

HISTORICAL PERSPECTIVES AND FUTURE PERCEPTIONS
OF SACRED PILGRIMAGE SPOT OF CENTRAL GUJARAT,
INDIA – A CASE STUDY OF *GOMTI* WATER TANK

Hiren B.Soni¹, Sheju Thomas¹

Key words: Pilgrimage Wetlands, Geographical Scenario, Cultural Heritage, Anthropogenic Interventions, Environmental Issues, Mitigating Measures.

Abstract. Hindu pilgrimage sites in India always experience tremendous influxes of pilgrims and they are eventually subjected to considerable environmental impact. This article demonstrates how this sacred wetland has been established, and how since then it has been a religious – urban place which receives thousands of pilgrims daily. The present review is the case study of one of the anthropogenic freshwater wetland ecosystem of *viz.* Gomti Pond of Dakor Town, Kheda District of Central Gujarat, India. The pond is one of the esteemed and religious Hindu pilgrimage places, associated with exodus of Lord Krishna and his devotee Bodana. Geographically, the place is a regional province, fringed by mainly three districts *viz.* Anand, Kheda (*Charotar*) and Ahmedabad, reflected by identical culture, heritage, traditions, rites, and rituals. The present article has been prepared referring to various printed and on-line published literatures, visiting the place several times, and gathering information from the locals by semi-structured questionnaires. Besides, the screening of the entire area was done and a complete scenario was observed. This article delineates how the most sacred town ‘Dakor’ got recognized as a renowned pilgrimage spot, attracting the people from all over the State and the Country for its splendid historical significance, vivid geographical features, natural habitats, prevalent biotic community, variegated human population, and its holistic scenario. Keeping in mind the future challenges and projected perceptions about Gomti Pond, Dakor, many questions are still to be unanswered about how it is losing its natural habitats and biotic components. The information provided in the form of an article undoubtedly offers an insight for better understanding the environmental aspects to be addressed effectively for its better protection, conservation and management.

Wetlands

Wetlands are the area of transition between land and water, where saturation with water is the dominant factor determining the nature of soil development and

¹ Institute of Science and Technology for Advanced Studies and Research (ISTAR),
Department of Environmental Sciences, Vallabh Vidyanagar - 388 120 (Gujarat) India
drhirensoni@gmail.com, sheju.thomas.aribas@gmail.com

the types of plants and animal communities living in it. According to Ramsar convention (1971), wetlands can be defined as a “*Areas of marsh, fen, peatlands, whether natural or artificial, permanent or temporary, with water that is static or flowing, fresh, brackish or salty, including areas of marine water the depth of which at low tides does not exceed six meters*”. Wetlands are important as they aid recycling the nutrients, purify water, attenuate floods, maintain stream flow, recharge ground water, provide drinking water, fish, fodder, fuel, wildlife habitat, control rate of run-off, buffer shorelines against erosion and recreation (Prasad *et al.*, 2002).

Wetlands occur extensively throughout the world in all climatic zones and are estimated to cover about 6.4% of the Earth’s surface. Out of which, India harbours about 18.4% of global wetlands, and Gujarat supports 36% of the country’s wetlands (MoEF, 1990). Globally, wetlands cover 6.4% of the Earth’s surface, of which 30% are bogs, 26% fens, 20% swamps, and about 15% are flood plains. Compared to seawater, the amount of freshwater is very small; 69.6% is locked in continental ice, 30.1% in underground aquifers, and 0.26% in rivers and lakes.

Lakes occupy less than 0.007% of the world’s freshwater (UNEP, 1994). India has 16,429 wetlands, covering an area of about 4.1 million hectares (MoEF, 1990) of which 2,175 are natural and 65,254 are man-made wetlands. Wetlands in India (excluding rivers) account for about 18.4% of the country’s geographical area. Gujarat harbours around 36% of the total wetland area of the country. Out of 831 wetlands in the state, 483 (58 %) are coastal and 393 (47%) are inland wetlands [including 231 (28 %) small and big reservoirs] (GEER, 2003).

Geographical scenario

Gujarat is a state of western India with a population exceeding 60 million, with an area of 1, 96,024 sq km; has an average annual rainfall of 93.2 cm, and literacy rate of 69.97%. The state got its name from “*Gujjars*” who ruled the area since the 11th century A.D. (Gujarat State Portal, 2009). Gujarat consists of 25 districts (Gujarat Tourism, 2010), and is home to individuals with diverse religions, with the highest ratio of “*Gujarati*” speaking individuals.

Biogeographically, the area falls in the 4-B Gujarat-Rajwara biotic province of the semi-arid biogeographical zone (Rodgers and Panwar, 1988). Gujarat, also called Modern Gujarat, started with the advent of Europeans in 1614 A.D. Earlier Gujarat, soon after the independence, was included in the old city of Bombay under the reign of the Bombay Presidency (Modern Gujarat, 2011). Ahmed I, the first independent Muslim ruler of Gujarat, was the founder of Ahmedabad in 1411, which was made the capital of Gujarat; but, after the spilt of old Bombay

to Maharashtra and Gujarat in the year 1965, a new capital was planned viz. Gandhinagar, named after Mahatma Gandhi (Gujarat Plus, 2000) (Figure 1).

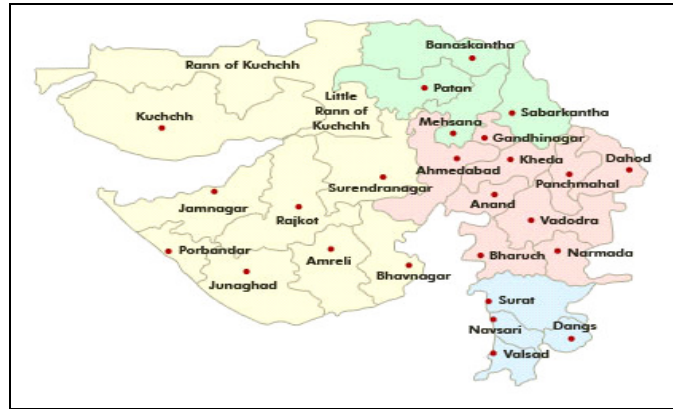


Figure 1. Map of Gujarat showing Districts of Central Gujarat (Pink Shadow)

Cultural heritage

The state of Gujarat is famous for the numerous pilgrimage spots; this article is focused mainly on Dakor, which is a famous Hindu pilgrim heritage of central Gujarat, in Kheda district, also called “*Charotar*”. Festivals at Dakor are held on *Kartik*, *Falgun*, *Chaitra* and *Ashwin Purinma* (full moon days), during which lakhs of people visit this holy shrine. Every first day of bright half of moon of *Kartik*, *Annakoot* is celebrated; the largest assortment of sweets and food is offered to Shree Ranchhodraji (Lord Krishna), and during the vaishnav festivals, like Holi, Amalka Ekadashi, Nand Mahotasav, Dashera, Rathayatra, Deity of Gopalji are taken in procession on an elephant and devotees play harp and music of high order with rhymes and rhythms. The virtues of blessings gained by visiting temple of Ranchhodraji and catching a glimpse of the deity are considered equal to those gained by visiting *Char Dhams* (Four heavens) (Holydham, 2004).

Study area

Dakor is located at 22.75° N 73.15° E and has an average elevation of 49 meters (~160 feet) above MSL; temperature ranges from lowest 12 °C (Winter) to highest 34 °C (summer) (Falling Rain Genomics, 1996). According to the 2001 census, the population of Dakor is around 23,784, with an average literacy rate of 76%. More than 70-80 lakhs devotees visit Dakor every year and, on the day of “*Falgun Purinma*”, 10-15 lakhs devotees visit Dakor (Census

Commission of India, 2004). It is the most worshiped temple of Lord Krishna (Shree Ranchhodraiji) and has also become a source of attraction for the people not only from India but from every corner of the world. Despite being a religious place, Dakor is also a trading centre for income generation by local tribes for their livelihoods. Sweets, rosaries of *Tulsi* beads, devotional books, pictures of deity, toys, household articles like iron, wood, etc. plates made of *Butea* leaves are also exported to the other part of the state in large quantities annually. Every Tuesday, cattle from all over India are brought to the market yard for sale (Wikipedia, 2012). Since 1905, the temple has not been managed by the government, but by the temple committee itself, which mainly includes *Vaishnav* devotees of Lord Krishna. In 1952, it was registered as a public religious trust. Recently, Dakor is considered one of the six major pilgrimage places under “*Yatradham Vikas Board*” by the government of Gujarat (Figure 2).



Figure 2. General view of Gomti Pond (Dakor, Gujarat, India)

Mythology and historical background

During the time of Mahabharata, areas adjacent to Dakor were recognized as “*Hidamba Van*” (Jungle), which was very pleasant, dense and rich, with various streams and lakes interspersed by sparse and thick forested pockets. Owing to such pleasant environmental conditions, it had always been an attraction for various sages to establish their hermitage for meditation and monasteries for living (Gujarat Portal, 2009). *Dank Rishi*, a devotee of Lord Shiva, had his hermitage in Dakor; he pleased Lord Shiva by his meditation, and requested him to leave behind him his replica in the form of Ban (Ling), which is recognized as “*Danknath Mahadev*”. Thus, in ancient times, Dakor was known as “*Dankpur*” after the name of “*Danknath Mahadev*” and was also known as

“*Khakhariya*” due to patchiness of numerous trees of *Khakhara (Butea monosperma)* in its vicinity (Temple Committee of Dakor, 1991).

The existence of Dakor town is owed to *Dank Rishi*, but also to *Vijayanand Bodana*, a devotee of Lord Krishna. On every full moon night, *Bodana*, along with his wife, walked all the way to Dwarka from Dakor with a Basil (*Tulsi*) to worship Lord Krishna. He did this incessantly with true emotions till he was 72 years old, but as he aged, it became difficult for him to walk so long, so, Lord Krishna, looking, asked him to bring a bullock-cart so that he could accompany him to Dakor as he was immensely pleased with his devotion. The hereditary priests of Dwarka were against *Bodana* taking Lord Krishna away from Dwarka and to prevent *Bodana* from taking away *Sanctum*, they sealed and locked the *Sanctum sanctorum* of Dwarka temple. At midnight, Lord Krishna opened all the doors and asked *Bodana* to take him to Dakor. When the *Gugli Brahmins* of Dwarka came to know that the idol of Lord Krishna was missing, they chased *Bodana* up to Dakor in pursuit. *Bodana* was frightened, but Lord Krishna advised him to hide the idol of the deity in *Gomti* tank and meet the *Gugli Brahmins*. *Bodana* did accordingly and when *Bodana* went to meet the *Gugli Brahmins*, they got exasperated and threw a spear at him. *Bodana*, after this incident, fell dead on the ground and it is said that at the time when *Bodana* was hurt by the spear, the image of the deity hidden in the *Gomti* tank also got hurt, and as a result, the water of the *Gomti* tank where the image was hidden, became red also, and even till date, the area of *Gomti*, where the image of the deity was hidden, has a red mud, while the rest of the area has a brown mud (Ranchhodraiji Official Website, 2010).

Gomti tank, which is located just opposite the Shree Ranchhodraiji temple, is the biggest pilgrimage village reservoir in Kheda district, with masonry walls and stony steps on sides, which according to Hindu mythology, originated when Lord Krishna and Bhima were on their way to attain the holy thread ceremony of son of Arjuna; while passing the jungle, Bhima was thirsty and was looking for water; at that time, Lord Krishna pointed him a small basin near *Dank Rishi's* hermitage. Both of them went there and quenched their thirst; while doing so, Bhima had a thought that if this small basin was big, then it would quench the thirst of many wild animals, birds and human beings; so, with the stroke of his club, Bhima converted the small basin into a big pond spreading over an enormous area of 572 acres, which is now known as the *Gomti* tank. It is said that even human bones melt in the water of *Gomti* tank. The water of *Gomti* Pond attains a maximum depth of 22-24 ft (during Monsoon), ovo-rhomboidal hydro-logical regime, having three islets, a wind velocity of 9-10 kilometers per hour, and it is a significant wetland of National Importance (World Weather Online, 2008) (Figure 3).

Present scenario

As many people visit Dakor and Gomti pond on monthly basis, the local authorities have constructed a pavement around the Gomti pond, for protection. Certain spiritual beliefs make people visit Gomti tank for bathing and washing (clothes and utensils). But erratically, such untoward activities have made Gomti Pond more vulnerable to anthropogenic activities, such as throwing of plastics, cloths, rubbers, garlands, coconuts, burnt ash, human hairs, excretory matters, metals, edible items, and fish exploitation, boating, etc. Such uncontrolled deeds have further worsened the environmental condition (water and soil quality) of Gomti. Initially, there were approximately 800 individuals of Flap-shelled Turtles (*Lissemys punctata*) in Gomti (2000 Census), but because of the magnitude of anthropogenic interventions, their numbers have also declined drastically (2010 Census). The reason for such a drastic decline in Turtle population is not only because of the water that is polluted by human activities, but also because of the local people there, who sell these turtles in the market for profit. Ultimately, these cause the disturbance in the entire food chain and food web, affecting the biodiversity and the aquatic ecosystem (Figure 4).

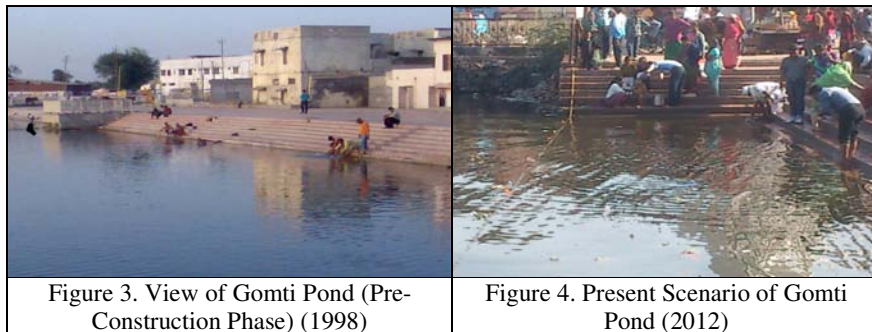


Figure 3. View of Gomti Pond (Pre-Construction Phase) (1998)

Figure 4. Present Scenario of Gomti Pond (2012)

Besides, the human bones from the nearby crematorium are thrown in the water of Gomti Pond. Moreover, washing, bathing, throwing of non-biodegradable commodities, boating, and trading of turtles, fishes and edible floral elements such as *Trapa sp.*, *Nymphaea lotuses*, and *Nelumbo nucifera*, have converted the sacred place into the most deteriorated hydrological regime of Gomti Pond (Figure 5).

Physical features of Gomti tank

As the present article is a part of my Ph.D. research work, the entire study area (Gomti Pond) was keenly traversed at least for two consecutive seasons

(Summer and Monsoon). On the basis of topological, geographical, geological, hydrological, hydro-biological, physical-chemical features, and the extent of anthropogenic pressures, three study sites were selected on permanent basis to be studied for three years. All study sites were visited by canoe to collect data on water and sediment quality, and phenology of aquatic macrophytes, along with the extent of anthropogenic pressures, by interviewing local people such as boatmen, herdsman, farmers, devotees, visitors, hakims, vaidyas, headmen, animal traders, etc. A description of each study site is shown in Table 1.



Figure 5. Extent of Anthropogenic Pollution at Gomti Pond

Table 1. Features of Study Sites of Gomti Pond

Name	Gomti Ghat (Site – 1)	Jafaram Ghat (Site – 2)	Mahadev Ghat (Site – 3)
Anthropogenic pressure	High	Moderate	Low
Features	Constructed Pond Bank	Islet with Temple	Natural & Undisturbed Islet, No Human Settlement
Water Level (ft)	-16	-19	-26
Bathing	Devotees	Saints	Cattles (Wading)
Boating	20 Boats (15 Passengers per Boat)	5 Boats (10 Passengers per Boat)	Not Observed
Washing	Clothes and Utensils (18-20 People)	Clothes and Utensils (5-8 People)	Not Observed
Plant sp.	<i>Chara sp.</i> , <i>Elchhornia cressipes</i>	<i>Chara sp.</i> , <i>Nymphaea lotus</i> , <i>Nelumbo nucifera</i> , <i>Ipomoea sericea</i> , <i>Elchhornia cressipes</i>	<i>Chara sp.</i> , <i>Nymphaea lotus</i> , <i>Nelumbo nucifera</i> , <i>Ipomoea sericea</i> , <i>Ipomoea aquatica</i> , <i>Phragmites karka</i> , <i>Polygonum glabrum</i> , <i>Elchhornia cressipes</i>
Anthropogenic Waste	Garlands Plastics Coconut Cloths Papers	Not observed	Not observed

Routine activities

Different types of routine activities exercised by the local people as well as the visitors of *Gomti* Pond were observed throughout the tenure of the investigation period. People visiting *Gomti* Pond were found to be involved into various types of ritual activities nearby the pond-bank (Off-shore and In-shore) viz. Religious ceremony of hair removal, bathing after worshipping the holy shrine, sipping of *Gomti* water as a sacred symbol of a particular religion (*Vaishnav*), etc. Contrastingly, many obnoxious anthropogenic activities were observed as a routine practice in and around *Gomti* Pond, such as washing of cloths and utensils, feeding turtles by throwing dough made up of Wheat and Rice, passenger boating for recreation, fish exploitation for food as well as selling, cattle grazing (wading), cremation of dead bodies of humans, burning of animal carcasses, thatching of *Trapa sp.*, *Nymphaea lotus*, and *Nelumbo nucifera* for food, ornamental and trading purposes, and so on.

Recreational activities

About 20 passengers in three to five paddle-boats were observed on the water of *Gomti* Pond; boating being a pastime enjoyed by the visitors of *Gomti* Pond. Recreational boating allows a huge crowd of visitors to enjoy the ride and experience the pleasant and natural arena of *Gomti* Pond. Such activity has been proved as one of the most important source of income generation and livelihood for the fishing community of Dakor. Each boat has a capacity of approximately 20 to 30 passengers at a time, on an hourly basis from 10 a.m. to 6 p.m. A single passenger boat takes about seven to eight rounds in and around *Gomti* per day, exerting anthropogenic pressures in the form of waste-loads from around 150 to 170 visitors a day; being thus an evident source of pollution.

Anthropogenic intervention

The huge influx of visitors from all over the state as well as the country leads to the boosting of the magnitude of anthropogenic pressures in and around *Gomti*. Washing, bathing, fishing, and throwing edible items, performing religious rites and social rituals on the pond-side as off-shore activities were observed during the study period. Apart from these, boating induced an anthropogenic activity that was found to facilitate the influx of about 150-170 visitors on a daily basis, adding a 1000-fold pollution load onto the prevailing biotic elements.

Environmental issues

Based on the comprehensive study of environmental status of *Gomti* Pond, the following issues need an urgent attention for better protection, conservation and management on regular intervals.

Pollution issues

Constant exposure to anthropogenic pollution loads, massive inflow of people, multi-faceted human activities like washing, bathing, boating, and fishing are found to be the chief causal factors for degradation and deterioration of the aquatic ecosystem of *Gomti* Pond. If such uncontrolled malpractices continue, scenic natural habitats and a lot of biotic components will vanish soon.

Eutrophication status

Increase in aquatic pollution has resulted in peak nutrients load and deterioration of water potability, which ultimately induces the growth of algal blooms (scums). Such blooms take up the nutrients, and hence make them unavailable to the living components present therein, leading to the eventual loss of biota from the entire ecosystem in near future.

Anthropogenic activities

Various objectionable and unpleasant activities (as already mentioned in the article) of the people visiting *Gomti* Tank have led to many detrimental alterations in the aquatic ecosystem of the studied pond ecosystem, such as degradation of water quality, induced eutrophication, disappearance of biodiversity elements, exploited bio resources, etc. The impact of such practices would result into unsustainable utilization of wetland resources, including vandalism and degradation of wetland biodiversity as a whole.

Alarming action

An aquatic ecosystem of *Gomti* Pond has been found to be threatened due to various anthropogenic pressures (thatching, washing, fishing, boating, cremation, etc). Besides, such activities could be the major causative factor for the dwindling of the turtle population (from 600 to 100-120 individuals within five years). The population of turtles could be revived implementing the Species Reintroduction Programme (SRP) or by commencing the Turtle Hatchery Plan (THP) in and around *Gomti* Pond, by involving local people, *Panchayat*, temple committee, NGOs, or State Forest Department officials.

Management and conservation

Proper filtration method, assessment of hydrological, physical-chemical and hydro-biological features on regular intervals, implementation of disciplinary rules and regulations for the visitors of *Gomti* pond, should be urgently initiate by the management committee to protect, conserve and manage the natural habitat of *Gomti* Tank and its diversity in a better and methodical way, for the better sustenance and perpetuation of biotic components.

Conclusion

Ponds are the easily approachable natural sources of freshwater, conveniently accessible for the human use, but eventually the wanton destruction and degradation of habitat and its biodiversity occur. Hence, it is an imperative necessity to estimate its value in terms of water budget, economy and security for common use. In the case of *Gomti* Tank, this can be achieved only if the prevalent environmental issues are taken care of seriously as an urgent pre-requisite for the protection, conservation, and management of the pond ecosystem for its ceaseless survival and eternal endurance.

Acknowledgement

We are thankful to “Shalin Manav Ratna” and “Charotar Ratna” Dr. C.L. Patel, Chairman, Charotar Vidya Mandal (CVM), Dr. V.S. Patel, Director, Sophisticated Instrumentation Centre for Applied Research and Technology (SICART), Dr. J.H. Patel, I/C Director, Institute of Science & Technology for Advanced Studies & Research (ISTAR), and Dr. Nirmal Kumar, J.I., Head, Department of Environmental Science and Technology (DEST), Vallabh Vidyanagar, Gujarat, India, for providing the necessary infrastructure and logistic facilities throughout the tenure of the research work.

References:

- Census Commission of India (2004)** Retrieved on 1st November, 2008. (http://en.wikipedia.org/wiki/Dakor#cite_ref-0)
- GEER (2003)** Regional Workshop on Wetland Conservation, GEER Foundation, Gandhinagar, Gujarat. Pp. 38.
- Gujarat State Portal (2009)** (<http://www.gujaratindia.com/about-gujarat/fact-file.htm>)
- Gujarat Tourism (2010)** (http://www.gujarat-tourism.net/Gujarat_Pilgrimage.htm)
- Gujarat Plus (2000)** (<http://www.gujaratplus.com/web/gujarat/cities/gandhinagar.html>)
- Holy Dham (2004)** (<http://holydham.com/festivals/>)
- Modern Gujarat (2011)** (<http://www.mapsofindia.com/gujarat/history/modern.html>)
- MoEF (1990)** (<http://moef.nic.in/divisions/cs/NWCP.htm>).
- Lalitha Vijayan, S. N. Prasad, T .V. Ramachandra, N. Ahaliya, T. Sengupta, Alok kumar, A.K.Tiwari and V.S Vijayan (2002)** *Conservation of Wetlands of India – A Review*. Tropical Ecology. 43 (1): 173-186
- Rodgers, B .L, and K. N. Panwar (1988)** *Planning Wildlife Protected Area Network (PAN) in India state Summaries*, Volume II. Wildlife Institute of India (WII), Dehra Dun.
- Temple Committee (1991)** *Brief History of Dakor and Shree Ranchoddraggi*. Pp. 12.
- UNEP (1994)** The Convention on Biological Diversity: Issues of Relevance to Africa. Regional Ministerial Conference on the Convention on Biological Diversity. October. UNEP/AMCEN/RCU 7/1 (A), 27 July.
- Wikipedia (2012)** <http://en.wikipedia.org/wiki/Dakor>

Ranchhodraiji Official Website, (2010).
<http://www.ranchhodraiji.org/common/History.aspx>
World Weather Online, 2008 (<http://www.worldweatheronline.com/dakor-weather/gujarat/in.aspx?day=21>)

