

wknd | lifestyle

Heritage on the brink

In India's semi-arid zones, the changing climate is wreaking havoc on traditional architecture, threatening cultures and the ways of life associated with them. In Ladakh, yak-wool tents keep out the snow, but have no defences against heavy rain. In Jodhpur, humidity is peeling the lime-plaster layers off sandstone houses. Old homes, temples, entire neighbourhoods are up against aggressive new foes

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Ancient homes in Ladakh that have stood for up to 300 years are under threat from a source no one anticipated: rain. Homes, monasteries and heritage structures across India's arid and semi-arid zones – Ladakh, Jodhpur, Jaisalmer, Shekhawati – are scrambling to deal with unusual weather phenomena: heavy rain, rising humidity, new extremes of heat and cold.

The rains create standing pools on the roofs of houses built of mud or porous stone or, in the case of the semi-nomadic Changpa peoples, soak their yak-wool tents. The tents become unusable. "We are used to bitter cold, harsh winds and sun, but not the rains. Rain is a new phenomenon for us," says Changpa shepherdess Sonam Yangdol, 45.

With the mud and stone homes, the damage is insidious. The water seeps from the roof into the walls and masonry. As the weather cools, it freezes and expands. Between the humidity and the cracks, the homes weaken, and the routine maintenance – expensive anyway, and rendered more so because traditional building practices have faded away – becomes a relentless battle against the elements.

So the homes and temples are either emptying out, or changing. "Now, in conserved buildings, we are making provisions for changing weather patterns with, for instance, more steeply sloped roofs," says conservation architect Yutaka Hirako of the Tibet Heritage Fund, which operates, among other regions, in Ladakh.

Not everyone has access to the kind of support the Fund offers. In Shekhawati, centuries-old mansions with elaborate frescoes on the outside – displays of pride in the region's culture; art works tracing changes such as the invention of the hot-air balloon, telephone and steam locomotive – are seeing art-covered plaster flake off, damaged by humidity and intense heat and cold.

In the blue city of Jodhpur, residents of sandstone and lime-plaster homes that have stood for centuries are struggling to deal with the damage from volumes of rain so great that the Army had to be called in when the desert city flooded last year.

"I repaint my house every Diwali, but now the plaster is peeling so fast that once a year isn't enough," says Chandralekha Purohit, 55, whose three-storey, 400-year-old family home is a landmark in Old Jodhpur. Paint, of course, only covers up the cracks.

Along the coast of Maharashtra, rising sea levels are eating away at historic sea forts and spreading damp through their stone walls and floors.

"We've known for a while that, in India, the regions most vulnerable to climate change are the Himalayas, the coastal belt and the semi-arid zones, says Anjal Prakash, research director at the Bharti Institute of Public Policy of the Indian School of Business, Hyderabad, and one of the authors of last year's sixth assessment report of the Intergovernmental Panel on Climate Change (IPCC). "The IPCC report made it very clear that climate has been changing more rapidly than was earlier estimated."

"In Churu, Shekhawati last year, minimum temperatures dropped to -4.5 degrees Celsius, from the usual range of 0 to 1 degrees. These have become a conservation concern," says conservation architect Urvasi Srivastava.

In Maharashtra, the Archaeological Survey of India is working with conservationists, biologists and geologists from Dronah (the Development and Research Organisation for Nature, Arts and Heritage) to assess the damage to coastal and sea forts and plan how to conserve them.

Meanwhile, along India's coast, all the way down to the eco-sensitive Lakshadweep and Andaman & Nicobar Islands, massive development projects are underway. Projects large and small have long peppered the Himalayas, where towns such as Joshimath in Uttarakhand are now crumbling as the ground heaves and sinks.

"The climate crisis is completely our doing," says Prakash. "Unregulated construction, infrastructure projects, unchecked tourism growth in eco-sensitive zones, destruction of green lands... The more we pollute, the more problems we will face. We have to chart a plan for a green economy."



In the blue city of Jodhpur, residents of sandstone and lime-plaster homes that have stood for centuries are struggling to deal with the damage from volumes of rain the city has been experiencing. BLUECITY WALKS, SHUTTERSTOCK

{ JODHPUR } DECAYING TRADITIONAL SANDSTONE HOUSES

Stone homes battle storms, soaring temperatures

Standing tall at 65 ft, the 400-year-old Purohit residence is a landmark in Old Jodhpur's narrow, low-rise bylanes. The three-storey structure was built in the same traditional style as the rest of the blue city, using sandstone covered in indigo-lime plaster.

There's only one resident left in this house, 55-year-old Chandralekha Purohit. She lost her husband three years ago. And she's finding it harder and harder to keep up with the maintenance that her sandstone house requires.

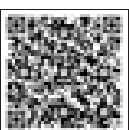
Sandstone is soft and porous, and Jodhpur has been getting unprecedented amounts of something it rarely experienced: rain. "Water is seeping in through the roof, onto the walls, damaging the plaster," Purohit says. "I repaint my house every Diwali, but now the plaster is peeling so fast that once a year isn't enough."

It's the same across the old homes here. Govind Singh Bhati, an art and culture curator, has been conducting heritage walks in Jodhpur since 2010. He's seen the escalating damage to the Purohit residence, a main attraction on his walks, and to other houses in the ancient city, founded in 1459 by Rao Jodha, chief of the Rathore clan.

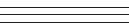
The blue city received light rainfall even a few days ago. "Rainfall in February used to be unheard of in Jodhpur," Bhati says. Jodhpur received 60% more rainfall in 2022 than its annual average, causing flooding in some parts that made national news. Unprepared for such volumes (73 mm in 24 hours at one point), the Army had to be called in to help with rescue efforts.

Intensifying heat waves have caused further damage to structures, as humidity retained in the stone expands and contracts. The Ministry of Earth Sciences recorded a total of 203 heatwave days across India in 2022, five times more than in 2021. The worst-affected states were Uttarakhand, with 28 heatwave days, followed by Rajasthan, with 26.

Adding to the menace are the logistical challenges residents face in repairing their homes. The narrow lanes cannot accommodate trucks. Construction material must be offloaded outside the Old City and brought in mini-tempo, or by labourers. This doubles the cost of even simple repairs. Fail to make the repairs in time, and the damage escalates, says Shikha Jain (left), architect, heritage conservationist and founder-director of Gurugram-based Dronah (Development and Research Organisation for Nature, Arts and Heritage). "Maintenance is hard, and poor maintenance just accelerates the deterioration."



READ: Expressions of ecological grief from around the world.



The Sindhudurg fort (right) built by the warrior-king Shivaji in 1667 and the 15th-century Murud-Janjira fort built by Raja Ram Rao Patil (below) are suffering damages amid the climate crisis. HT ARCHIVES, SHUTTERSTOCK



{ MAHARASHTRA } FORTS ERODED BY THE SEA

Monuments of war threatened by the sea

They've stood for hundreds of years (almost 900 in one case). Through wars and colonisation, the fall of the Maratha empire, the struggle for Independence and Partition.

They are some of the country's most telling monuments to the might of Indian kings.

Now, amid the climate crisis, the ocean is nibbling away at them, and the government of Maharashtra is assembling task forces to try and figure out how to protect its iconic sea forts.

At the invitation of the Archaeological Survey of India (ASI), conservation architect Shikha Jain has spent the last three months studying 26 of Maharashtra's sea forts, including the 15th-century Murud-Janjira fort built by Raja Ram Rao Patil, the Koli ruler of Janjira; the Vijaydurg fort built in 1205 by Raja Bhoja II of the Shilahara dynasty of Kolhapur; the Sindhudurg fort built by the warrior-king Shivaji in 1667 (all of which sit on islands or in some cases strips of rock off the coast); and one of Maharashtra's oldest forts, in Bassein aka Vasai on the outskirts of Mumbai, built right by the sea in 1184 by the Yadavas of Devagiri. Based on her initial observations, Jain



says they are suffering escalating damage from the impact of rising sea levels and the subsequent rise of groundwater levels. "The sea water is flowing deeper inside the forts than a few years ago," Jain says. "This leaves more salt deposits on and in the structures, eroding the stones, weakening the mortar and impacting the construction masonry." Jain is founder-director of Dronah (Development and Research Organisation for Nature, Arts and Heritage), and is working on the sea-forts research project along with a team of experts that includes a biolo-

{ **SHEKHAWATI** } FLAKING FRESCOES, VULNERABLE CENTURIES-OLD MANSIONS

Havelis standing tall, but fading away

You can drive for 100 km in northern Rajasthan – across the districts of Jhunjhunu, Sikar and Churu in the Shekhawati region – and never run out of grand mansions to marvel at. Some are 200 years old, all bear the unique frescoes (paintings on wet plaster) that draw tourists. The homes stand tall. In the desert state of dry winds, they’d been built for wear and tear. Now, amid new extremes of heat and

HT ARCHIVES, SHUTTERSTOCK



cold, the art is flaking off the walls, the foundations weakening.

These mansions were built using pressed-mud bricks and lime mortar. In addition to the frescoes, some have artwork hand-painted onto Burma teak. **The frescoes (left)** are intriguing because they showcase local art forms, and also tell of changing times. The motifs range from mythological stories to then-new inventions such as the hot-air balloon, telephone and steam locomotive.

“The increasingly severe weather acts as a second level of vulnerability for these neglected structures,” says conservation architect Urvashi Srivastava, who has worked in Shekhawati for two decades.

Last winter, Fatehpur village in Churu recorded a new low of -4.5 degrees Celsius, far colder than its usual range of 0 to 1 degrees in winter. “In sub-zero temperature, water that has seeped into the masonry also freezes and expands, leading to more severe cracks,” Srivastava says.

As the homes are still privately owned, restoration and conservation is ad-hoc. In a 2007 survey, the Rajasthan State Museum and Monument Management and Development Society, which operates under the state’s Department of Archaeology and Museums, mapped and inventoried 3,000

structures across 13 towns in the region. “All were found to be in need of urgent conservation,” Srivastava says.

The struggle to conserve them begins with securing permission from distant owners, and mobilising funding. It extends to a lack of manpower (traditional craftsmen have moved on to other construction methods) and lately, a lack of lime. “Cement is widespread, so there is hardly any demand for lime. Few people still make it. This also drives up the price,” Srivastava says.

In an attempt to promote and organise conservation in the region, Srivastava founded the NGO CATTs (the Centre for Advancement of Traditional Building Technology and Skills) in 2001. “If we have skilled people, the owners might want to consider restoring these mansions,” she says.

In 2019, CATTs spearheaded the restoration of the Dangayach Haveli, built in 1892, in Nawalgarh town, Jhunjhunu. The bat-infested structure was restored by local masons using lime mortar. Damaged doors, windows and lattices were repaired. The structure is now used as a cultural centre..

An exhibit features panels, photos and a short film about the history and culture of Shekhawati and its conservation challenges.

For now, the win has brought some joy. “I am glad that I could conserve my family’s haveli and put it to good use,” says Govind Dangayach, 72, who is a carpet manufacturer in Nawalgarh, and custodian of the Dangayach Haveli.

culture

Staging the resistance, again

As Janam turns 50, the troupe that popularised protest theatre, took activism to the streets, is finding new ways to shake the establishment and spark new revolutions



Machine, a play about the exploitation of industrial labour, was Janam’s first street play, in 1978. (Below) The special Janam at 50 logo designed by the graphic artist Oriji Sen. The troupe performing the play Andher Nagari at the farmers’ protest in Delhi.

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It was an act of courage and resilience. On January 4, 1989, two days after the death of Safdar Hashmi, who was attacked while performing a street play on the outskirts of Delhi on January 1, his wife and comrade Moloyashree Hashmi went back to the spot with their troupe, Jana Natya Manch, to complete the performance.

They had been performing *Halla Bol*, a play that advocates for workers’ rights. It was written in 1988, to be performed during a seven-day strike organised by the Centre of Indian Trade Unions.

It was the kind of thing Hashmi had dedicated his life to. By the time of his death at age 34, the playwright and activist had spent 15 years with the troupe he founded, building a body of work that used the earthy, direct form of street theatre to communicate issues of social concern to the masses.

This was during the labour-movement wave in India. Hashmi’s murder at the hands of Congress party goons sent shockwaves through worker communities, activists and society at large. People who had never heard the name Hashmi now associated it with courage, and commitment to a cause.

When Moloyashree Hashmi returned to the scene to finish the performance, it fuelled this sense that a unique legacy was being born, and it was. In the decades since that New Year’s Day performance, Janam has inspired young people across the country to form street theatre groups.

Hashmi’s birthday, April 12, is celebrated as National Street Theatre Day in India. The plays from Janam’s repertoire are often performed on January 1. His troupe, along with his wife, return to the site of his death and perform there on January 1 each year.



{ **THE SPORTING LIFE** }
Rudraneil Sengupta



A turbo-boost for women’s cricket

From a fresh platform for young talent to more time on the pitch for the stars, WPL promises a new era in the women’s game

The stage is set for the Women’s Premier League (WPL). There are five teams and 87 players on board, bought for a total of Rs 59.5 crore at the auction held this past week. Broadcast rights were sold for Rs 951 crore, and investors paid Rs 4,670 crore for the five franchises earlier, which makes this the second-most-valuable women’s sporting league, after US basketball’s WNBA.

A lot of the players set to feature in the inaugural edition of WPL are in action at the T20 World Cup right now, and will have to transition to playing for their new franchise teams fairly quickly. Which makes the WPL, without a ball bowled yet, uncannily like the IPL already: it promises to make the women’s cricket calendar properly hectic, and will allow players to earn more from a three-week stint than they make in the rest of the year.

The Indian Premier League (IPL), when it began in 2008, immediately changed cricket. Whether you consider the economics, the rise in popularity of the T20 format, or the concept of cricket as a high-stakes

Even the stars of the women’s game need the WPL in order to flourish. The talented Jemimah Rodrigues, 22, has had to contend with a lack of game time and being dropped from the Indian team, only to bounce back when she got a chance. AP



Breaking new ground

This year, the Jana Natya Manch (or Janam) turns 50. It continues to widen its reach. In 2012, it established a performance space, Studio Safdar, in New Delhi. In keeping with the aim of promoting theatre as a tool of public outreach and activism, Studio Safdar is used most by small, independent theatre groups.

“Janam itself rarely performs there,” says Sudhanva Deshpande, who has been an actor, director and organiser with Janam since 1987, and authored the book *Halla Bol: The Death and Life of Safdar Hashmi* (2019).

While Janam performs at theatres and cultural venues too, the street remains its primary stage. Popular plays include *Machine*, an early production from 1978, about the exploitation of industrial labour; and *Nahin Qabul* (Not Acceptable), about the pitfalls of globalisation and economic liberalisation. Other plays tackle issues such as women’s rights, unemployment, communalism, caste, dangers posed to democracy, and the failings of the education system.

Now, as Janam turns 50, a series of events is being planned to mark the milestone. Three theatre directors who do not work in the street-theatre format – Sunil Shanbag, Shaili Sathya and Mallika Taneja – are staging plays in that format to mark the occasion.

Shanbag’s *Katha Kaalratni Ki*, written by Komita and Brijesh, is about the politics of language. Sathya’s play, *Hau Hau Ki Kahani*, is based on a Tagore story titled *Shiburam*, about a jackal trying to be human. These have been staged multiple times since August, at Studio Safdar and elsewhere; Taneja’s production is slated for later this year.

“I have been a supporter and admirer of Janam’s work, so when I got an opportunity to work with their actors, I was happy,” says Sathya. “What Janam has been able to achieve, while staying true to their ideology, is quite unique. Going to Jhandapur on January 1, when they commemorate Safdar Hashmi’s death anniversary, is also a beautiful experience.”

A mobile exhibition showcasing photographs and memorabilia from 50 years of Janam has been created, in collaboration with students from the Indian Institute of Art and Design. A special Janam at 50 logo has been designed by the graphic artist Oriji Sen.

Moloyashree Hashmi says she is gratified most by the influx of young people as members, performers and volunteers. The times are not exactly conducive to political or agit-prop theatre.

club tournament instead of a matter of national rivalries, nothing was the same. IPL also provided a platform to cricketers who might otherwise never have escaped the anonymity of domestic cricket.

WPL, it can be said with some confidence, will have a similar effect on the women’s game, if not a more profound one, considering that the women’s game in India is still far from well-developed.

Some of the Indian players picked up for big money at the auction were bound to get that attention. Smriti Mandhana is arguably the finest batter in the game right now, so of course she was the most valuable pick. Royal Challengers Bangalore (RCB) snapped her up for Rs 3.4 crore. Deepti Sharma, Jemimah Rodrigues and Shafali Verma, understandably, were the other major picks.

Despite their rising status and popularity, even the stars of the women’s game need the WPL in order to flourish. Otherwise, they simply don’t play enough cricket, which leads to the inevitable crests and troughs in form. Take Rodrigues. A phenomenal talent at 22, she has had to contend with a lack of game time and being dropped from the Indian team, bouncing back when she got a chance, with a string of superb scores as part of England’s women’s league, The Hundred. Verma too has had a slight dip in form since her explosive debut as a 15-year-old in 2019. She, like every other Indian woman player, just needs more time on the pitch.

A number of teenagers have also been given contracts, including the 15-year-old bowlers Sonam Yadav and Shabnam Shakil, the youngest to be picked for the League. For them, sharing a dressing room with the best players from around the world and being part of a world-class coaching system will be a dream come true.

If the inaugural WPL goes well, franchises will begin to take more steps: a junior development programme, skills acquisition and knowledge-sharing between the men’s and women’s franchises, building a data bank on players through fitness technology and using that data to offer more sophisticated and personalised training and recovery programmes.

As New Zealand skipper Sophie Devine (signed on to RCB) put it: “It’s enormous. You talk about glass ceilings and I think the WPL is going to be the next stage. I am really excited about it.” So are we.



gist and a geologist. They’ve been tasked with drawing up a site management map for the conservation of these historic structures.

A worrying sign, Jain says, is that damp patches can be seen at ground level and on the inside walls of some forts. “Conserving these forts will be a challenge,” she adds. “Some of them are made from harder basalt stone, others from softer laterite. They’re exhibiting different level of deterioration, in different environs. Each will need a different plan and strategy.”



{ **LADAKH** } LEAKING REBOS, ANCIENT WALL PAINTINGS AT RISK

The land of cold tested by rain

Across Ladakh, old homes, temples and monasteries are struggling to keep pace with the damage caused by rising volumes of rain, amid the climate crisis. Some residents and conservationists are altering traditional architecture that stood for centuries, to cope with new phenomena such as standing water collecting on roofs.

In the cold, dry environment, traditional structures were built using stone, mud, wood and dried grass. “Buildings were designed to trap heat during cold months, and breathe during summer,” says conservation architect Yutaka Hirako who has worked with the Tibet Heritage Fund for 11 years.

The Fund, an international not-for-profit organisation founded in 1996, has restored 70 structures in Ladakh since its inception, most of these old houses in Leh.

“Now, in restored buildings, we are making provisions for the changing weather patterns with, for instance, more steeply sloped roofs so that rainwater can flow off.”

There is living heritage at risk of being lost, as rain seepage and humidity also eat away at wall paintings inside temples and monasteries, says art conservationist Sree-kumar Menon, who has been working to conserve 100- to 500-year old wall paintings on the interiors of Buddhist temples across the Himalayan desert region since 2006.

According to data from the India Meteorological Department, annual rainfall in Ladakh has risen from 28.9 mm in 2011 to 70.3 mm in 2019. “It hardly ever rained in Ladakh, but now we seem to be having a proper monsoon,” says 31-year-old Rigzin Lachic. She runs Dolkhar, a sustainable hotel in Leh built in traditional Ladakhi style, with stone and mud.

“Waterproofing is the biggest challenge,”

she says. The flat, mud roofs accumulate rainwater, which percolates into masonry, dampening the plaster, causing damage.

“When snow melts and ingresses into a wall, the damage is slower. Rainwater percolates faster,” says Menon. “As temples are surrounded by open drains, the rainwater also ingresses into the floor.”

At higher altitudes, a whole different heritage is at risk, as rain threatens the semi-nomadic Changpas’ way of life. This is the community that herds the Changra, the goat that yields pashmina wool. The Changpas live in rebos, hexagonal tents made from yak wool. They’re resistant to cold, but not to water.

“Rain is a relatively new phenomenon for us,” says shepherdess Sonam Yangdol, 45. She has been spending the summers in the village of Kharnak, which is at 14,921 ft above sea level, for almost three decades. “We are used to bitter cold, harsh winds and sun, but not the rains, which have become a lot more frequent and heavier, in July and August, sometimes even in September.”

The rebos have been leaking; the goats, sheep and yaks becoming sick in their pens. “The rains also make the sandy terrain mucky. It sticks to the goats’ coats, impacting the quality and quantity of pashmina wool,” Yangdol says.

“Annual pashmina production has reduced by 40% since 2001,” says Dorje Stanzin, chairman of the All Changthang Pashmina Growers Cooperative Marketing Society. “The mortality rate among the livestock has increased by 20% due to rain, snowfall and heat. Youngsters are giving up this way of life. They move to the cities for an easier life. In Chantang, the youngest herders are largely in their 50s. Sometimes I think this might be the last generation of pashmina goat herders in some parts of Ladakh.”