

Reviving Bhuj's Historic Water System: A Citizen-Led Movement to Reclaim City's Identity and Heritage

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Abstract

This paper examines the apathy of the state and the shortcomings of modern urban planning that have led to systematic erosion of natural recharge mechanisms and surface water systems, which have sustained human settlements for centuries. Today, most Indian cities increasingly depend on external water sources rather than investing in the maintenance of traditional systems, indigenous knowledge, and local skills that once met urban water needs sustainably. Against this backdrop, this paper highlights the efforts undertaken by the citizens of Bhuj to safeguard their historic water system—an enduring symbol of the city's ecological ingenuity, heritage, and cultural identity. Yet, the absence of a comprehensive policy framework and institutional support continues to impede meaningful change. Despite these constraints, civic vigilance, public advocacy, and legal interventions have contributed to the formal recognition of Bhuj's lakes. However, restoring them to their original ecological condition and reactivating the entire interconnected system remains a formidable challenge. The future of Bhuj's historic water systems, therefore, lies at the intersection of community resilience, state accountability, and innovative policy action.

Keywords: Groundwater, climate change, waterbodies, restoration, rejuvenation, public interest litigation, and historic water systems.

Background

Indian cities are currently experiencing a serious water crisis, characterized by inadequate supply and often poor water quality. Both surface and groundwater sources are under increasing strain, with declining levels caused by over-extraction, pollution, and unsustainable urban expansion. At the same time, many cities are seeing more frequent and intense rainfall, leading to recurrent waterlogging and urban flooding. These trends emphasize the growing and undeniable impacts of climate change, especially the shifting patterns and intensity of rainfall.

In this context, traditional water bodies—such as lakes, ponds, tanks, and stepwells—play a crucial role, and must be protected and restored. Designed historically to

capture and store rainwater, these structures serve multiple ecological and social functions. They contribute to urban water security by supplying drinking water, supporting biodiversity, offering fodder and livelihoods, and helping to regulate stormwater runoff. Moreover, they act as natural recharge zones for groundwater aquifers. Historically, these water bodies also functioned as community gathering spaces and recreational areas, reflecting their central place in the cultural and social life of Indian cities. Their conservation is therefore not only an environmental imperative but also a step toward preserving urban heritage and resilience.

According to the World Bank 2010 report, India is the largest user of groundwater globally, with an estimated annual extraction of approximately 230 cubic kilometres, accounting for more than one-fourth of global groundwater usage. Over 60% of the country's irrigated agriculture and nearly 85% of drinking water supplies rely on groundwater, making it an indispensable resource, particularly for rural areas (2010:1). However, its significance is growing in urban contexts as well. With the increasing inadequacy of municipal water supply systems, urban residents and industries are turning to groundwater—often through unregulated private wells—as a coping strategy.

Moreover, groundwater systems, due to their slow response to surface-level changes, act as vital buffers against the hydrological variability of surface water resources (World Bank 2010:5). This buffering capacity is especially important in the context of climate change, which is intensifying surface water scarcity and variability. Despite its importance, groundwater remains poorly managed and inadequately protected, especially in urban areas where recharge sources such as lakes, ponds, and open catchments are being rapidly lost or polluted.

According to the World Bank estimates, Indian cities house more than one-third of the country's population—about 480 million people in 2020, which is expected to nearly double, reaching 951 million by 2050 and around 1.1 billion by 2070 (2025:23). Significantly, more than half of the urban infrastructure, buildings, and services needed to support this population are yet to be developed. It is vital to recognize that supporting such a large urban population requires adequate access to water. Therefore, incorporating water-sensitive planning and development in urban growth strategies is not only critical for city livability but also essential for the long-term sustainability of the Indian economy.

In recent decades, the interaction between human activities and urban water bodies has become a significant environmental issue. Many of these water bodies are being gradually encroached upon, either through conversion into real estate developments or their misuse as dumping sites for sewage, solid waste, and hazardous industrial effluents. The unchecked release of untreated wastewater often causes eutrophication—marked by the excessive growth of aquatic weeds—which greatly disrupts the ecological balance of lakes and ponds.

Additional sources of pollution, such as immersion of painted idols during religious festivals, further degrade water quality by introducing harmful chemicals and heavy metals into the aquatic system. The cumulative effect of these practices often results in a sharp decline in water quality, causing significant harm to aquatic biodiversity. Additionally, the catchment areas that naturally feed these water bodies are

increasingly subjected to encroachment, degradation, and fragmentation, undermining the hydrological and ecological integrity of the systems (CSE 2012: 4-5).

Urban lakes, ponds, and tanks are rapidly disappearing under the pressures of intensified human activity, unplanned urban expansion, ineffective governance, weak regulatory frameworks, and a pervasive lack of public awareness. The degradation and loss of these traditional water systems not only threaten urban ecological sustainability but also erase critical elements of the cultural and environmental heritage of Indian cities.

It is important to recognise that India's ongoing groundwater crisis is driven primarily by anthropogenic factors rather than climate change alone. Unsustainable extraction, weak regulatory oversight, and degradation of natural recharge systems have significantly contributed to the depletion of this vital resource. Furthermore, climate change acts as a compounding stressor, amplifying the variability and unpredictability of surface water availability. In this context, groundwater serves as a crucial buffer during periods of hydrological stress. Unfortunately, instead of conserving this strategic reserve, widespread mismanagement has led to its rapid depletion—much like burning an insurance policy just before a fire outbreak.

The National Water Policy (2012) emphasizes the urgent need for a central framework law that clearly defines the legislative and executive powers of the central, state, and local governments in water governance. Such a framework would serve as a foundation for state-specific water management laws and facilitate the transfer of authority to local institutions. This decentralization is essential because it allows communities and local governments to respond more effectively to local challenges, promoting more sustainable and participatory water governance.

The critical ecological functions performed by urban water bodies—such as flood mitigation, groundwater recharge, microclimatic regulation, and biodiversity support—remain largely underestimated, unaccounted for, and systematically overlooked in urban planning and policy discourse. Their degradation has significant implications for both environmental sustainability and water security.

Concerned citizens and non-profit organizations have increasingly turned to legal mechanisms, including filing of Public Interest Litigations (PILs), to protect and restore urban water bodies. While some of these legal interventions have resulted in landmark judicial pronouncements, however, the overall impact has often been limited. The vital roles of urban waterbodies in flood moderation and groundwater recharge are completely underestimated, unaccounted, and overlooked.

Today, Bhuj—a city and the headquarters of Kachchh district located in the semi-arid region of northwestern Gujarat state in west-central India—is facing a severe water crisis. Much of the city's water comes from external pipelines or deep groundwater extraction, while many residents rely heavily on bottled water for their daily needs. Although the historic water systems still serve the city in some capacity, their effectiveness has been compromised by rapid urban growth and incompatible planning practices. This has not only reduced Bhuj's water resilience but also weakened its link to a heritage deeply rooted in sustainable resource management (WMF, 2025).

Methodology

This paper draws upon firsthand experiences of the authors, who played a leading role in the citizen movement, administrative advocacy, and legal interventions in the last three years, from 2023 to 2025. During this period, multiple field visits were conducted to various lakes in Bhuj and its surrounding areas, and their catchments to observe and document the current conditions and challenges faced by these water bodies. These visits were followed by both formal and informal conversations with long-term residents, whose insights provided valuable historical context and helped to trace the systemic degradation of these lake ecosystems over time.

In addition to the qualitative data, secondary data sources systematically collected government reports, academic articles, and local newspapers through desktop research, besides data, reports, and information from the Arid Communities and Technology (ACT). This information supported the preparation of citizen petitions, legal documentation, and media engagement strategies aimed at raising awareness, mobilizing public support, and pressuring authorities to act against encroachments and pollution.

The combination of ground-level observations, community narratives, and institutional data enabled a comprehensive understanding of the challenges confronting Bhuj's historic lakes. The sustained civic efforts documented here directly contributed to the legal recognition and protective notification of several lakes within Bhuj city and its surrounding areas, marking a significant step towards their long-term conservation and restoration.

Challenge of Water Insecurity in Semi-Arid Kachchh: Lessons from Bhuj

The situation is particularly acute in Kachchh, one of the most water-stressed regions in India. According to the Central Ground Water Board (CGWB), as cited in *Divya Bhaskar* (Bhuj edition, 23 December 2022), groundwater levels in Kachchh declined by 12.43 metres between 2011 and 2020. The report identifies Kachchh as one of three districts in Gujarat—along with Panchmahal and Sabarkantha—where groundwater levels are falling at an alarming rate of more than one metre per year. Contributing factors include rapid industrialization, unplanned urban development, and chronic neglect or destruction of traditional reservoirs and natural drainage channels.

Kachchh also receives the lowest average annual rainfall in the state. When combined with increasingly erratic precipitation patterns, this has accelerated the depletion of groundwater resources. The region suffers from highly skewed rainfall distribution and chronic over-extraction of groundwater, both of which have exacerbated salinity intrusion. This phenomenon poses serious implications for soil fertility, freshwater availability, and public health. In Kachchh, groundwater quality below a depth of 150 metres shows significant deterioration. Since brackish water in deeper zones is under confined conditions, further lowering of piezometric levels—already underway due to over-exploitation—risks triggering irreversible salinity intrusion (Government of

India 2013:16). These hydro-ecological changes threaten the long-term sustainability of both the natural environment and human well-being across the region.

Historically, however, Kachchh demonstrated remarkable resilience in the face of recurring droughts and chronic water scarcity. For centuries, survival was ensured through strategic water reserves created by linking lakes, ponds, and wells into integrated systems of storage and recharge. These networks were designed to satisfy urban demand even in drought years, reflecting a sophisticated understanding of local geo-hydrology. Yet much of this conventional wisdom has been eroded in the present context (CEPT 2016:1-2).

Bhuj, founded in the 16th century under the *Jadeja Rajputs*ⁱⁱⁱ, exemplifies the interplay of hydrology, urban planning, and cultural values. The city's location was carefully chosen: the nearby Bhujiyo Hill provided a natural defensive stronghold, while the underlying Cretaceous sandstone formation—one of the few in Kachchh—offered a dependable aquifer. This geological advantage supplied water to both the city and its agricultural hinterlands. Historical evidence suggests that Bhuj not only met its water needs effectively but also planned for future demand. Its integrated catchment and storage system—consisting of reservoirs and wells—provided a resilient and adaptive framework. Over recent decades, however, this system has disintegrated, leaving Bhuj increasingly reliant on external water from the Narmada Canal (CEPT 2016: 2).

The Hamirsar Lake System epitomizes the scale and sophistication of Bhuj's historic water infrastructure. It comprised 72 water bodies of varying sizes, three major feeder canals extending the catchment, hundreds of small seasonal streams, and a network of waste channels and flood-control gates. Spread over nearly 40 square kilometres (km²), this system ingeniously diverted three rivulets of the Khari River into three interconnected lakes—Hamirsar, Chattedi, and Dhobi Talav. To address seasonal scarcity, buffer dams in surrounding shale hills captured monsoon runoff and gradually released it into urban lakes during dry months. Crucially, the geological positioning of these lakes—above porous sandstone—enabled active aquifer recharge, creating a vast confined groundwater reservoir spanning nearly 100 km² and systematically accessed through hundreds of open wells.

This system was later expanded with more than 43 additional ponds and engineered diversion gates to manage floods. Importantly, the infrastructure was not purely utilitarian but deeply embedded in the city's cultural and spiritual life. Stepwells, temples, *sarais* (inns), and *dargahs* (tombs/shrines) were often situated near water bodies, making hydrological structures focal points of community, ritual, and identity. Between independence and 2001, recurring droughts and population pressures forced Bhuj to increasingly rely on borewells. While this initially bridged demand gaps, it disrupted the hydrological balance as rainfall and recharge diminished. The Narmada Canal project and the availability of deep-borewell technology created a perception of water abundance, further undermining traditional practices. Meanwhile, urban

expansion—particularly after the 2001 earthquake—encroached on water channels and ponds. For example, the Police Parade Ground was built over the historic Pragsar Lake. As a result, water tables plummeted, many reservoirs fell into neglect, and groundwater recharge was severely compromised (Mishra & Virmani 2019:285; Sheth & Iyer 2021:338).

Bhuj citizens showcased immense pride towards their traditional water heritage, becoming part of many water rituals (Mungekar et al. 2023:20). The Hamirsar Lake System continues to hold immense ecological, cultural, and symbolic importance. Ecologically, it functions as a seasonal habitat for migratory birds—such as pelicans, flamingos, wigeons, mallards, and pintails—enhancing local biodiversity and ecotourism potential. Culturally, Hamirsar remains a focal point of civic and spiritual life, hosting festivals, rituals, and community gatherings. The annual celebration of its overflow—with civic prayers, community offerings of *meghladu* (a popular Indian sweet), and a district holiday declared by the Collector—symbolizes the enduring reverence for water as a source of life and collective identity.

Recognition of this heritage has grown in recent years. In 2023, Hamirsar was declared one of India’s 75 Water Heritage Sites by the Ministry of Jal Shakti, and in 2025, it was included on the World Monuments Fund’s Watch List of 25 cultural landscapes worldwide. These accolades reaffirm Hamirsar’s dual significance as a hydraulic marvel and a cultural landmark.

Nevertheless, a paradox persists. Even as the system’s heritage value is celebrated, its functional and ecological integrity continues to deteriorate. Contemporary urban development projects—such as those at Bhujio Dungar and Rawalwadi Relocation—have caused irreversible damage to traditional water channels (Meulen et al. 2023:12, 15). Despite court rulings and state resolutions mandating lake protection, many reservoirs suffer from encroachment, sewage inflows, and solid waste dumping. Today, of the original 72 interconnected water bodies, only 38 remain visible, with most stripped of their ecological function.

Bhuj’s current predicament underscores a critical lesson: heritage recognition alone cannot safeguard water systems unless coupled with proactive stewardship. Without integrated interventions that combine policy enforcement, ecological restoration, community participation, and investment in local water resilience, Bhuj risks losing not only its hydrological heritage but also the sustainable foundation upon which the city was originally built (WMF, 2025).

Significant Court Orders by the Gujarat High Court for the Protection and Notification of Lakes in Gujarat State

Two such considerable orders are referred to below.

1. Hon’ble Gujarat High Court Order dated 2 August 2002 in SCA No. 10621 of 2000 (Shailesh Shah V/s State of Gujarat). The Order clearly states:

“.....the State Government will notify in the Gazette the water bodies and will ensure that no lands forming part of the water bodies be alienated or transferred by the various Area Development Authorities or the Local Authorities and will oversee that the water bodies are maintained and preserved as water bodies.....The Local Bodies and Area Development Authorities will be requested and instructed to see that desiltation may be undertaken in a phased and gradual manner, and encroachment is removed also in a phased manner. Care will be taken that water bodies are not converted to any other use in the town planning schemes/development plans that may be made hereafter, and the Local Authorities and the Area development Authorities will be instructed to ensure that no debris of buildings is dumped by any person or institution in the existing water bodies. The General Development Control Regulations, which are now framed, take care as regards the distance to be maintained between the development zone and the water bodies, which was a minimum of nine metres, as stated in that affidavit. The Regulations also provide for a percolating well to be provided if the area of building exceeds 1500 sq. mtrs. and up to 4000 sq. mtrs. The State Government in that affidavit assured this Court that proper monitoring would be undertaken to oversee the preservation and maintenance of water bodies.”

To sum up, the Court issued the following directions:

[A] The State Government will notify all the lakes and ponds as may have been shown in the areas covered by the Town Planning Schemes and the Development Plans, as also those in the areas not so covered throughout the State, in short, all the water bodies in the territory of the State that vest in the State and/or the Area Development Authorities or the local bodies including Panchayats, in the official gazette within three months from the date of this order.

[B] The State Government and all Area Development Authorities and local Bodies will protect, maintain and preserve all the water bodies in the State which are identified as per the development plans, town planning schemes and the government records and which will be notified in the official gazette, as water bodies and they will not be alienated or transferred or put to any use other than as water bodies.

[C] The respondents' authorities should take steps to get the standards of quality of water of the lakes and ponds prescribed by the concerned authority under the law, and devise a mechanism for periodic monitoring of the quality of water in these lakes and ponds.

[D] The State Government, the Area Development Authorities, and the Local Authorities should take urgent measures to rejuvenate the water bodies which are to be notified in the gazette by undertaking a declared phased programme of desiltation and make adequate provisions for recharging them by appropriate storm water drains and other feasible means, and to take measures against pollution of such water bodies.

[E] The State Government shall expeditiously take steps to constitute the Water Resources Council as contemplated in the Draft Water Policy of the State, headed by the Hon'ble the Chief Minister with other Ministers, including the Ministers in charge of Environment and Urban Development Departments, to oversee the programme for protection, preservation, and improvement of the water bodies. The State Government will also constitute the Water Resources Committee, headed by the Chief Secretary, which may include the Secretaries of Environment, Urban Development, and Agriculture Departments, for monitoring the implementation of the programme in a time-bound manner with periodic review of its success. This Committee shall place the particulars of the targets achieved and the causes of non-fulfilment of the targets periodically before the Water Resources Council, for its consideration.

[F] The State Government, the Area Development Authorities, and the local bodies are directed to prepare an authenticated record in the form of videography, photography, and panchnamas of the existing encroachments and take urgent steps to remove them in accordance with law and the rehabilitation policies of the Government. Responsibilities of the officers/staff concerned should be fixed in respect of non-removal of encroachments and fresh encroachments. The Water Resources Committee will closely monitor the removal of encroachments by the concerned authorities, and the Area Development Authorities and the local bodies shall furnish, quarterly, particulars of such encroachments and their removal to the Water Resources Committee.

[G] The question of determining the peripheral area surrounding a lake or pond on which construction may be prohibited will be taken up by the concerned authorities for consideration in the context of the development of individual lakes and ponds and the authorities will take decisions thereon having regard to the relevant factors which may have a bearing on the protection, preservation and improvement of lakes, ponds and other water bodies, and once the peripheral area, around a lake or pond, in which there will be no construction allowed is determined, the same shall be notified. All the applications for building permissions which may be pending, may accordingly be decided as per the regulations and keeping in view the requirement of individual water bodies.”

2. Hon'ble Gujarat High Court Order dated 17 February 2022 in R/WRIT PETITION (PIL) No. 144 of 2021 (Paryavaran Mitra Vs. State of Gujarat) Order 17 February 2022. This order refers to the Government of Gujarat Resolution dated 27 August 2001, which clearly states:

Instruct all officers of the Revenue Department, District Collectors/District Development Officers which are extracted below:

“(1) Carry out survey of ponds, lakes, small ponds, waterbodies within each village, Taluka and district under their respective control, and which are almost in dead condition and are almost in scrap condition. Survey report reflecting village wise, Taluka wise, district wise information about the same

be sent to Section Officer, C-Branch, Revenue Department, Sardar Bhavan, Block No. 11/5th floor, Gandhinagar, within 30 days.

(2) Aforementioned lakes, ponds, small ponds, waterbodies, or such sort are not to be disposed of for any other purpose other than development, neither any proposal for the disposal be sent to the government.

(3) Continuous vigilance is to be observed that on the aforementioned type of lands, there are no encroachment and if any such encroachment is found then immediate proceeding to be undertaken to remove the encroachment, as per law.

(4) Proper steps be taken for development of them as lakes, ponds, small ponds, water bodies.

(5) As the matter is of the State Interest, it will be personal responsibility of all District Collectors/District Development Officers to strictly follow these instructions and they are supposed to. issue proper instruction regarding this to their subordinate offices.

(6) Instruction is issued to all Collectors/District Development Officers for having immediate planning about these water bodies getting filled at the maximum capacity during the current rainy season.

(7) These instructions are to be followed on a permanent basis.”

The order concludes:

“We do hope and trust that the State and its instrumentalities would not only implement the Government Resolution dated 27.8.2001 in its true letter and spirit but would also take all steps as expected of a prudent welfare State to implement the directions which are already issued in Shailesh R. Shah referred to herein supra.”

Two other orders of the Hon'ble Gujarat High Court – Order dated October 1, 2021, in R/WRIT Petition (PIL) No. 37 of 2018 (Shriraj Rajesh Gohil Vs State of Gujarat) and Order dated October 8, 2021, in R/WRIT Petition No. 38 of 2021 (Shriraj Rajesh Gohil Vs State of Gujarat), which were filed by a citizen to prevent constructions on Hamirsar and Pragsar lakes proposed by Bhuj Municipality. In the latter case, the court observed and remarked:

“.....We find the reply of the Bhuj Municipality a little interesting. It says that the land bearing Survey No.736 undoubtedly is known as the “Pragsar Lake”, but in fact, there is no lake in existence. It is further brought to our notice that some part of the land bearing Revenue Survey No.736 has been allotted to the district police and for other extracurricular activities like parade, etc. It is also the case of the Municipality that some portion of the land has now been allotted in its favour for the purpose of constructing a fish and mutton market. The Municipality also proposes to put up construction of Ran Basera (shelter for urban homeless – SUH) over the Revenue Survey No.736.....In other words, what we want to convey is that if the Revenue Survey No.736 is otherwise a notified water-body, then, despite the fact whether water gets accumulated in this particular parcel of land or not, it would still remain a notified water-body. If that be so, then the State Government owes an explanation in

what circumstances the land has been allotted to the Bhuj Municipality as well as to the Police Department of the District. Bhuj.....”

Despite important landmark judgments and government resolutions, both recognized and unrecognized lakes face numerous environmental and existential threats, requiring urgent action to protect, restore, and rejuvenate them for the survival of current and future generations and the preservation of rich biodiversity in the city.

Citizens' Movement to Save Lakes

The residents of Bhuj—particularly the elderly and those with deep generational roots in the city—maintain a strong cultural and spiritual connection to the Hamirsar Lake and its surrounding water systems. For them, the lake is not merely a functional water body but a symbol of identity, memory, and resilience. Beyond its aesthetic appeal and role as a recreational space, Hamirsar is deeply embedded in the everyday rhythms and collective consciousness of the community. Many citizens are acutely aware of the lake system’s historical, ecological, and hydrological significance, and their emotional and civic commitment to its preservation runs deep.

Since the early 2000s—especially in the aftermath of the devastating 2001 earthquake—citizens have mobilized in various ways to protect and restore the Hamirsar Lake System. This grassroots movement emerged partly in response to post-disaster reconstruction plans, which often failed to recognize the importance of traditional water infrastructure. In many instances, urban development proposals—including new land use patterns and road networks in the Development Plan—were planned without consideration for the lake system’s catchment areas, flow paths, and recharge zones. As a result, several water bodies within the Hamirsar network experienced shrinking catchments, disrupted hydrology, and reduced recharge capacity.

Further compounding the issue, debris from the earthquake was used—intentionally or otherwise—to partially or fully fill several of these lakes, permanently altering their structure and functionality. These changes, driven by both neglect and short-term planning priorities, spurred concerned citizens into action. Their efforts—ranging from public awareness campaigns and heritage walks to formal objections in planning processes—represent a growing civic consciousness around urban water governance, ecological restoration, and heritage conservation.

The Homes in the City (HIC) programme, a collaborative initiative led by five civil society organizations (CSOs)—including ACT, which specializes in water sustainability—has played a pivotal role in fostering citizen engagement around the protection of Bhuj's traditional water systems. Under this initiative, an informal civic platform—the Jalsrot Sneh Samvardhan Samiti (JSSS)—was formed to mobilize concerned residents and promote collective stewardship of local water bodies.

Following the 2001 earthquake, ACT took the lead in repairing segments of Bhuj’s historic water infrastructure and conducted a comprehensive study of the system’s

geo-hydrological characteristics, spatial layout, and cultural significance. Since the late 2000s, both ACT and JSSS have worked to raise awareness, advocate for policy attention, and initiate community-led conservation efforts. However, their success has been limited, with only one lake—Umasar—in terms of legal recognition of the lake. This restoration was largely made possible through the dedicated efforts and personal initiative of a JSSS member, underscoring both the potential and limitations of citizen-led action in the absence of broader institutional support.

While the HIC programme addressed a range of urban development challenges in Bhuj, it served as a critical platform for consolidating the efforts of JSSS members and other civic-minded residents. Drawing on ACT's technical expertise, as well as insights from legal experts and environmental activists working across Gujarat, the group compiled a comprehensive petition. This petition, submitted in March 2023 to relevant authorities at the local, state, and regional levels, outlined the historical, ecological, and social significance of Bhuj's lake system. It identified key threats—such as encroachment, pollution, and infrastructural neglect—and called for the official notification, legal protection, and ecological restoration of all lakes within Bhuj and its peri-urban surroundings. This initiative represents a data-driven, community-backed appeal for integrated water governance and marks an important step in reclaiming Bhuj's legacy of water resilience through collective action and participatory planning.

Following the submission of their detailed petition in March 2023, the concerned citizens received no response from the relevant authorities. In response, they issued a follow-up letter on July 3, 2023, addressed to all the original recipients. The letter warned that continued inaction would lead to legal consequences, stating:

“Inaction to do so may invite legal action, and the responsible officers will be personally held liable and accountable for the environmental damage.”

The follow-up communication referenced notices issued by the Gujarat Pollution Control Board (GPCB), which were based on water sample analyses and field observations conducted during site visits to the affected lakes. The letter emphasized the need for urgent action to address issues raised by the GPCB, including sewage inflow into lakes, dumping of debris at lake margins, and inadequate operation and maintenance of sewage treatment plants (STPs). It also reiterated the recommendations presented in the original March 2023 petition and urged compliance by the municipal and district authorities.

When no substantive response followed, a PIL was filed in October 2023 by one of the petition signatories—a concerned citizen. The Hon'ble Gujarat High Court took cognizance of the matter and issued a significant order, referencing the Government Resolution (GR) dated August 27, 2001, which had been issued to all Revenue Officers, District Collectors, and District Development Officers across the state.

The Court observed that:

“The instructions in the aforesaid government order had been issued for restricting the disposal of land where ponds, lakes, small lakes, or any other water bodies within the State are located, and ensuring continuous vigilance, as also ensuring that there would be no encroachment. In the case of any encroachment, immediate steps for removal thereof have to be taken by the concerned officer.”

The Court further noted that the GR of August 2001 was of permanent application, thus providing a continuing legal mandate for water body preservation. In its order, the Court granted the petitioners liberty to raise specific grievances regarding the 38 water bodies listed in the petition. It directed the petitioners to bring such instances to the attention of the Collector of Bhuj, in the case of encroachment or unauthorized land use, and the Bhuj Municipality, in the case of sewage outflow, waste dumping, or other pollution-related issues.

The High Court clarified the obligations of public officials as follows:

“In case the petitioner raises a specific grievance or brings the instance of encroachment before the concerned Collector about the water body in Bhuj City, the Collector, Bhuj shall be under an obligation to take appropriate action to remove the encroachment and restore the water body to its original status/condition. Similarly, if the issue pertains to sewage disposal into the water body or dumping of garbage, the grievance shall be placed before the Bhuj Municipality, and its officers shall be under an obligation to take action against the erring persons and ensure the protection of the water body.”

The Court concluded with a clear accountability mechanism:

“In case of non-compliance with the directions given above, it would be open for the petitioner to approach this Court with a specific instance of non-compliance.”

This legal development represents a major milestone in the citizens' movement to protect Bhuj's historic water system. It reaffirms the binding nature of state policy on water body protection and creates a judicially backed framework for citizen monitoring, administrative accountability, and environmental governance. The Court's decision not only supports immediate remedial action but also provides long-term legal leverage to ensure the preservation, restoration, and sustainable management of Bhuj's threatened lakes.

Following the Gujarat High Court's directive, the petitioner submitted a formal request to the Kachchh District Collector, seeking the official notification and rejuvenation of all lakes within Bhuj and its surrounding region. This request explicitly referenced the court order, reinforcing the legal obligation of the administration to act.

In response, the Collector's office directed the District Inspector of Land Records (DILR) to initiate lake surveys. Subsequently, the DILR issued a letter to the Bhuj Municipality, requesting assistance in identifying the relevant water bodies. This led to a series of interdepartmental correspondence involving the *Mamlatdar*^{iv}, Irrigation Department, DILR, and the Bhuj Municipality. However, rather than taking decisive action, these communications largely reflected a bureaucratic tendency to shift responsibility between departments. Despite the gravity of the issue and the court's explicit directives, no substantial progress was made in notifying the lakes or initiating concrete rejuvenation measures.

Frustrated by repeated delays and lack of accountability, another concerned citizen—also the co-author of this paper—filed a case before the Gujarat Human Rights Commission (GHRC) in January 2024. The petition sought a binding directive compelling public officials to notify the identified lakes and undertake essential conservation actions.

Following monthly hearings and the issuance of strict interim orders by the GHRC, a series of joint field visits was conducted in November and December 2024. These involved representatives from the DILR, the Sub-Divisional Magistrate (SDM), and Bhuj Municipality, marking a shift from administrative apathy to on-ground engagement.

The sustained pressure culminated in a landmark order issued by the Kachchh District Collector on July 31, 2025. This order mandated the freezing of land use for 21 lakes, effectively preventing further encroachment or unauthorized development. Moreover, it directed that land ownership be formally transferred to the appropriate local governing bodies—either Bhuj Municipality or the respective village panchayats—within 30 days.

Building on this success, the petitioner submitted an additional request to the District Collector, accompanied by land records, to initiate the same process for the remaining seven lakes. In its final hearing on August 4, 2025, the GHRC disposed of the matter but issued a binding direction to freeze land use for the remaining lakes within three months.

This series of events demonstrates the critical role of citizen vigilance, the legal utility of human rights mechanisms, and the need for multi-institutional coordination in restoring urban water systems. While progress remains incomplete, the freezing of land use for 21 lakes and pending action on the remaining seven represents a significant milestone in the reclamation and protection of Bhuj's historic lake network.

Summary

The restoration and revival of waterbodies involve reinstating ecosystems to a healthy and functional state. Crucially, catchment areas must be recognized as integral

components of these systems and prioritized equally during the restoration process. In Bhuj, numerous interconnected waterbodies that form part of the historic Hamirsar Lake System are in urgent need of such interventions.

Preventing degradation is far more achievable when supported by robust legal and regulatory frameworks. Encouragingly, the combined efforts of concerned citizens, non-profit organizations, and government agencies have already initiated the restoration of some of these vital resources. Effective revival requires a twofold approach: first, the management and rejuvenation of catchment areas to ensure sustained inflow and ecological balance; and second, the direct restoration, protection, and maintenance of the waterbodies themselves.

In Bhuj, the absence of a formal legal framework for identifying and protecting urban waterbodies has compelled residents to seek judicial intervention. Landmark court verdicts have since provided critical guidance and hope for the regeneration of these historic systems, which remain essential for the city's sustainable future. Nevertheless, despite notable achievements by CSOs leveraging legal avenues, the movement to protect and revive Bhuj's lakes continues to face significant challenges. These challenges underscore the urgent need for stronger institutional commitment, proactive governance, and deeper community engagement.

Looking ahead, Bhuj's efforts to restore and safeguard its traditional water systems have the potential to serve as a model for other semi-arid regions in India and beyond, demonstrating how heritage-based water management can inform contemporary strategies for resilience and sustainability.

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ⁱⁱⁱ The *Jadeja Rajputs* ruled the princely state of Kachchh, with Bhuj as their capital, from the 13th century until India's independence in 1948.

^{iv} A Mamlatdar is an administrative official in India primarily responsible for the revenue administration at the *taluka* (or sub-district) level. The responsibilities of this official include overseeing land revenue collection, maintaining land records, and ensuring the implementation of government policies related to land and agriculture.