

Developing Kanjli Wetland as a Eco-Tourist Spot for Environment Sustainability

Dr. Harvinder Singh

Associate Professor & Head

Department of Geography

GKSM Govt. College, Tanda Urmar,

Hoshiarpur (Pb.)

Email: harvindersinghthethy@gmail.com

INTRODUCTION:

Under the International Ramsar Treaty (Iran, 1971) all waters that are natural or artificial, temporary or permanent, stable or flowing, sweet or salty that are less than six meters in depth at low tide, marshes, peat-bogs, fens and swamps are covered under the meaning of wetlands. Wetlands Day is celebrated every year on 2nd February.

Wetlands cover a dismal 0.5 per cent geographical area of Punjab compared to 1.5 per cent in India and 6 per cent of the total land. Wetlands perform unique functions and provide tremendous advantages particularly relating to our environment sustainability. Wetlands are important source of storage of water. Wetlands of Punjab are the major source of supply of water for drinking, irrigation and industries. They help in the maintenance of underground water table, water purification, and retention of pollutants, nutrients and sediments. . Wetlands of Punjab are also important source of income as they attract large number of tourists from within the state and from other parts of the country. In brief a wetland is not merely a water feature but it is amongst the most productive ecosystems in the world.

OBJECTIVES:

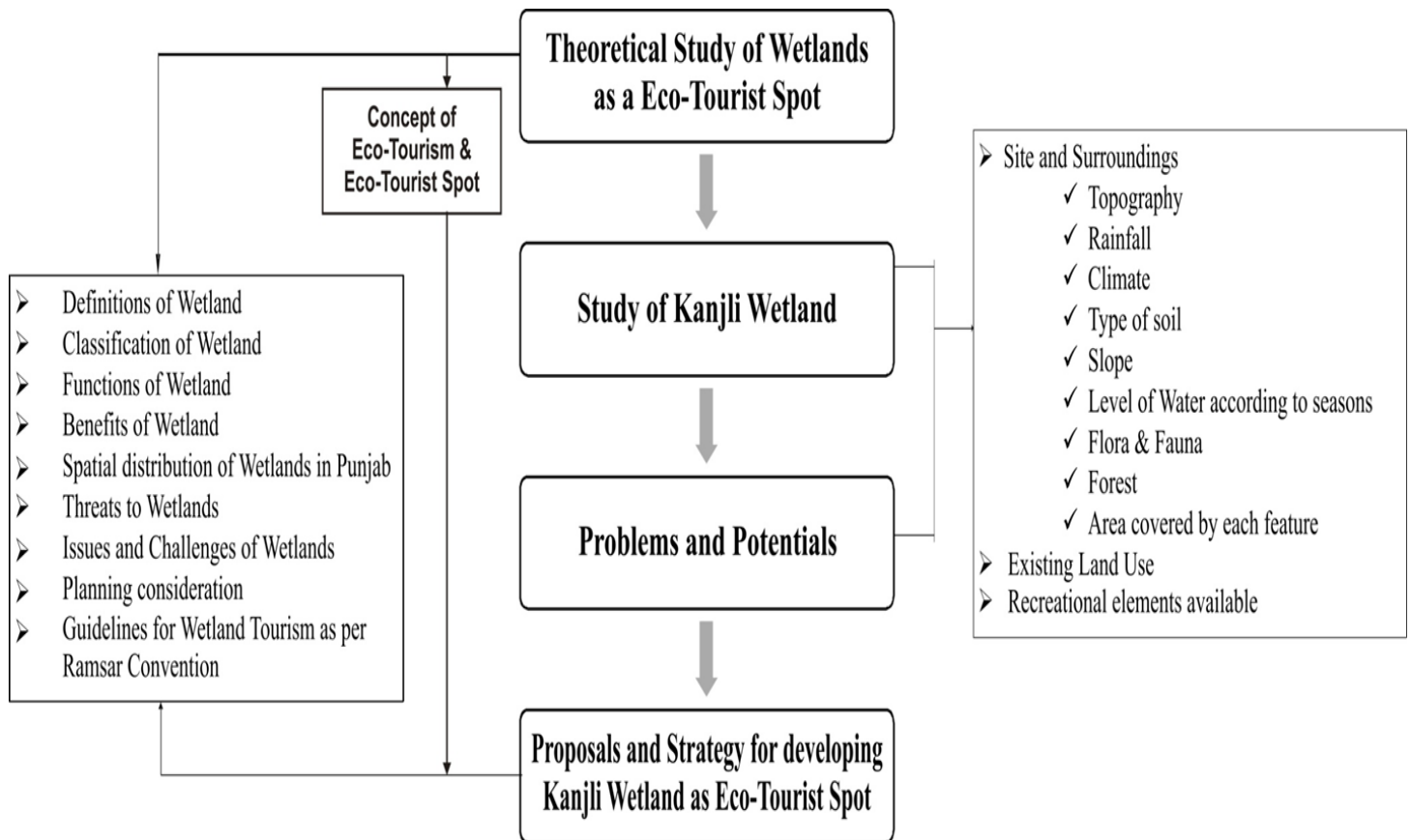
This research paper aims to achieve the following three objectives, that is

- To study the wetlands of Punjab and their functions briefly and concept of eco tourist spot.
- To have a detailed study of Kanjli wetland in terms of characteristics, problem faced and available potentials to develop it as an eco- tourist spot.
- Basic considerations for developing a eco tourist spot..
- Proposals for Kanjli wetland as an eco-tourist spot with environment sustainability.

METHODOLOGY:

The following flow diagram explains the methodology followed for achieving the above objectives.

It includes the theoretical study of various wetlands of Punjab and functions performed by them in general and explanation of eco tourist spot. On the other hand side the detail study of Kanjli wetland in terms of its characteristics, problems, potential land and considerations. From these two, final proposals are drawn to develop it as eco tourist spot with respect to sustainability of environment in Kapurthala city.



CONCEPT OF WETLAND AND ECO-TOURIST SPOT:

Under the International Ramsar Treaty (Iran, 1971) all waters that are natural or artificial, temporary or permanent, stable or flowing, sweet or salty that are less than six metres in depth at low tide, marshes, peat-bogs, fens and swamps are covered under the meaning of wetlands.

In 1991 The Ecotourism Society board of directors defined ecotourism as:

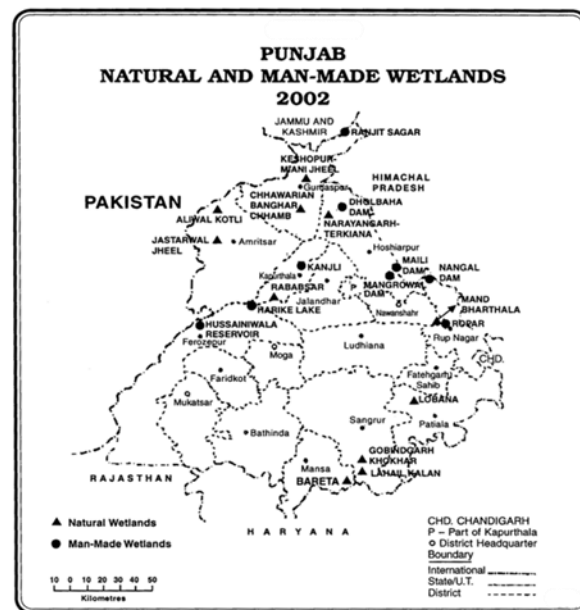
“Responsible travel to natural and cultural areas that conserves the environment and sustains the well-being local people”. Tourist Spot- a place which provides recreational facilities to the Tourist and Tourist is a person who moves from his native place for recreational purposes. There are basic three aspects of eco tourist spot i.e. .Focal Attractions, complementary attractions ,support attractions .Eco-tourist spot is a recreational spot created using local local elements with minimum damage to environment. Ecotourism enhance the income of local people and helps in sustaining the local environment.

WETLANDS OF PUNJAB AND THEIR FUNCTIONS:

There are 21 wetlands are in Punjab. Out of which 12 are natural and 9 man-made. The three National Wetlands found in Punjab are Harike, Ropar and Kanjli which have also got a place in the Ramsar list of Wetlands of International Importance. Hussainiwala Reservoir and Nangal lake wetlands of Punjab have also been nominated to Ministry of Environment and Forests for inclusion in the list of National Wetlands.

NATURAL WETLANDS			MAN-MADE WETLANDS		
NAME OF THE WETLAND	LOCATION	AREA IN (ACRES)	NAME OF THE WETLAND/ LAKE	LOCATION	AREA UNDER WATER (IN ACRES)
Jastarwal Jheel	Ajnala ()	135	Hanke Lake	Hanke (Junction of, Kapurthala and Ferozepur)	10131
Aliwal Koth	Ajnala ()	25	Kanjli Lake	Kanjli (Kapurthala)	452
Bareta	Bareta (Maana)	50	Ropar Lake	Rup Nagar (Rup Nagar)	3373
Chhawarian Banghar	Chhawarian (Gurdaspur)	315	Hussainiwala Reservoir	Ferozepur (Ferozepur)	1700
Chhamb			Ranjit Sagar	Shahpur Kandi (Gurdaspur)	8000
Keshopur-Miani Jheel	Keshopur Miani (Gurdaspur)	1000	Dholbaha Dam	Dholbaha (Hoshiarpur)	326
Maud Bharthala	Bharthala (Nawanshahr)	150	Mali Dam	Mali (Hoshiarpur)	178
Narayangarh-Terkiana	Dasuya (Hoshiarpur)	200	Mangrowal Dam	Mangrowal (Hoshiarpur)	173
Sital Sagar	Manzar (Hoshiarpur)	Major Part in Himachal Pradesh	Nangal Lake	Nangal (Rup Nagar)	988
Rababsar	Bharowana (Kapurthala)	100			
Lobana	Nabha ()	28			
Lahail Kalam	Lahail (Sangrur)	50			
Gobindgarh Khokhar	Gobindgarh, Khokhar (Sangrur)	20			

Source : 2002 pscst.com



Area wise Keshopur-Miani Jheel located in Gurdaspur is the largest natural wetland of Punjab whereas Gobindgarh Khokhar located in Sangrur district is the smallest natural wetland of Punjab. Sital Sagar wetland apart from Punjab extends also in Himachal Pradesh.

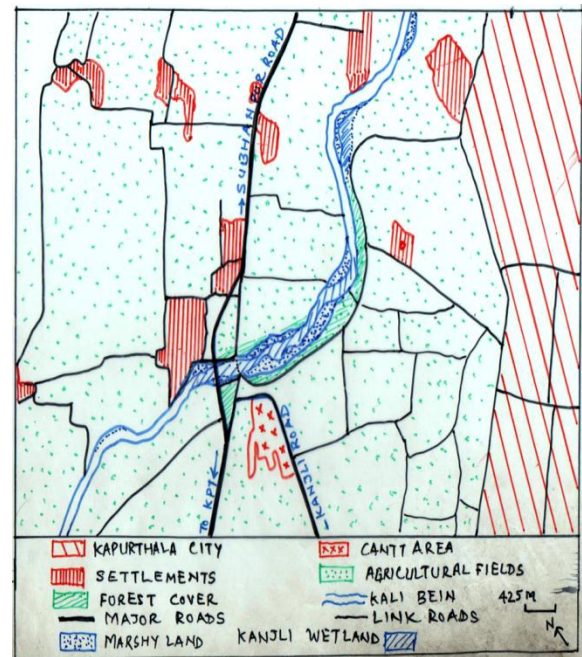
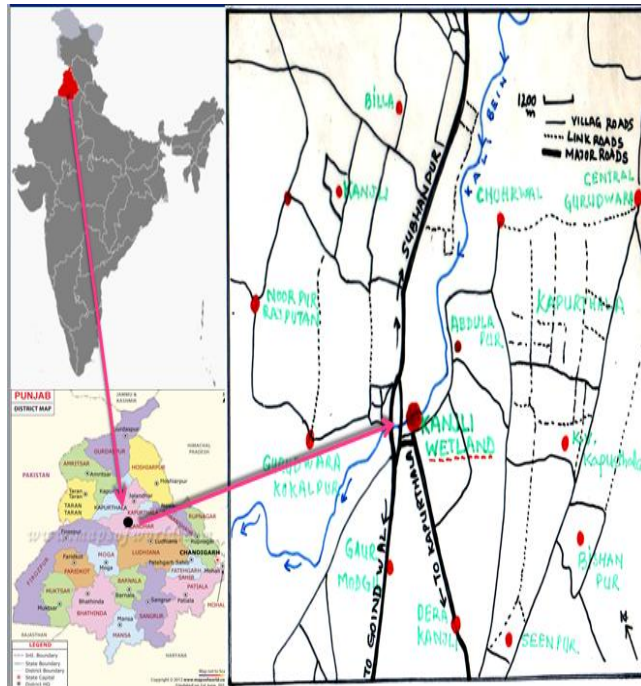
Nine man-made wetlands of Punjab are located in different districts. These are developed mainly after the construction of dam or barrage on the flowing water resources. Harike with an area of 4100 hectares (10131 acres) is the largest wetland in North India. It is a vital source of water for the people of Punjab and neighbouring Rajasthan. It was created in 1952 by the construction of a barrage at the confluence of the rivers Sutlej and Beas under the administrative boundaries of Amritsar, Kapurthala and Ferozepur districts. Harike plays an important role in maintaining the hydrological balance in the catchment area of the Sutlej and the Beas rivers. It supports rare, vulnerable and endangered fauna species including the testudine turtle and the smooth Indian otter, both of which are on the International Union for Conservation of Nature's list of threatened animals. The Reservoir at Ropar was formed with the construction of a head regulator in 1952. It is fed by the river Sutlej and some choes in the Shivaliks range. The Ropar wetland spreads over an area of 1365 hectares (3373 acres). It plays an important hydrological role in recharging the aquifers as the stratigraphy of this area is sandy. It is an important source of water for irrigation, industry and drinking even in remote places via Sirhind and Bist Doab canals.

Function and Advantages of Punjab's wetlands:

- Major Source of Fresh Water Storage and Supply for Drinking, Agriculture and Industries.
- Maintain Underground water Table.
- Help in Water Purification.
- Regulate Hydrological Cycle.
- Stage for Wildlife Sanctuaries.
- Refuges to Endangered Species of Fauna and Flora.
- Support Diverse Food Chains and Food Webs.
- Staging Ground for Migratory Water-Fowl.
- Source of Fish, Vegetables, Fodder, Fuel wood, Medicinal Plants and Water Hyacinth for Biogas.
- Attract Tourists for Recreational Purposes
- Maintain Ecosystem Balance and Sustain the Environment

KANJLI WETLAND, KAPURTHALA:

It came into existence with the construction of head regulator in the rivulet of Kali Bein in 1870 by Raja Randhir Singh to provide irrigation facility to the hinterland. Declared as Wetland of National Importance in 1988. Ramsar Convention in February, 2002 designated it as internationally important wetland. It is spread over 12 villages. It is a man made fresh water riverine system. Kanjali wetland is located on Kali Bein which is ultimately joins Harike Wetland downstream after covering a distance of about 20 kms.). The Kanjali wetland acts as a key regulator of ground water discharge and recharge. It plays an important role in maintaining water quality, hydrological balance and flood management. This wetland has surface area around 490 ha. Its average depth is 10 feet and surface elevation is 690 foot. It is located in the gentle rolling alluvial plain of Bist-Doab. It has slope toward south-west direction. It is located on the Kapurthala-Subhanpur road about 12 km away from Jalandhar-Amritsar National Highway. It has co-ordinate 31.42°N and 75.37°E.



Kanjli Wetland: Location and Site Description

KANJLI WETLAND FEATURES:

- Migratory Birds are there
- Mammals in the wetlands are the Indian Civet, Mongoose, Indian Porcupine, Squirrel and hare.
- Twelve varieties of trees found here
- 11 Species of aqua flora, 34 species of Zooplankton and 15 species of Macro invertebrates.
- Manmade fresh water wetland.
- Agriculture crop wheat, Rice, Sugarcane are grown in the surrounding land use.

PROBLEMS FACED BY KANJLI WETLAND:

- Extensive growth of water hyacinth due to nutrients and pesticides from adjoining agricultural fields.
- Anthropogenic pressure and consequent land encroachment
- Eutrophication, particularly due to in-situ decay of hyacinth
- Conversion of wetland for agriculture, human habitation, industrial expansion and recreational activities.
- Illegal and indiscriminate fishing causing disturbance to bird life.
- Disturbed ecosystem
- Lack of Government Care and facilities
- Lack of Tourist attraction facilities in the wetland.
- Maintenance Problem.

POTENTIALS OF KANJLI WETLAND:

- Availability of Wildlife in natural environment.
- .Gentle slope and smooth flow of water
- It has unique socio-religious importance due to its association with Sri Guru Nanak Dev Ji.
- Dense Forest Cover
- Situated Near to Kapurthala City which is known as City of Palaces.
- It has a water regulator to control the flow of water.
- It has a international recognition.:
- Wetland provide water supply for agriculture in the Kapurthala district.
- Recharges the ground water table
- Drains excessive rainwater from sensitive crops like wheat, potato, etc.
- Acts as a sponge by absorbing the flood waters.
- Enhanced the growth of 12 variety of trees recorded in the wetland are Acacia Arabica, Albizzia Lebbeck, Azadirachta indica, Delbergia sissoo, Eucalyptus hybrid, etc.
- Enhanced the growth of 11 species of aquaflora, 34 species of Zoo Plankton and 15 species of Macro invertebrate species.
- The tortoise is the common reptile found in wetland.
- Two varieties of birds are found i.e. common resident birds (28 species) and migratory birds (9 species).
- Migratory birds are goose, white eyed pochard, wigeon, tufted pochard, common teal, etc.

- Mammalian fauna are also found in wetland. It includes Indian Civet, Mongoose, Indian Porcupine, Squirrel and common Indian Hare.

GUIDELINES AND CONSIDERATIONS FOR DEVELOPING A WETLAND AS AN ECO-TOURIST SPOT:

Ramsar Convention guidelines for Wetland Conservation

- Wetland tourism development should focus on environmental education.
- It Promotes public environmental awareness.
- It encourages public participation in conservation actions
- Low impact transport such as hiking and walking is appropriate for wetland tourism.
- Wetland should be based on enjoying and appreciating nature and cultural features.
- It should have eco-friendly environment with all over ecology of the wetland, which states that there should be no any negative impact on the wetland ecosystem.

Developing Considerations

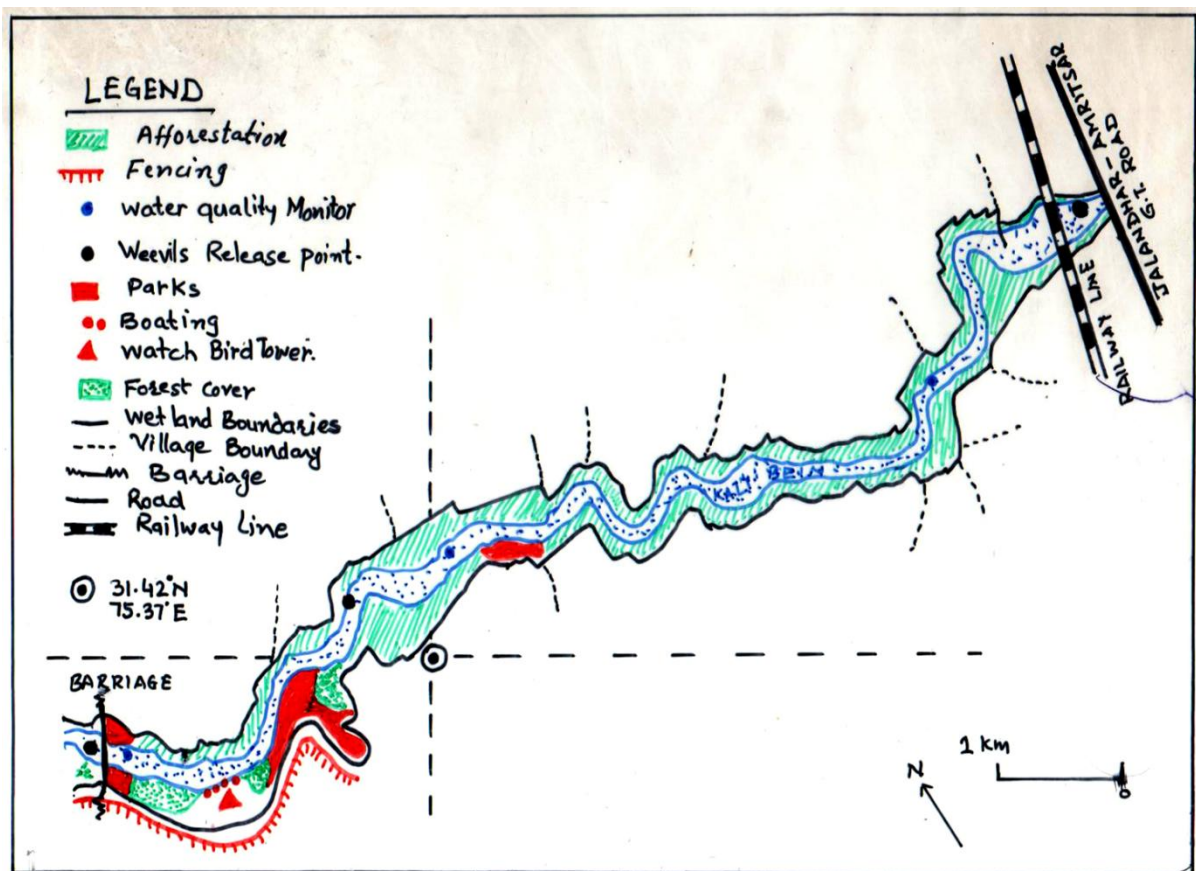
- A harmonious relationship between humans and nature is essential for the sustainable use of lakes
- To create awareness among people, notice boards should be displayed in the surrounding areas of the lake, informing Do's and Don'ts, etc.
- An appropriate ecological restoration mechanism should be implemented to regain and protect the physical ,chemical ,and biological integration of wetland ecosystem
- Land around the lake and at a certain distance from its shore-perimeter should be declared as eco-sensitive area and dumping of any solid waste into these areas should be made a punishable offence. For collection of solid waste, collection-bins need to be placed around the Water Body and regular cleaning of solid waste should be undertaken.

- Any commercial use of the lake and its immediate surrounding areas should be properly assessed before conveying the permission.
- The Lakes should live with their inherent natural features to remain as healthy Water Bodies, e.g., fish, frogs, turtles, micro-organisms, zoo planktons,, including varieties of aquatic vegetation (rooted, submerged, floating, etc), all these are catalytic to improving water quality.
- The tourism in wetland should promote in wetland with out interfering the environment of wetland
- The existing infrastructure should be optimally used .and provision of new infrastructure should be according to requirements.

PROPOSALS FOR DEVELOPING KANJLI WETLAND AS AN ECO-TOURIST SPOT:

- Judicious hyacinth (weed) control by the irrigation department, district police, and even army units.
- Hyacinth control through biological control by releasing two weevil species
- Introduction of more fish species in the lake judiciously to avoid any adverse effects of exotic species.
- Afforestation measures around the lake area and in the small islands, with mixed indigenous species of trees to prevent soil erosion resulting in siltation reduction in the lake.
- Selective Fencing of the Wetland to prevent excessive grazing to preservation of important pockets provide habitat for wading birds and to check encroachments
- Public awareness campaigns through mass-media, educational material, camps, etc.
- Creation of Bird Watch Tower in the vicinity of wetland.
- By providing boating facility in the wetland.

- By creating nature based huts for the tourists.
- Implement tot-lots facility for children.
- Creating Walking Pathways
- Small Market Units with 10-15 shops with the support of local people and goods.
- Parking Facilities for the tourists.



Kanjli Wetland : Proposals

REFERENCES:

1. A Directory of Wetlands of International Importance, India 21 N 007 and 21 N 008.
2. en.wikipedia.org>wiki>Kanjli_Wetland
3. Gulati Vishal, “Wetlands cover only 0.5 pc area in Punjab, The hyacinth menace at Harike and Kanjli”, The Tribune, February 2, 2004. pp.11.
4. “Punjab Environment Status Report, 1995”. Punjab State Council for Science & Technology, Chandigarh. pp. 99-108.
5. punjabtourism.gov.in
6. “Status of Wetlands”, 2002 PSCST.COM
7. Wright Belinda, “Harike Wetland Conservation Mission”, Punjabilok, Email:blue@nda.vsnl.net.in