared one of the 93 significant wetlands in Asia by the Asian Wetland Bureau.

The Forest Department in collaboration with wildlife researchers and conservationists has been intensifying efforts to protect the flora and fauna of the lake, which is home to over 166 bird species and also one of the major sanctuaries for migratory birds on the Coromandal Coast.



Figure 2. Artificial Island initiative by IBF and Aaranyam Foundation in Oussudu Lake (source: *The Hindu*, 2019)

The inter-State lake covers an expanse of 800 hectares, of which 390 hectares lies in Puducherry. The normal migratory season begins by mid-October and continues till February. As soon as the lake went bone-dry, IBF and Aaranyam Foundation wrote to the Forest department seeking permission to create artificial islands ideal for nesting of birds before the onset of the migratory season. IBF and Aaranyam Foundation started the process of creating artificial islands. The project is funded by Five Star Groups and the two NGOs. Figure 2, shows the detailed picture of Artificial Island initiative by IBF and Aaranyam Foundation in Oussudu Lake

According to S. Vimalraj, a wildlife conservationist of IBF, "nine artificial islands have been planned on the lake. They would be

built 150 metres from the lake's boundaries on around three hectares. The alluvial soil generated from desilting the lake bed will be formed into a mound for creating the islands."The islands will be separated by a distance of 100 metres and will come up close to the Poothurai Road. Three-metre deep trenches will be dug surrounding the artificial islands to ensure a natural habitat with adequate prey for the birds. Though the lake has completely gone dry except for a thin strip of water near the lake bund, migratory birds such as the White Ibis have been visiting the lake in large numbers in search of prey. The birds have been moving to other wetlands in the region such as the Kaliveli lake in Villupuram district and Vedanthangal bird sanctuary in Kancheepuram district due to lack of prey in the Oussudu Lake. Migratory birds such as the Spot Billed Pelican, Painted Stork and Spoonbill Duck will return once the islands are ready. IBF have compiled a list of over 100 saplings that will be planted on the periphery of the artificial islands. According to P. Devaraj, former Additional Principal Chief Conservator of Forests, the islands with vegetation and foliage will ensure the perfect habitat for nesting and roosting of birds. The denser the vegetation the better it is for birds to find shelter and food, he said.

Best Time to Visit the Oussudu Bird Sanctuary

It is highly advisable to visit this sanctuary in January which can prove to be one of the best months to be there. Winter is said to be the most accurate time to visit this destination because many migratory birds from several corners of the world can be spotted during these months. Located in the Oussudu village, Tamilnadu, one can also visit this place between September to November with sunny weather offering better chances of finding numerous varieties of birds.

Vulnerability and Threats of Oussudu Lake

Vulnerability assessment study conducted in Oussudulake, Puducherry had shown concern over rising plastic pollution in water bodies. The report had highlighted that the canals have become dumping grounds for used plastic bags, thermocols, cups, plates, pipes and bottles. The dumping of plastic items had interrupted free flow of monsoon run-off. Around two-thirds of all forms of plastic getting accumulated, degrades slowly and leaches into the land and water. Plastic causes serious environmental pollution, affecting the basic life support systems such as soil, water and air. Plastic

pollution also results in health ailments such as eye irritation, vision failure, difficulty in breathing, liver dysfunction and cancer. The study recommends that prior to Plastic Ban, it is necessary to adopt daily usage of alternative packing items.

Encourage people to identify and manufacture alternative packing items. Hoteliers should be encouraged to shift to banana leaf, teak leaf, vanathula leaf and mantharai leaf for serving and packing food. Skill development in producing alternate packing materials should be encouraged. A strong enforcement of rules and regulations for the production and use of plastic, throwing of litter in the dustbin and recycling of biodegradable and biodegradable products could play a major role in reduction of plastic pollution in Oussudu Lake.

KEY ISSUES OF THE OUSSUDU LAKE

The following are among the main weakness of the Oussudulake which must be addressed if we are to advance further in this field of research.

- The tourism resource available at the destination is abundant by nature. The destination has to be promoted in such a way so as to preserve the nature there by benefiting the host community as well as the Government.
- Attention has to be paid to the tourist demand especially sustained tourist flow has to be maintained at the destination level.
- While emphasising intergenerational equity, no due attention has been paid to intra-generational equity, that is, the fairness of benefits and costs distribution among the stakeholder group of tourism development.
- While underlining the interests of the host population, the destination community should reap the economic benefits of tourism but keep its culture intact. Tourism related socio-cultural changes should be encouraged at the destination level.
- Determine the absolute level and pace of development has to be carried out at the destination. The tourism organisation and the government have to identify and set or threshold of tourism growth through identifying carrying capacity and indicators of sustainable tourism development.
- Many writers and practitioners enthusiastically promote ecotourism and wetland tourism but none of these forms can

be relied as the way forward for a sustainable tourism. In the path of sustainable tourism development one can find ecotourism, alternate tourism, responsible tourism, low- impact tourism, community tourism and so on.

Comprehensive Strategy for Sustainable Tourism in Oussudu Lake

Sustainability is often related to a balanced environment. It is the process of development that satisfies the needs of the present without affecting the ability of future generations to satisfy their needs. This kind of tourism takes full account of its current and future economic, social and environmental impact. It does not only visit someplace as a tourist but, also create a positive influence in all the surrounding. The mainly three things sustainable tourism can be responsible are: benefits the environment, help local communities and can have economic advantages.

The competent authorities should undergo the following guidelines: To prepare overall strategies for tourist destinations based on the dialogue with the private sector, local bodies and NGO's with a vision for future. To participate in the enhancement and management of tourist destinations, balancing the interests of the environment with those of residents, tourists, and tour operators. Launch campaigns to inform the tourist's communities (service providers and tourists) about the advantage of embarking on strategies and action plans for wet land tourism. Involve local leaders in wetland ecosystem and resource conservation planning efforts which help them to understand the linkages between tourism, resource protection and economic advantages.

To hold migratory bird festivals, wet land festivals which highly visible economic benefits to the local community. To collect economic data concerning the value of wet land tourism locally. To provide wet land tourists card at the wetland site to protect and conserve birds and community. Construct roads and interpretative facilities adjacent to the wetland by establishing buffers and setback where possible. To provide bird watching trails adjacent but not into wetlands by using elevated platforms for viewing the lake by arranging guided walks and boat tours (leisure boats), and by creating bird watching observatory with the essential equipments. To limit the negative interaction between mechanized or harsh sound making activities for sustaining the stability of the wet

land ecosystems. To ensure the sustainability of the natural resource base, the recognition of all the stake holders in it and their roles and responsibilities in its protection and management is essential. The traditional approaches to natural resources management in lakes water harvesting and management system should be revived by creating institutional mechanism with ecological wisdom and the spirit of community management inherent. Lake Clean Development Mechanism strategy (L.C.D.M.), can be achieved by providing financial assistance to sustainable development programmers with clear-cut objectives. User community pyramid strategy by using integrated and appropriate technological solutions and the applications thereof for the success of the sustainable development of the people. Change in life style of the citizen should go a long way to attain sustainable development and water bodies' conservation. Landscape beauty for the lake's scenic view, space for tourism, recreation and for the local residents with few entrances, to the wet lands is very much required.

CONCLUSION

The present study indicates that the Oussudulake is predominantly a very important tourism hotspot spot in Pondicherry. The study deals with the various conservation and management interventions that can be taken up for long-term sustainability of Ousterilake, the largest lake in Puducherry. Wetlands in urban areas have always been exploited for several purposes due to anthropogenic activities. However, such activities may lead to alteration of wetland characteristics and thus cause changes in species composition and density. The Ousteri Lake is rich in flora and fauna and is known to provide several ecological services including recharging underground aquifers and providing several livelihood options for the local community.

To conclude, the development of lake has to be sustainable. The poor, the vulnerable and marginalised groups has to be identified and given opportunities for sustainable livelihood. To protect and conserve the nature the lake region will be declared as no-horn and plastic free zone. The local authorities will take care of the maintenance of the newly declared bird sanctuary. Sign boards with complete details of birds and eight feet by six feet multicolour paintings of birds will be set up at different places of the sanctuary. The department will also plant more trees near the water body.

Toward the economic sustainability PTDC operates a small boat club at the lake. The 20-seater boats offer a 30min ride that allows visitors to enjoy the cool breeze and visual treats. The local community people should be encouraged to become the stakeholders and to sell the locally available products to the tourists arriving at the destination.

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Citation: Ramyasri. E "A Conceptual Framework of Oussudu Lake: A Sustainable Tourism Hotspot in Pondicherry", *Journal of Travel, Tourism and Recreation*, 2(2), 2020, pp 18-24.

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