



Historic conservation and sustainability: a case of bindusagar lake, old Bhubaneswar

Mayarani Praharaj

Department of Architecture, College of Engineering & Technology, Bhubaneswar.

ARTICLE INFO

Article history:

Received: 13 January 2012;

Received in revised form:

13 October 2012;

Accepted: 27 October 2012;

Keywords

Historic conservation,
Bindusagar,
Sustainability.

ABSTRACT

Bhubaneswar before becoming the capital of Orissa in 1948 had been a temple town with series of ancient sandstone temples, heritage ponds and water tanks. Now Bhubaneswar is one of the modern well-planned cities with broad avenues, planned habitation, institutional, commercial and industrial areas. But still it gets the prestige of the temple town due to large number of temples and natural lakes located in the old town area. The old town area has tremendous architectural, historical and cultural values which need to be protected. Now-a-days the process of urbanization and socio-cultural change started with increase in population. Here the question is how to conserve the historical area and its natural heritage. Bindusagar is one of the natural heritage and holy lakes in Old Bhubaneswar. The lake is surrounded by many temples and monuments. The lake receives wastewater and sewage from the surrounding buildings, flowers and offerings from the temples, and other wastes from the ghats. The lake is highly degraded and its water is unsuitable for pilgrims and local residents for bathing or any other religious activity. This paper highlights the proposal for conservation and rejuvenation of the Bindusagar Lake located near the famous Lingaraja Temple of Old Bhubaneswar.

© 2012 Elixir All rights reserved.

Introduction

Bhubaneswar is the second “planned” city of independent India after Chandigarh. Its total area of 135 sq km includes approximately 25 sq km of the Old Town which dates back more than a thousand years. The temple of Swarna Jaleswar (6th century A.D.), Vaital and Sirsewara group of temples(700-900A.D.), Brahmeswar group of temples(960-1065 A.D.), Mukteswar group of temples(950-975 A.D.), Rajarani (950-975 A.D.), Lingaraja temple (11th century A.D.), Kedareshwar group of temples (12th century A.D.), record the remarkable continuity of a culture in the old temple city. In close association with the numerous temples in Bhubaneswar, there exist many ponds and water tanks such as Bindusagar Lake, *Papanasini Tank*, *Ganga Yamuna Tank*, *Gouri Tank*, *Bramha Tank*, and *Ramkunda (Tank) etc.* Bindusagar Lake is situated north of the famous Lingaraja Temple. The Lake is about 1300 ft in length and 700 ft in width. Historically the great Lake can be dated from the 8 th /9th century A.D.

Bhubaneswar and its Heritage Resources

Bhubaneswar the capital city of Orissa, is one of the modern well-planned cities in India with broad avenues, planned habitation, institutional, commercial and industrial areas. Otto Koenigsberger planned the city in 1948, on small neighbourhood unit concept, which would preserve the sense of community. The city is earmarked by distinct landuse pattern i.e. residential, commercial, and institutional etc based on a gridiron pattern of road network.

However Bhubaneswar also has an old part whose plan is based on the ‘ashta ayatana’ concept.

As per the medieval texts, a concept of ‘ashta ayatana’- eight sacred precincts each with its temples and prescribed pilgrim routes are ritualistically and symbolically connected to the Lingaraj Temple.

The important monuments and Water bodies coming under each Ayatana are as follows.

The Bindusagar Lake is coming in the First Ayatana, Papanasini Tank in the Second Ayatana, Ganga Yamuna Tank in the Third ayatana, Gouri Tank in the Fourth Ayatana, Bramha Tank in the Fifth Ayatana, Meghasvara Temple in the sixth Ayatana, Utreswar Temple in the Seventh Ayatana and Ramakunda in the Eighth Ayatana



Fig.1 Astha ayatana concept of Old Bhubaneswar Location

The Old Bhubaneswar is located in Zone 18. The old township is bound by the Chennai-Kolkata railway line to the North and West, agricultural fields to the south and Puri-Cuttack railway line to the North and West. Beyond this road, the old town stretches along the Tankapani road as a ribbon development with the Rajarani temple complex located along this road.

The Old Town Area is composed of congested roads, crowded market-places, polluted water-bodies, inadequate storm-water drains, and a larger amount of bushes and mounds of solid waste in and around the historic structures. The shrines and temples are typically hidden behind the shoddy high-rise apartments which have come up over the years with little regard to the Archaeological Survey of India (ASI) Act.



Fig.2 Aerial view of Bindusagar Lake and Lingaraja Temple

Function of religious Lakes and Ponds in Old Bhubaneswar

A dip in the pond before entering into the temple complex is associated with religious sentiments. The pond is being used extensively as the dumping site for leftovers of variety of cooked and uncooked food from the near by famous “Ananta Vasudev” temple. Local residents also regularly bath in it and also depend on it for washing their clothes. Until recently, the tank has remained practically unmanaged. However, with the direct initiative of the Municipal Corporation and Jawaharlal Nehru National Urban Renewal Mission (JNNURM) extensive revitalization and cleaning has been carried out.

The people of Old Bhubaneswar are proud of their spiritual, cultural and architectural heritage. But due to the haphazard development of Old Bhubaneswar it is difficult to preserve the architecture and natural heritage.

Concept of natural heritage & conservation:

Natural Heritage includes all components of our surroundings which have not been created by man and which are of cultural, aesthetic, spiritual, biotic or ecological value and which could also be of directly usable resource value.

A heritage conservation area is defined as an area of special architectural, historical and cultural interest, the character and appearance of which is desirable to preserve and enhance. These are areas which afford a cultural and traditional identity to a particular area.

A brief history about Bindusagar

There is a very interesting legend associated with the creation of the Bindusagar Lake. As per historical belief, the Lord Siva and Parvati were flying above the city, Parvati felt thirsty. Unable to find water in the Vicinity, Shiva created a sacred lake called Bindusagar. The lake was formed by the contribution of a drop, each by all sacred water of India. The lake was consecrated by Lord Brahma and the God Ananta and Vasudeva were appointed to live on the eastern bank of the lake as guard deities.

The Bindusagar Lake is the heart of Old Town, Bhubaneswar and its water is used for ablution in all the surrounding temples as well as for individual worship.

According to Ananta Vasudev inscription, Bindusagar was a lake surrounded by a forest of palm trees. The trees had medicinal value and also had the power to clean the water. People were using the water for bathing and drinking purposes. Ritual activities like Snana were taking place along the ghats by the local people and the pilgrims. Density of population was less and the Lake had carrying capacity. Hence there was symbolic relationship between man made and natural elements.



Fig.3 Bindusagar Lake with the backdrop of Lingaraja Temple

Change of the traditional role of Bindusagar

The Bindusagar Lake is one of the popular tourist attractions of Bhubaneswar. Every year, the idol of Lord Lingaraja, enshrines in the Lingaraja Temple, is brought to the lake for a ritual bath. The lake serves as a focal point around which numerous temples of Bhubaneswar are located. At one time, over more than thousand temples bordered the Bindusagar. Now only 500 of these still survive and all built in the Orissa temple architectural style. With the passage of time other non-conforming uses such as shops, residential buildings grew up in the available space resulting in a gradual decay of the shrine and the lake and Bindusagar has been polluted, lost its self purify capacity. Even now, in its dilapidated state, the lake is used by thousands of pilgrims and the local people for a holy dip in faith. Over the years, the economic and social linkages have undergone change. Growing population and immigration of other social groups and impact of tourism had an impact on the character of the old town. The old town has gradually transformed into a dormitory town for the administrative capital. Perceptibly the difference is manifest in its unorganized and haphazard character, encroachments, unregulated quarrying, polluted water bodies, congested roads and densely built derelict houses.

Opportunity to study

The area gives the opportunity to study -the present status. The Scope of developing the left out open space along with their access and linkage.

Festival associated with Bindusagar.

Kartika Purnima

Kartika Purnima falls on the month of Kartika (November-December). On this day thousands of toy boats are sailed in Bindusagar. Sailing paper boats in Bindusagar and worshiping at Lingaraj temple are the major activities of the festival. The parking space for the vehicles is inadequate. The sailing of paper boats in the Bindusagar and other water bodies pollutes the water and the environment as the toy boats are not removed immediately.

Chandan Yatra

At Bhubaneswar the Chandan Yatra festival of Lord Lingaraj is observed in Bindu sagar in the month of March-April. Here, the float is moved to the Mandapa in the middle of the tank.

As the Hindu deities are modelled on the behaviour of human beings, they are also given the same treatment. During this festival they are taken out of the temples in procession for perambulation in water on floats or boats. The richly decorated boats are called 'Chapa'. Once a year, Lingaraja, the main deity of the temple, is brought to Bindu Sagar to be washed.

From Old town and new town huge crowd gathers to celebrate and to pay homage to Lord Lingaraj so it becomes difficult to manage and control the crowd.

Present status: Bindusagar

The Bindusagar is abutted by motorable roads on 3 sides – the northern, eastern & western side. The Pooja Ghat (eastern side) approached by the main road is the busiest among all & this leads to the Lingaraja Temple.

Eastern Ghat

Activities and problems: The 24 feet vehicular road with mixed traffic to the temple leads to congestion. Its waters are sullied by leaking sewage, ritual offerings by hundreds of pilgrims and chemicals from washing clothes and boats during the Kartik Purnima Festival.

This is a poorly maintained road without drainage system. There is no segregation between vehicular and pedestrian

access. Pilgrims park their vehicles along the road, use lake for washing before visiting temple. After visit they used to wash hands in the lake. Frequent crossing of pedestrians causing the area most accident prone.



Fig. 4 Approach road to Lingaraja temple with Bindusagar Lake in the right

Southern Ghat

Activities and problems:

Mostly used for bathing, kriya-karma and viewing vimana movement during Chandan Yatra (March-April). It is approached only by the eastern main road leading to the Lingaraja temple. Offerings such as flowers, milk, rice and earthenware like kalashas etc are released into the water. It is mostly used for bathing and washing of utensils leading to accumulation of silt and growth of algae on the surface. Detergent, soap used for bathing pollutes the lake water.



Fig. 5 Southern Ghat

Northern Bindusagar

Activities and problems:

Extremely interesting temple complex i.e. Bhimeswar and Uttereswar temple built around 9th century A.D.



Fig.6. Bindusagar lake with the backdrop of Uttereswar temple, dominated by multistoried apartments

Western Ghat

To revitalise the heritage zone on the western side one unique medicinal plant garden has been developed, named "Ekamra Van" on the Western bank of Bindusagar. About 15,000 plants have been planted in this garden.

Scope for development:

Bindusagar area needs to be conserved and redeveloped



Fig.7. Western Ghat Bindusagar

Perspective Plan for Bhubaneswar-Cuttack Urban Complex (BCUC): Vision 2030

The Department of Architecture and Regional Planning, Indian Institute of Technology Kharagpur (IIT Kharagpur), submitted the long term Perspective Plan for Bhubaneswar – Cuttack Urban Complex and provide vision to the anticipated development for the target year 2030 in November 2006. Bhubaneswar Development Plan Area (BDPA) forms part of the Bhubaneswar–Cuttack Urban Complex (BCUC)

The Vision

BDPA stands unique, in the state of Orissa, as a major urban capital complex and has always led the region in progressive action.

BDPA must continue to carefully preserve its historical heritage and its cultural diversity. In regard to natural environment, the BDPA must be especially sensitive to protecting its natural resources like canals, forest, and hillocks that provide a foundation for its livability.

National Lake Conservation Plan (NLCP)

Government of India under National Lake Conservation Plan (NLCP) approved a programme for conservation and management of polluted lakes in May 2001. The objective of the scheme is to restore and conserve polluted and degraded lakes and other similar water bodies. The implementations of NLCP results in improvement of lake ecology and add to the aesthetic and tourism value. The beneficiaries of the scheme are the State Governments, local bodies and the local population.

Under NLCP 46 number of lakes has been covered during the 11th Five Year Plan including Bindusagar.

Government Proposal (JNNURM): Bindu Sagar Periphery Development project

The Jawaharlal Nehru National Urban Renewal Mission (JNNURM), the first project to have been taken up under the Old Town Revitalisation Project was the Bindu Sagar Periphery Development project which includes a medicinal plant garden called Ekamra Van on the west bank of Bindu Sagar. The project is being implemented by the Forest Department under the guidance of Heritage Lab, a heritage conservation firm. It provided design inputs and training to the stone-workers.

The Bindusagar periphery wall is being built by local sculptors who are being trained in the art of stone carving by the accomplished skilled craftsmen of the area. This not only creates a resource for the future conservation of heritage but it also visibly and positively impacts the lives of the rural craftsmen and their children.

Role of Statutory Authorities

The 73rd and the 74th Amendments to the Constitution of India contain the Twelfth Schedule applicable to urban authorities and the Eleventh Schedule applicable to the other (rural) areas. Entry No. 13 of the Twelfth Schedule refers to 'Promotion of cultural, educational and aesthetic aspects'.

Entry No. 21 of the Eleventh Schedule refers to 'Cultural Activities' and Entry No. 29 of the same to 'maintenance of community assets'.

The land use planning in most states is regulated by the relevant town and country planning law. While making development (master) plans for the city/ town or the region under it, the planning authority has to take into account the sites of natural heritage.

Role of the Citizen

The Constitution of India has a separate chapter, Part IV-A, on the Fundamental Duties of a Citizen. Clause (g) of Article 51-A of the Constitution states, "It shall be the duty of every citizen of India to protect and improve the natural environment including forests, lakes, rivers and wild life and to have compassion for living creatures".

Proposal

Eastern Ghat

It is proposed to convert the road into a pedestrian walkway with cycle track parallel to the pedestrian walkway for people's convenience.

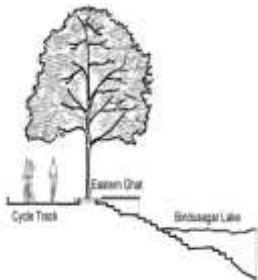


Fig.8 Proposed Cycle Track (Section) on the Eastern Side of Bindusagar Lake

Southern Ghat

Human activities offensive to the area should be checked. Proper utilization of spaces by assigning uses to specific areas is required to control & maintain the ghats.

Northern Ghat

The landscaped realm, temple complex and steps need proper maintenance.

Implementation and Conclusion

To preserve the Bindusagar lake and its surroundings, there is a need for environmental clean-up and city planning to open up easier access to the Lake which will revitalise the living culture of the Old temple Town. Development of ritual routes and strengthening of Ashta Ayatana to the Bindusagar through urban design elements are essential.

The process of historical conservation is quite complex and involves a proper interaction and co-ordination between various agencies such as public agencies like Temple Trust/Bhubaneswar Development Authority / Archaeological survey of India / State Archaeology /Bhubaneswar Municipality/ Town Planning Organisation / Private agencies like INTACH /NGO / Private individuals and the residents of the locality involved with the temple activities.

The co-ordination and synchronization of the various agencies is important, it is felt that the Government being the apex of all organization should co-ordinate the work keeping in view the historical and cultural importance of the area.

Another important consideration should be to raise public consciousness towards the value of such natural heritage. This would help in better maintenance of such places.

References

- 1.Report, 2006, Vision 2030: Comprehensive Development Plan for Bhubaneswar Development Plan Area: Heritage Conservation, Department of Architecture & Planning, IIT Kharagpur
- 2.Report, 2006, Vision 2030: Comprehensive Development Plan for Bhubaneswar Development Plan Area: Culture, Recreation and Tourism, Department of Architecture & Planning, IIT Kharagpur
- 3.Kulbhusan Jain, Conservation of Historic towns, JIIA, Diamond Jubilee Year
- 4.M.Praharaj, 2003, Urban Renewal and Rejuvenation of Old Bhubaneswar", MTRP Thesis, BESU
- 5.M.Praharaj, 2011, Rejuvenation of Cultural Heritage of Bhubaneswar, Proceedings of the International Conference on Contemporary Architecture – Beyond Corbusierism, October, Edited by Sarbjay Bahga, Surinder Bahga & Archana Chaudhary, ISBN: 978-9350-59002-7
- 6.INTACH Report on Ekamrakshetra heritage Conservation Zone, Bhubaneswar, 1989, INTACH,
- 7.Report of the Working Group on Rivers, Lakes and Aquifers in Environment & Forests for the Eleventh Five Year Plan (2007-2012), April, 2007, Government of India, Planning Commission, New Delhi
8. www.wikimapia.org
9. <http://orissagov.nic.in/forest&environment>
- 10.<http://www.frontlineonnet.com/fl2725/stories/20101217272510700.htm>
- 11.http://credaincr.org/news_details.phpnid=11228
- 12.Annual Activities Report 2010 – 11, Housing and Urban Development Department, Govt of Orissa. (http://urbanorissa.gov.in/pdf/annual_activity_report_1010-11.pdf)
- 13.Conservation of Water Bodies – Annual Report 2006-007(<http://envfor.nic.in/report/0607/chap05.pdf>)
- 14.<http://www.intach.org/chapters-gfl-nh.asp>
- 15.<http://moef.nic.in/modules/recent-initiatives/nlcp/Lakes/Bindusagar Lake. PDF>