



RIVER SAL: FROM LIFELINE TO LIFELESS – A GRAVE WARNING FOR GOA'S FUTURE

The Sal River's story is one of tragedy and hope. While its waters may now flow sluggishly under the weight of pollutants, the determination to revive it burns brightly. The collective will of the government, local communities, and environmentalists holds the key to breathing life back into this vital artery of Goa's ecological and cultural heritage. **GAURESH SATTARKAR** weighs in



Several stretches of the Sal are choked with invasive weeds like the water hyacinth, which disrupts aquatic ecosystems by depleting oxygen levels and obstructing sunlight

Spanning 35 kilometres, flowing gracefully from Verna to Betul, River Sal is Goa's third-longest river. Originating as a humble stream near the ancient Mahalsa Temple in Verna, it gathers strength as it meanders downhill, forming its main channel amidst the lush paddy fields between Arossim and Cansaulim.

This once-vital lifeline of Salcete now teeters on the brink of extinction, its vibrant flow reduced to a mournful trickle in some parts. Over the past 12 years, no sincere effort has been made to cleanse its tarnished reputation as Goa's most polluted river or to restore its lost dignity. The current state of the Sal River is grave, particularly from Nuvem to Mobor, where untreated sewage is relentlessly funneled into the drains that feed into its waters. Adding to its plight, the riverbanks have silted up in several areas, choking its natural flow. At places like Khareband and the nearby fish market, the scene is grim—mired in mud and polluted waters. The situation is worsened further by the unchecked sewage discharge from the wholesale fish market, leaving the Sal River gasping for survival.

It is deeply ironic that a State boasting grand infrastructure like the Rs 2,700 crore, 8-lane Zuari Bridge and the iconic Atal Setu, built at a cost of over Rs 600 crore, allows its lifeblood, the mother-like Sal River, to suffocate under neglect. In a place celebrated for hosting world-class seminars, international festivals, and welcoming 70 lakh tourists annually, the plight of this small but vital river, integral to the lives of countless families in South Goa, is a glaring contradiction. The degradation of this river is not just an environmental crisis but a profound embarrassment for the State.

The degradation of the Sal has had devastating consequences for its aquatic ecosystem. Fish deaths are increasingly common, and the unchecked growth of invasive aquatic weeds further disrupts the river's balance. Lakes connected to

TO RESTORE THE SAL TO ITS FORMER GLORY, A COMPREHENSIVE AND COORDINATED APPROACH IS NEEDED. SOME RECOMMENDATIONS FROM EXPERTS ARE

- 1 Enforce penalties for industries, tourism establishments, and individuals polluting the river
- 2 Complete the underground sewerage network and ensure proper maintenance
- 3 Educate and involve local communities in river conservation efforts
- 4 Remove invasive weeds and ensure the functionality of sluice gates and treatment systems
- 5 Conduct regular studies to assess water quality and the effectiveness of implemented measures

the Sal, such as Benaulim's Wodle Tollem, have become cesspools of pollution. Once a haven for migratory birds and a source of livelihood for local fishermen, these water bodies now lie abandoned. Fishing activities have ceased, and the lake's biodiversity has been irreparably harmed.

In 2016, the Goa State Pollution Control Board (GSPCB) declared the Sal the most polluted river in the State, placing it in the Priority III category. This designation highlights a river with a biochemical oxygen demand (BOD) of 10-20 mg per litre, indicating severe pollution. The Central Pollution Control Board's findings confirmed that much of the river's water is unfit for bathing, with high levels of faecal coliform from untreated sewage and waste.

A multitude of factors contribute to the Sal's sorry state. Margao's aging sewerage system, over three decades old, leaks untreated sewage into the river through nullahs and tributaries. Effluents from Verna's industrial estate flow into the river, compounding the pollution. Resorts along the riverbanks, particularly in Mobor, release untreated

waste into the Sal. Open defecation and domestic waste dumping from slums along Khareband exacerbate the pollution. Margao's fish market contributes large volumes of waste, including fish offal and wastewater. The proliferation of water hyacinth, a plant that thrives in polluted water, chokes the river and depletes oxygen levels, further endangering aquatic life.

In response to a 2016 High Court directive, the government initiated various measures to address the river's pollution. Unity I E World Pvt Ltd, a Pune-based company, prepared a detailed report on the Sal, which led to recommendations for its restoration. Phytoid beds, a form of Soil Biotechnology (SIBF), were installed along the riverbanks as a sustainable solution to treat wastewater. Unfortunately, these efforts have yielded little success.

The installation of sluice gates aimed at regulating water flow and preventing saltwater intrusion also failed to produce tangible results. Stagnant, foul-smelling water persists on both sides of the gates, rendering them ineffective. Meanwhile, dredging and desilting projects have been marred by delays and inefficiencies.

The River Rejuvenation Committee, established in 2019 under the National Green Tribunal's directive, continues to monitor the state government's action plan. The action plan outlined comprehensive measures to determine the specific locations and severity of pollution in the Sal River, propose strategies to prevent further contamination, and estimate the associated costs. Developed by the Pune-based organisation Unity I.E. World, the plan projected a budget of approximately Rs 43 crore for implementing the recommended initiatives. However, the committee's efforts have so far failed to address the root causes of pollution. Public support and stricter enforcement of environmental regulations are crucial to reversing the river's decline.

In July 2023, Water Resources Minister Subhash Shirodkar presented a phased action plan to rejuvenate the Sal.

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The plan includes:

Phase 1: Desilting and restoring the riverbed along a 19.77 km stretch to improve hydraulics and enhance the waterway's carrying capacity.

Phase 2: Installing storage structures with automated gates and floating aerators to improve water quality by increasing dissolved oxygen levels.

Phases 3 and 4: Additional measures to be detailed in later stages.

Despite these ambitious plans, the minister warned that without collective action from stakeholders, including local MLAs, government departments, and the public, the situation would worsen. He set a target of December 2025 for significant improvements, emphasizing the importance of completing the underground sewerage network to curb the discharge of untreated waste.

The Sal River's plight serves as a stark reminder of the consequences of neglecting our natural resources. The once-flourishing salt industry of Salcete is now a distant memory, and the river, a symbol of life and prosperity, has become a conduit of waste. Without immediate and sustained intervention, the Sal risks becoming a lifeless relic of Goa's past.

QUOTEROOM

“This is the only river that originates and ends in Goa, flowing through six constituencies. It is essential for the MLAs of Benaulim, Nuvem, Fatorada, Margao, Navelim, and Velim to take responsibility for restoring the river in their respective regions. Despite numerous announcements to clean the river, the situation has worsened, with increasing amounts of sewage and garbage polluting its waters. The river is now so contaminated that it can no longer sustain aquatic life, no fish can survive here anymore”

– Roque Fernandes, fisherman



“Over the past four to five years, the government has spent crores of rupees on desilting the Sal River. However, they have failed to address the root causes of pollution. Under the guise of removing silt, illegal sand mining was carried out, and vast amounts of sand was extracted. Yet, the riverbed continues to accumulate silt and sewage. The inaction of the authorities is driving this river to its demise”

– Savio Coutinho, former Margao Chairperson



“In recent years, several mega projects have been undertaken in areas like Aquem, Margao, and Fatorada. The Supreme Court has clearly stated that no mega project should proceed without a proper waste management policy. However, this directive seems to be ignored in Goa. The State has very few functional sewage treatment plants, leading to untreated waste from industries and human settlements being dumped directly into the river. This pollution poses serious health risks; even stepping into the river once could result in infection”

– Santan Pereira, social activist



“Plastic bottles and other waste are now being carried into our fields, making farming increasingly hazardous. During the monsoon, our fields are flooded with polluted water, posing risks to both crops and farmers. While we do not know the exact sources of pollution, it is imperative that the government acts immediately to address this crisis”

– Agostine Fernandes, farmer

