

# They let nature take its own course

BADRI CHATTERJEE

*In a success for citizens' group, Versova Beach recently became a nesting spot for turtles. How does one convert Versova Beach from a blackspot to a beauty spot? The answer: By removing 13 million kgs of plastic and carrying out 200 clean-ups over a period of three years. What the persistent efforts held is not just a cleaner beach, but a hatching spot for nine turtles.*

*Like Versova, there are at least five other spots where citizens, conservation groups and government agencies have helped restore the natural sites. HT takes a look at these stories and how the success was achieved.*

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## Experts' speak

With construction sites dotting the city, Mumbai is running out of open spaces and green zones that help reduce pollution. "The urban sprawl is slowly creeping into eco-sensitive areas. Through proper planned efforts and research studies, we can bring back these locations to their original status," said Avinash Kubal, Deputy Director, Maharashtra's Nature Park Society in Mahim, a former garbage dump which was turned into an urban forest.

While orders from the Bombay High Court and National Green Tribunal helped protect the green cover and biodiversity, especially mangrove forests, construction and demolition activities continue to pose a serious threat, said eco experts. "In a crowded city, restoring such areas will help people connect with nature. Every effort should be made, to not just protect, but

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restore and revive such locations,” said Deepak Apte, Director, Bombay Natural History Society (BNHS).

Mangroves and wetlands, which form nearly a fourth of suburban Mumbai’s area (132 sq.km of total 534 sq.km) and one-tenth of the area of the island city (7.6 sq.km of 69 sq.km), are under threat from construction activities. “People are coming together for this cause. It is a good sign,” said N Vasudevan, Additional Principal Chief Conservator of Forest, state mangrove cell, which has set aside Rs. 3 crore for restoration of mangrove patches across the state, including Mumbai, for 2018-19.

Experts said corporate houses, too, are doing their bit. “The mangroves along the eastern end of the city are taken care of by Godrej. Sagar Upvan, a Mumbai Port Trust garden in Colaba, which once used to be a dump, was restored through corporate social responsibility projects. We also have examples of semi-government organisations such as the Indian Institute of Technology, Bombay and Bhabha Atomic Research Centre (BARC) in South Mumbai that have worked towards protecting green spaces,” said Anand Pendharkar, environmentalist and Founder, SPROUTS Environment Trust.

### Why it matters

According to experts, citizens need to remember that natural areas are repositories of resources such as water, plant and animal life. “They are important ecosystems that support a variety of biodiversity,” said Stalin D, Director, NGO Vanashakti.

They said, Powai Lake, Charkop, the lakes near Film City in Goregaon, Mahim Creek, and Mahul are among a few that need to be restored. “When it comes to protection, there are mandates, but protection is only on paper,” said Dr. Nitesh Joshi, urban ecologist and Associate Professor of Botany, University of Mumbai.

The State Environment Department said protecting Mumbai's green spaces is top priority. "Efforts by the forest and environment department through afforestation and pollution abatement measures show this government's commitment to preserve, protect and revive the green lungs. There is always room for improvement through more citizen participation and awareness in the years to come," said Satish Gavai, additional chief secretary, State Environment Department.

## How we can and should: Six success stories

### MAHIM NATURE PARK

The 40-acre Maharashtra Nature Park in Mahim, now home to 18 species of birds, 85 types of butterflies, 32 varieties of reptiles, 30 types of spiders, 18,000 trees and a wide array of wildlife, was once a dumping ground. Located along the banks of the Mithi River on the Bandra-Sion Link Road, the ground was shut in 1977. Almost 23 years ago, three Mumbai residents, all of whom worked for the World Wildlife Fund-India (WWF-India), took it upon themselves to transform the area into a green lung. Chairman of WWF (Maharashtra and Goa), Shanta Chatterji, and Education Officer, Himanshu Joshi, conceptualised the park as a green refuge. Architect Ulhas Rane planned its layout.

"The area was highly polluted, thanks to the garbage dumped along the banks. However, an extensive clean-up drive was conducted to clear the river of waste. The park was built under the vision of the late ornithologist and naturalist Salim Ali," said Avinash Kubal, deputy director, Maharashtra Nature Park Society.

The Maharashtra Nature Park Society took over the work in 1994. "We chose evergreen trees to attract birds. On the periphery of the park, along the Mahim creek, close to 1,50,000 mangrove saplings were planted, which is today, the mangrove patch at the centre of Mumbai", said Chatterji.

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### **VERSOVA BEACH**

In March, 80 Olive Ridley turtles hatched along the 25-km Versova Beach, a first in 20 years.

Why is this remarkable? Because, less than three years ago, the beach was strewn with so much garbage that the sand underneath was almost not visible. However, over 126 weeks, lawyer Afroz Shah and other members of the Versova Residents' Volunteers (VRV) removed 13 million kg of plastic and garbage along the beach.

As they completed more than 200 beach clean-ups, they were joined by residents and administration. The United Nations termed the movement, the "world's largest beach clean-up".

The journey began on a rainy October morning in 2015, when Shah looked out of his sea-facing apartment at Versova. Every wave crashing along the shore brought piles of garbage, a view that disturbed Shah. "There is a difference between sitting in a closed space to make policy decisions for an environmentally sustainable future and actually work on the ground, digging your hands in the dirt to separate plastic from sand. I chose the latter", he said. "The efforts bore fruits with the recent evidence of marine life nesting along the beach. We still have a long way to go."

The United Nations awarded Shah the UN's top environmental accolade- Champions of the Earth Award at Cancun, Mexico- making him the first Indian to achieve the feat.

### **BHANDUP PUMPING STATION**

After the construction of the Bhandup Pumping Station and sewage treatment plant along the eastern express highway during the late 90s, the adjoining five-acre mangrove patch and seven ponds dried up. Encroachments, too, came up in some areas.

From 2010 onwards, after city-based NGO Vanashakti raised the matter in the Bombay High Court, the State Mangrove

Cell examined all blockages to tidal water flow at the site and developed a plan to restore the mangrove patches. They also planted hundreds of mangrove saplings at the site.

Within five years, a large waterbody to the south of salt pans and six other ponds were completely rejuvenated. The entire patch turned green with 4-ft mangrove trees.

"The local fishing community helped us with plantation and also provided protection from further encroachments. Today the area boasts of high avian biodiversity and water is accessible to all mangrove patches; said Stalin D, Director, NGO Vanashakti.

### **SEWRI MANGROVES**

The plot belonging to the Mumbai Port Trust (MbPT), along the Sewri Bay was declared Sewri Mangrove Park in 1996. But, it transformed into an entirely green patch only over the past three years. In February 2011, HT reported on how the mangroves spread across more than 30 acres were destroyed by pollution from coking coal at a nearby depot.

Damage to mangroves and carrying out non-forestry activities near 5 mangrove areas is in violation of the Bombay High Court (HC) orders. The HC took suo motu cognisance of the HT report and directed various government bodies to investigate the issue. Coking coal, a soft bituminous coal, is heated to produce coke -a hard, grey porous material- used to blast furnaces to extract iron from iron ore. The National Environmental Engineering Research Institute's (NEERI) report to the HC confirmed that large tracts of mangroves had died of contamination from coking coal. Following this, MbPT moved the depot on its own. In August 2013, fresh shoots and small mangrove plants started growing at various locations along the bay. The trees reclaimed the degraded site. 'Today there are 8-ft mangrove trees at the site that rejuvenated on its own after the coal depot was moved out' said N

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#### **MANGROVES ALONG THE JOGESHWARI-VIKHROLI LINK ROAD (JVLR)**

The restoration of the 20-acre degraded wetland patch at Vikhroli-end of the Jogeshwari-Vikhroli Link Road is one of the largest mangrove restoration projects in Mumbai, according to the mangrove cell of the state police.

In July 2016, HT reported that officials from the district collector’s office demolished illegal bunds built to cut off a wetland from seawater. After the area lost 80% of mangrove cover over five years, the district administration decided to restore the forest. “We unclogged a pipeline using large suction pipes, removed silt and sewage. We asked the civic body to channel a path to supply water regularly to the mangroves,” said Babasaheb Pardeh, sub-divisional officer, Mumbai, Suburban.

The restoration took place after the Bombay HC, in July 2016, directed the state to take steps to restore areas highlighted in a contempt petition by NGO Vanashakti. This was one of the largest patches. “A majority of the mangroves came back naturally and some saplings were submitted by us. The ability of mangroves to rejuvenate themselves is spectacular. When the water recedes, mangrove roots absorb nutrients and oxygen,” said Vasudevan.

#### **LOKHANDWALA LAKE**

This 4.5-acre fresh water lake in Lokhandwala, Andheri witnessed a complete transformation over the past two decades.

From 2003 onwards, the area fell prey to direct debris dumping and run-off from debris dumped at the site off the road. Idol immersions, too, were a regular feature here during festivals, bringing along a large quantity of residue, including Plaster of Paris (POP) and fibrous material. Every April, the lake would start

to dry up. In 2012, local citizens convinced the Brihanmumbai Municipal Corporation (BMC) to construct an artificial immersion pond. That year, 2,000 idols were immersed in the artificial pond. In 2014, three like-minded professionals – chartered accountant and filmmaker Sumesh Lekhi, Dr. Chandrakant Jain and businessman Aashish Mehta – started Friends of the Environment, a citizens' group to convince top officers of the BMC and mangrove cell to desilt the lake. "After the lake filled up in the monsoon, it was heartening to see crystal clear water. We decided to plant around 100 indigenous tree saplings around the lake." said Lekhi. "Subsequently, the lake became a wetland jewel over the years." Spot-billed Ducks, Lesser Whistling duck, Purple Heron, Rose-ringed Parakeet, White-breasted Kingfisher, Indian Pond Heron, Little Egret, Black Drongo, Indian Golden Oriole, Rosy Starling (during winters) and many more species are spotted here. "The Lokhandwala lake and its surrounding area is a treasure house of wildlife species today. We now need to protect it," said Lekhi.

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