

Alternative Tourism: Potency of Beels of C.D. Block Krishnagar-II

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Abstract: *Beels (wetlands) of C. D. Block Krishnagar-II cover an area of 886.972 acres or 363.67 km². There are 12 wetlands (Recorded under B.L. & L.R.O, Krishnagar-II) in the block, having area more or equal to 5 acres. Amongst these 12 wetlands, 5 are major beels. Hansadanga Beel has an area of 178.08 acres, Nowpara Beel 240.89 acres, Satitala Beel 43.37 acres, Baro Beel 87.46 acres and Rukunpur Beel 46.96 acres. These beels have enormous potential to be developed as Alternative Tourism centers based on rural culture and festivals of Bengal related to water bodies. But in spite of enormous potential, Nadia district in general and this block in particular is totally insignificant from the view point of wetland-based tourism. This paper has prepared the blue print how this block can emerge as a significant tourists place based on these beels. Data for this study were collected from office of the B.L. & L.R.O, Krishnagar-II, District Fishery Office, Nadia and from Field survey.*

Keywords: *Beels, Sikara, Nouka Baich, Angling, Aqua-Riding.*

I. Introduction

Tourism is the world's largest industry. It accounts more than 10% of the total employment, 11% of global GDP (Sfougaris et al, 2009). A predicted international tourist arrival in 2030 is 1.8 billion. Economic activity generated by travel and tourism creates around 5% of global GDP and supports an estimated 6-7% of the world's jobs. International tourism expenditure reached 1 trillion USD in 2011 (UNWTO press release, 7 May 2012). Half of all international tourists are travelling to wetlands. Wetlands offer significant opportunities for tourism and recreation, generating income (Wetland, 2011) for governments, for the tourism industry itself, and for local communities as well (UNWTO, 2012). The economic value of wetland tourism is truly enormous (UNWTO 2011). Brinson et al. (1995) categorized wetland functions into hydrologic, bio-geo-chemical and habitat. Wetlands, heritage of 'nature' are visitor's attraction (Leask and Yeoman, 1999) and importance of heritage attractions can be assessed against checklist (Silberberg, 1995). Tourists attractions are increasing directed towards wetlands (De Stefano, 2004) which is the hotspot of ecotourism. But prime challenge to the ecotourism industry is to make it profitable, ecologically sustainable, achieving a satisfactory level of tourists and raising living standard of host community (Lim and McAller, 2003). Wetlands are important landscape for migratory bird habitat (Lim and McAller, 2014); source of surface as well as ground water; flood regulatory tanks; entrap sediment and maintain alluvial channel depth (Majumder, 1941); take part in delta building mechanism; modify and equate temperature of the local level weather; CO₂ absorber; convert solar energy into chemical energy by aqua-flora and hotspot of biodiversity (Sfougaris et al. 2009). Some features of wetlands made them tourism potential. Those are biodiversity hotspot and water resources. Birds, fishes and other macro fauna of diverged gene are the basic source of tourist's attraction. Water resource on the other hand provides scope for tourist's attraction of 'built' heritage in terms of hiking, boating, angling, canoeing, Nouka baich (group competition of boats), sikara lodging (house boat), bird watching, swimming and other water games.

However, wetland tourism sustains if and only if wetlands survive in good health. Although there is no need of conflict between conservation and use of wetlands (Bacon, 1987) yet during present days wetlands are at serious threat of pollution and even their existence due to callus activities of man (Turner, 1991). That is why management strategies for tourism should to move ecotourism experiences beyond mere enjoyment to a more active role which incorporates learning attitude and behavioral change (Orams, 1995). Wetlands are multifunctional resources and generating considerable social welfare (Costanza et al. 1997). Therefore social involvement in wetland management with adequate knowledge of its hydrology (Kusler, 2006b) along with consideration of community welfare is recommended. First step of wetland tourism management process is identification and mapping of wetlands using satellite imageries (Nakano, 2003) instead of error prone traditional surveying (Miyamoto et al. 2003, Kusler, 2006a) suggested eco-friendly management practices for wetland tourism. With love and adequate knowledge of wetland, if one or two business ideas are implemented, it helps to start out making a list of different activities that could be offered in the planning region of wetland (Drumm et al. 2004).

Out of 12 having area more than 5 acres each, 5 beels are under this study. Those beels are potential for boost the tourism in the block Krishnagar-II. Name of those beels are 1. Hansadanga beel in G.P. (Gram

Panchayet) Dhubulia – I, 2. Noapara beel in G.P. Noapara – I & II, 3. Satitala beel, 4. Baro beel and 5. Rukunpur Beel in G.P. Sadhanpa – I. Present paper will assess the potentials of these beels as tourist spots.

Study Area

Study area is strictly confined within 5 major beels of the C. D. Block Krishnagar-II. Krishnagar- II is a block in Nadia district of West Bengal, India. Its Head Quarters is Dhubulia. The block lies between 23°23'N to 23°32'N latitudes and 88°21'E to 88°33'E longitudes. Its area is 124.37 Sq.Kms. It is bounded by Jalangi River, C. D. Block Krishnagar-I and C. D. Block Nabadwip to the south, C. D. Block Chapra and Jalangi River to the east and north-east, C. D. Block Nakashipara to the North and Burdwan district to the west.

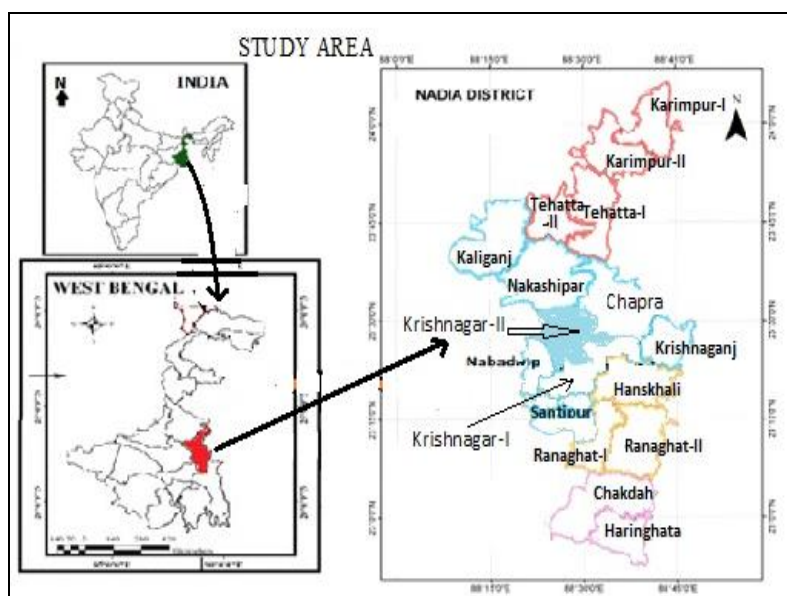


Figure 1 Location Map Of The Study Area

Materials

Materials for this study are these five beels and information and data related to these beels. Information on tourist influx at Nabadwip, Mayapur, Bethuadahari reserved forest and Krishnagar are also used as materials in this study.

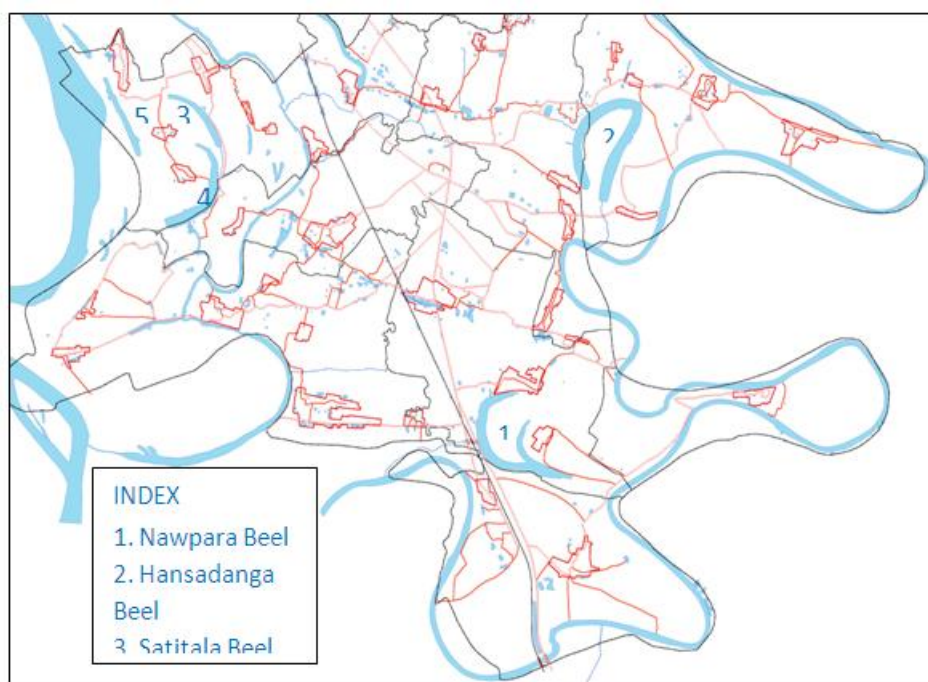


Figure 2 Five Major Beels In C.D. Block Krishnagar – II

Table: 1. Dimentions of beels of C.D. Block Krishnagar – II

G.P.	Sl. No.	Beel	Location	Area (Acre) @	Area (Sq. Meter)	Depth (Feet)*	Depth (Meter)	Volum e (M3)	Present Use	Owner ship
Dhubulia-I	1	Hansadanga	Banagram, J.L. No.	178.08	720655.76	6.50	1.98	1427763.20	Only Catching	Private
Noapara - I And II	2	Nowapara	Nawapara, Chuakhali, Rupdaha, Char Mahatpur	240.89	974849.65	13.17	4.01	3913257.05	Only Catching	Government
Sadhanpara – I	3	Satitala	Bargara, J.L. No. 2	43.37	175530.24	8.00	2.44	428012.94	Pisciculture	Government
	4	Baro	Bargara, J.L. No. 3	87.46	353929.73	9.00	2.74	970900.04	Fallow & Catch	Government
	5	Rukunpur	Rukunpur, Bargara (46.96	190030.28	8.75	2.67	506810.77	Pisciculture	Government
Total				596.75	2414995.67	9.08	13.84	7246744.00		Government

Source: Fisheries Mapping Project, Fishery Department, Govt. of West Bengal, Sector-IV, Saltlake, Kolkata-700098

II. Methodology

Beels were identified primarily from satellite imageries and finally ground truthing were done by field observations. Data on physical parameters of beels were collected directly by field survey and collected from Fisheries Mapping Project, Fishery Department, Govt. of West Bengal, and S. D. L. & L.R.O. Krishnagar, Nadia. Information on flora and fauna were collected by field tour. Data on tourism of Nabadwip and Mayapur were treated by simple mathematical and statistical tools and diagrammatically represented with the help of MS excel. Maps of these beels were prepared by outsource. For calculation of area and perimeters of beels, satellite imageries were used. Imageries were at first processed by Erdas Imaging software for radiometric correction and geometric correction. Then ArcGIS software was employed to digitize the image and to get areas and perimeters of beels. Depths were measured by meter scale during field observation.

III. Findings

Area of all the five beels were calculated by ArcGIS software and total area was 2414995.67 m². Cumulated perimeter for all those beels is 31701.56 meter. Beel wise details of dimensions are given in table 1. All these five beels are inland water body of riverine origin and classified as eutrophic lakes (Ggrawal, 1999). All these beels are floodplain lakes (Hillman, 1986) and named differently in different areas (Irion, 1975). Hansadanga beel and Nowapara beel had been originated during 18th century as ox-bow lakes being cut-off of meanders of the river Jalangi (Das, 2012, 2013, 2014) and their length to width ratio > 5 and also called channel lakes (Wetzel, 2001). Satitala beel, Baro Beel and Rukunpur beel in G.P. Sadhanpara-I are rejected channels of the river Bhagirathi. So water of all these beels is sweet water. pH ranges from 6.5 to 7.5.

Distance of Hansadanga beel is only 6 km from Krishnagar, head quarter of Nadia District. Nowapara beel is 21 km away from Krishnagar. Satitala beel, Baro Beel and Rukunpur beel are within 25 km from Krishnagar by road. No beels are beyond 30 km from Mayapur, the head quarter of International Society for Krishna Consciousness (ISKCON) and world famous Vaishnav pilgrim place. Each and every beels are within 30 km from Bethuadahari Wildlife Sanctuary. All these beels along with other places of tourist’s interest like Nabadwip, Mayapur, Bethuadahari Wildlife Sanctuary, Krishnagar and Bahadurpur Reserved Forest are within 130 km from Kolkatat. Bahadurpur Reserved Forest is located on the south bank of the Hansadanga beel. All these five beels from each other are within 15 km. Therefore, there is a close proximity of these beels.

Discussions

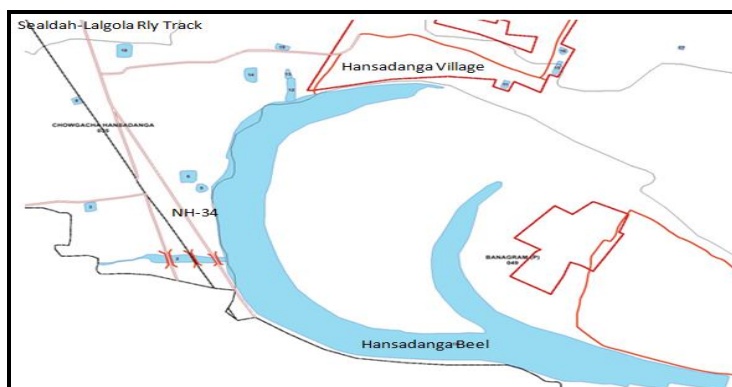


Figure: 3 Double Hooped Shape Made Hansadanga Beel An Unique Ox-Bow Lake In The World

Hansadanga Beel is an ox-bow lake having unique shape of its kind in the world. It covers an area of 7,20,655.76 m². Genetically it is an ox-bow lake, originated by cut-off of an acute meander of the river Jalangi but its shape is unique (Fig. 2). Numerous kinds of fishes of the beel are of great demand in local markets. Migratory wading birds along with sedge-birds and local birds (Fig.) are much more than enough to attract one's tourist's watch (Mitsch et al, 2009; Weller, 1999), especially during winter months. There is a tourist resort named 'Honey Moon Resort' on west bank of the beel for not homely but a different staying. Some other private resorts are under construction. The beel completely encircle a village named Banagram with its unique people and their living.

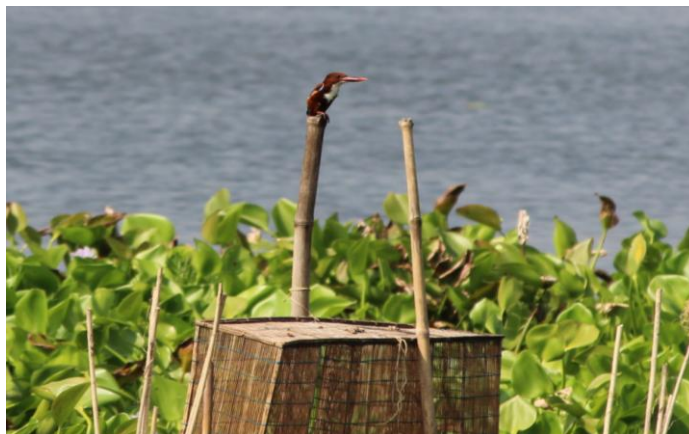


Figure 4 Kingfisher In Baro Beel

Nowapara Beel is located in Nowapara – I and II G.P. of C. D. Block Krishnagar –II. It is about 7 km away from Dhubulia, Block head office. This beel also originated during 18th century in the same way as Hansadanga beel. This closed-end hairpin-shaped ox-bow lake (Fig. 3) also supplies tasty fish of great demand to local markets. Colorful migratory birds and perennial birds along with other minor animals are found in the beel.

Satitala Beel is a rejected channel of the river Bhagirathi. This government owned beel is now under fish-cultivation by Sadhanpara and Rukunpur Fishermen Co-operative Society Ltd. The beel is within 10 km from Nabadwip and Mayapur and 25 km from Krishnagar.

Baro Beel And **Rukunpur Beel** is also derelict channel of the river Bhagirathi (Fig. 3). Former is a fallow beel used only for fish catch and jute retting. Later one is used for fish cultivation during season because it is inundated annually by flood water of river Bhagirathi.

Krishnagar, headquarter of **Nadia District** is famous for its tourist spots like Royal Palace, Clay Modelling of Ghurni, Cathedral, etc. Ghurni is the birthplace of Yogiraj Sri Shyama Charan Lahiri fountain-head of Kriya yoga. The Jhulan Mela is celebrated around the Rajbari in July–August and Baro Dol (as it is held 12 days after Dol Purnima) in March–April every year. The church is famous for its architectural and sculptural splendor. There are 27 oil paintings describing the life of Lord Jesus Christ. Of special mentions are the wooden sculptures by Italian artists. Others include the College Bhavan (1846), the Public Library (1856), Krishnagar Collegiate School (1846) the former house of barrister Monomohun Ghose, Anandamoyi Tola Kali Bari and the Protestant Church. Company Bagan is a horticultural garden run by the state government.



Figure 5 Lenin And By Artists Of Ghurni, Krishnagar

Nabadwip, within 15 km from any of these five beels, is birth place of Sri Chaitanya, leader of Bhakti movement in 16th century Bengal and great social reformer. He is considered as an incarnation of God. Millions of pilgrims visit this place every year. So, there is high potency of these beels to prosper as a tourists spot.

Mayapur, the spiritual capital of the world, is located on the banks of the Ganges river, at the point of its confluence with the Jalangi, near Navadvip, West Bengal, India. Headquarter of ISKCON (Fig.) is situated in Mayapur and it is considered a holy place by a number of other traditions within Hinduism. Sri Chaitanya is regarded as a special incarnation of Krishna in the mood of Radha played a lot of role here. Mayapur is visited by over a million of pilgrims annually. During the visit one can see the huge headquarters of the International Society of Krishna Consciousness (ISKCON) and ‘a long stream of saffron-robed devotees chanting’ the Hare Krishna. Mayapur is also within 15 km from all these beels giving them more gravity to attract international along with national tourists. Way to Mayapur runs on the west bank of the Hansadanga beel. Mayapur is also famous for Ballal Dhibi, a ruined architecture of 12th century by Sena dynasty and named after King Ballal Sen.



Figure 6 Headquarter Of Iskcon

Bethuadahari Wildlife Sanctuary is situated in the C. D. Block Nakashipara of Nadia District, West Bengal, India. The sanctuary is located beside National Highway 34. It covers an area of 67 hectares, and was established in 1980 to preserve a portion of the central Gangetic alluvial ecozone. The sanctuary has a large population of spotted deer (chital), jackal, Bengal fox, porcupine, and common langur. Bird species include parakeets, Indian cuckoos, barbets and other smaller birds, while reptiles and amphibians include pythons, monitor lizards and gharials, a type of small crocodile. The sanctuary is wonderful space for beginner photographers’ tourists etc. The amazing rock python is the greatest attraction of the forest (Fig.). Among the trees found within the sanctuary are shal, teak, arjun, Indian rosewood, and bamboo. Nearness of this sanctuary also multiplies the potency of these beels to be tourist spot.

Bahadurpur Reserved Forest is situated on the south bank of the Hansadanga beel, an ox-bow lake having unique shape of its kind in the world. Forest is planted with teak, arjun, simul and other local species. One can hear the rhythm of dropping leaves within this forest of peace broken by jungle boar and birds of VIBGYOR colors.

How These Beels Will Fly High As Tourist Centers?

Strategies through which these beels could be developed as successful tourist spots with their heritage resources can be summarized as bellow-

1. **Migratory birds** come regularly in all these five beels during winter. Proper protection measure should be taken for those birds to provide them environment suitable for breeding. Bird watching may be a good item of attraction to tourists.
2. **Swan and geese along with Campbell ducks** reared in floating-cage on commercial basis will positively attract tourists for their beauty (Fig.). Moreover, meat and eggs in dishes of tourists must raise the mercury.
3. **Duck Chase** is a game where ducks reared for commercial purpose swimming on open and wide water body are tried to catch. This may be a funny game for tourists.
4. **Nouka Baich** is the boats race popular in rural Bengal. Colorful boats may be introduced for Baich and participants will be tourists. Each tourist participant must be well protected by life-jacket etc to do in much water.
5. **Angling** may be very attractive to tourists as these beels are much rich in fish population. Angling can earn a lot along with fish cultivation.
6. **Sikara or house boat** may be kept for tourists stay. These may add glamour to the beel as tourist spot.

7. **Home stay** with local community to experience their cultural heritage and agricultural practices are also recommended. This may raise and increase respect and love for farmers, their living and their culture.
8. **Local festivals and village culture** like Jagadhatri puja (October), Rasa (November), Dol utshav (April/May), Pous Parvana (January) etc have great importance in Bengal. These beels can take opportunity of thousands of tourists visiting these festivals.
9. Proximity to **Historic town Krishnagar, pilgrim town Nabadwip, spiritual capital Mayapur (ISKCON), Bethuadahari Wildlife Sanctuary, Bahadurpur forest, dolls of Ghurni and archaeological treasury Ballal Dhibi** must add potency to these beels.
10. Finally eco-tourism practices forbidding plastic carry bags, wastage, and misuse of natural resources and encouraging nature fresh local foods, recycle, reuse and reduce of wastage are to be practiced.
11. All these are only achievable through local community participation and adequate advertizing by government. Local government must be actively involved within the project.
12. The most potential Hansadanga beel is a private property and its development as a tourist center is obvious. Already two tourist's resorts have been built up. But this is the most threatened beel amongst five. So, strict conservation practices are recommended through co-operative society or trusty board.

IV. Conclusion

These five beels with their potent natural heritage like vast extents, rich fish population, birds, aqua flora; built heritage like resorts, beautified embanks, proximity to other tourist spots; living heritage of local people are much potent for ecotourism. As four amongst five beels are government property, government's pioneering role can light the first lamp.

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Reference

- [1]. Bacon, P. R. (1987). Use of Wetlands for tourism in the Insular Caribbean. *Annals of Tourism Research* , 14, 104-117.
- [2]. Brinson, M. M. (1995). A guidbook for application of hydrogeomorphic assesments to riverine wetlands. *Wetlands Research Program Technical Report WRP-DE-11* .
- [3]. Costanza, R. D. (1997). The Value of the World Ecosystem Services and Natural capital. *Nature* , 387, 253-260.
- [4]. Das, B. C. (2012). Form-ratio of deltaic channels: a case study of the river Jalangi. *Conscientia* , 1 (3).
- [5]. Das, B. C. (2013). CHANGES AND DETERIORATION OF THE COURSE OF RIVER JALANGI AND ITS IMPACT ON THE PEOPLE LIVING ON ITS BANKS, NADIA.. *Ph.D. thesis submitted to Calcutta University* .
- [6]. Das, B. C. (2014). Anthropogenic causes of channel shifting and decaying of deltaic rivers: a study on the river jalangi. *Application of modern techniques for the management of contemporary environmental hazards and disasters. Proceedings of UGC sponsored national seminar* , 92-105.
- [7]. De Stefano, L. (2004). *Freshwater and Tourism in Mediterranean*. WWF.
- [8]. Doyle, J. Doniger,A.S. (2000). *Wetlands for Citizens & Land Use Decision Makers*. Heath Department . Monroe: The Environmental Protection Agency.
- [9]. Drumm, A. M. (2004). The Business of Ecotourism. *development and Management* , 2.
- [10]. Ggrawal, S. C. (1999). *Limnology*. New Delhi: APH Publishing Corporation.
- [11]. Gutteridge, H. A. (n.d.). Stream clearing on the Colo River-environmental impact statement.
- [12]. Hillman, T. J. (1986). *Billabongs in P. de Deckker and W. D. Williams, eds Limnology in Australia*. Dordrecht: W. Junk Publ.
- [13]. Irion, G. F. (1975). Chemismus and Mineralbestand Amazonischer. *Naturwissenschaften* , 62 (179).
- [14]. Kusler, J. A. (2006a). Common Questions:Definition of the term Wetland 'Function' and 'Value'. *Association of State Wetland managers, Inc, USA* .
- [15]. Leask, A. a. (1990). *Heritage Visitor Attractions. An Operation Management Perspective*. London: Cassell.
- [16]. Lim, C. a. (2003). *Ecologically Sustainable Tourism management*. Mediterranean Commission on Sustainable Development.
- [17]. Lim, C. a. (2014). Use of Wetlands for sustainable Tourism Management. 490-495.
- [18]. Majumder, S. C. (1941). *Rivers of Bengal*. Calcutta: University of Calcutta.
- [19]. Mitsch, W. J. (2009). *Wetland Ecosystems*. New Jersey: John Wiley & Sons.
- [20]. Miyamoto, M. Y. (2003). Temporal Variation in methane Emission form Tundra Wetlands in a Permafrost Area, North-Eastern Siberia. *Atmospheric Environment* , 34, 1205-1212.
- [21]. Nakano, T. K. (2003). Evaluation of Multispatial Scale Measurements for Monitoring Wetland vegetation, Kushiro Wetland, Japan.
- [22]. Orams, M. B. (1995). Towards a More Desirable Form of Ecotourism. *Tourism Managment* , 16, 3-8.
- [23]. Potter, W. K. Estimating Potential Reduction Flood Benefits of Restored Wetlands., (pp. 34-38).
- [24]. Pressey, R. A. Impact of flood mitigation works on costal wetlands in New South Wales. NSW.
- [25]. Sfougaris, A. P. (2009). Managing Wetlands-Tourism Interactions. *Discussion Paper Series* , 15 (6), 119-138.
- [26]. Sharma, P. (2011-2012). *Ecology and Environment* (Eleventh Revised Edition ed.). Meerut: Rastogy Publications.
- [27]. Sharma, P. (2011-2012). *Ecology and Environment* (Eleventh Revised Edition ed.). Meerut: Rastogy Publications.
- [28]. Silberberg, T. (1995). Cultural Tourism and Business Opportunities for Museum and Heritage Sites. *Tourism Management* , 16, 3-8.
- [29]. Trigger, B. G. (1967). Settlement Archaeology: its goals and promise. *american antiquity* , 32 (2), 149-160.
- [30]. Turner, R. K. (1991). Economics and Wetland Management. *Ambio* , 20 (2), 59-63.
- [31]. UNWTO. (2012). Destination wetlands: supporting sustainable tourism. 2012. Secretariat of the Ramsar Convention on Wetlands, Gland, Switzerland, & World Tourism Organization (UNWTO),Madrid, Spain. Ramsar, Iran: Secretariat of the Ramsar Convention on Wetlands (Ramsar, Iran, 1971) and theWorld Tourism Organization (UNWTO).

- [32]. Weller, M. W. (1999). *Wetland Birds*. Cambridge: Cambridge University Press.
- [33]. Wetland. (2011, 09 25). Retrieved from [www.wetland.ask.com Encyclopedia.htm](http://www.wetland.ask.com/Encyclopedia.htm).
- [34]. *Wetland*. (2011, 09 25). Retrieved from [www.wetland.ask.com Encyclopedia.htm](http://www.wetland.ask.com/Encyclopedia.htm).
- [35]. Wetzel, R. G. (2001). *Limnology Lake and River Ecosystems*. California: Elsevier.
- [36]. World Tourism Organization (2001), *The British Ecotourism Market*, Special Report, page 19.
- [37]. WWD, R. (2012). *Wetland Tourism a great experience, Responsible tourism supports wetlands and people*. Ramsar: Danone/ Evian.
- [38]. WWD, R. (2012). *Wetland Tourism a great experience, Responsible tourism supports wetlands and people*. Ramsar: Danone/ Evian, .