

# Bangalore's Toxic Legacy Intensifies

Status of Landfills, Waste Processing Sites and Dumping grounds, and working conditions of Pourakarmikas

A special focus on continuing toxic impacts of landfills in Mavallipura

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The aim of this report is to draw attention of key decision makers and the wider public to the continuous sources of pollution stemming from legal and illegal landfills, and also waste processing units in the Bengaluru metropolitan area. It not only highlights the socio-economic dimensions of the continuous pollution, but also takes under scrutiny the working conditions of the sweepers and cleaners of the city, at the forefront of maintaining hygiene and public health in the city. This report builds on environmental and public health impact data gathered over the past 15 years. In 2010, ESG consolidated the data and brought out a report investigating "[Bangalore's Toxic legacy](#)" at the landfill site in Mavallipura, a site 22 km away from Central Bangalore. While administrative and legal action was taken as a consequence of the report and citizens's PILs, the current report shows that despite progressive judicial and government orders, the pollution intensifies in spread, the plight of the impacted villagers and urban citizens still not heard and governance processes to improve the situation are yet to take shape. The report discusses the findings about the state of municipal waste governance relating to several benchmarks: 1) the progress made since 2010 2) adherence to judicial acts, directives and environmental norms and standards and 3) International and national labour standards to assess working conditions of the Pourakarmikas ("cleanliness workers"). The report is structured in six chapters and includes an Annex with the details of the water analysis on the water ponds in and around Mavallipura taken in 2017.

## 1) Introduction

The introduction presents a thematic summary of the directions of the High court issued since mid-2012, after the city deluged into a garbage crisis after the closure Mavallipura landfill and the Mandur protest. The scope of the judgement, cover the dimensions of urban solid waste management (SWM) in regard to civic responsibility, enforcement mechanism, legal reform, building transparency and accountability, required environmental education, private contractors, landfills, waste processing facilities, dumping in lakes, the role of ward committees and the SWM strategy involving the BBMP, parastatals, bulk & household generators.

## 2) Environmental and health implications of landfills in Mavallipura

Improving access and quality of water could prevent almost 1/10 of the disease burden, states the World Health Organisation. While water gives life, the two landfills operating over a dozen of years in Mavallipura is taking life today. The BBMP and KSPCB failed to monitor the water and hence ESG started monitoring the water since 2005 to assist the communities, who had come seeking for assistance. Despite the previous report produced, numerous submissions to court and its resulting directives, the water quality is still degrading rapidly. Untreated leachate continues to follow and continue to pollute the entire Arkavathy basin's surface water and ground water aquifers. Such a state is contaminating fauna and flora of the area, human and livestock health. A concise table presents the prevalence of various physico-chemical and microbial elements that contaminate 18 waterbodies that have rendered unpotable and unusable. The contamination pathways determined by the physical terrain adversely impact the streams flowing into the Arkavathy river and the Thippagondanahalli reservoir, the tanks of Konanakunte, Mavallipura, Shivakote and Arvara. This

contamination creeps further into the food produced in the area that lands up on the plates of Bangaloreans and into the veins of not only the villagers near by but also into those of city residents. The impacts of this contamination were grasped through a health survey of the impacted villages. Cases of morbidity and mortality have clearly risen. The survey finds a very high incidence of respiratory disorders (like frequent cough), bronchopneumonia, meningitis, skin infections (fungal) and susceptibility to vector borne diseases (dengue) and also widespread viral fever episodes. In addition, developmental malformations were in more than average cases noticed.

In the case of women, several reported constant headaches, skin infections, respiratory disorders, menstrual disorders and skeleto-muscular disorders are common. There were also several cases where Hysterectomy (uterus removal surgery) had been performed. Besides, there were instances of Lung cancer, Kidney Failure, and the rare Fatty Liver condition were reported, which seem to be too high an incidence for the population. Vector borne diseases like Dengue, Chickungunya and other psychosomatic disorder were found to be most common.

While the above-mentioned case of diseases/disorders is only indicative of the linkages between the contaminated environment, particularly of drinking water, a comprehensive study along with monthly monitoring of drinking water, preventive and restorative health measures are urgently required.

3) Environmental status and impacts of landfills in and around Bengaluru

Despite the court's intervention in the evolution of Mavallipura and Mandur and progressive orders by the High Court, to prevent other such detrimental development, such scenarios are repeating manifold again today in Bangalore's peri-urban areas. Abandoned quarries have become a major site for dumping waste, and this is being done without securing statutory environmental clearances or even making an effort to contain the damage to the local area due to the immediate and extensive leaching of pollutants.

The report brings to attention the state of 9 non-approved landfill sites within a radius of as far as 70 km from Bangalore, showing the spread of contamination. It provides a factsheet per landfill and discusses its legal and environmental non-conformance and scopes the effects. None of them have a no objection certificate, nor an environmental clearance. There are no leachate treatment plants installed. They are entirely unregulated, unmonitored and unscientific. The Mavallipura episode is repeating across away from public's and government's gaze, leaving those communities to their own devices to fight the pollutants and the effects on their life, livelihood and environment.

4) Waste processing sites in Bengaluru

Waste processing plants were created as temporary measures to respond to the 2012 garbage crisis of the city until each ward has Two wet waste processing centres and one dry waste processing centre. The Karnataka High Court passed an order to set up waste processing plants in all 28 Assembly Constituencies. Five of these plants are set up in the Yeshwantpur Assembly Constituency which falls within the Arkavathy Watershed. The for this entire exercise was that waste would be processed locally and the cost of transport could be conserved. This would also force waste would be progressively composted and recycled in every one of the 198 wards. The processing sites were meant to be a temporary relief, and a movement away from landfilling. The State of affairs at these processing plants have been far from satisfactory. None of these facilities have an Effluent Treatment Plant installed and in every case leachates are let out, contaminating streams and waterbodies downstream. About Rs. 450 crores has been invested in the establishment of these Processing sites. Due to their improper management, a variety of health and environmental hazards are resulting. In several ways, these plants are repeating the damage caused by landfills, but in closed spaces.

All these facilities should receive only wet waste, but they are currently receiving mixed waste due to poor implementation of waste segregation at source. Mixed waste at these facilities takes more time to process, as dry and wet waste have to first be segregated. Consequently, Operators are not able to process the design capacity daily. The seven facilities, taken together have a backlog of nearly 18000 tonnes of RDF and 20000 tonnes of compost.<sup>131</sup> This is due to the lack of streamlining of how waste is brought to these facilities (in mixed forms), and consequent disruption in the processes instituted.

These facilities were setup without any involvement and consent of the local impacted communities. No prior information was shared with the local communities, when decisions were taken to site the facilities near to their village. In the case of Lingadheeranahalli waste processing facility, the condition has been so bad, local communities report that they have preferred to challenge the Environmental Clearance (EC) accorded by State Environmental Impact Assessment Authority, Karnataka before the National Green Tribunal, Chennai. NGT has stayed the operation. It is also impacting the development of the BDA Kempegowda layout.

#### 5) About being a Pourakarmika

The chapter begins with mapping out the international commitment India has ratified in terms of facilitating decent work under International Labour Organisation's flagship programme and explore the definition of decent work to set a benchmark against which Bangalore's current working conditions.

Moving ahead it presents main findings from the 1976 Salappa report which set a second benchmark to judge the potential progress made three decades after independence, and for evaluating progress achieved in improving working conditions of waste workers in Bangalore in subsequent four decades.

Further, it reports from ESG's explorative study of 60 Pourakarmikas across a few wards to identify the working conditions of 'city's first doctor' as they are the ones who are exposed to waste primarily. During the study, it was found that they face a lot of health issues and most of them go unchecked as they don't have the potential to invest for their health care. ESI Cards have been given to all of them but the ESI Centres allocated to them are far away from their homes and therefore they don't benefit from it. The salaries have a record of being outstanding for two-three months at any point of time. BBMP, being the Principal Employer even in the case of contract workers is duty bound to pay them their salaries.

As our indicative survey shows, Pourakarmikas working conditions, and prospects for dignity and decency of work in the near future, are bleak, despite a wide range of progressive laws, policies and rules. The findings from the explorative study reveals that these workers, predominantly women, find themselves in a web of exploitative relationships. This impacts their well-being and their capacity to organise and mobilise sustainably, in claiming their rightful recognition as keepers of the city's health and environmental sanitation. Pourakarmikas are pushed to work under abysmal and dangerous conditions in order to hold on to their jobs that has no securities attached, as they are poor, utterly poor. This is particularly the case with contract - not regularised - workers. On 4<sup>th</sup> May 2016 the Karnataka Cabinet discussed the future of contract of pourakarmikas in the State and decided to abolish the contract labour system and regularise all contract pourakarmikas by March 2017. Orders were passed to bring this to effect more than a year later. Cases have been filed to enforce this order, such as the one by BBMP Contract Pourakarmikas Union<sup>159</sup>, and various directive have been passed by the Karnataka High Court subsequently. And yet, the situation of the workers has remained as it was before 2016.

In imagining a future of a metropolis, it is typically the interest of the middle classes and the rich that determine the outcomes. If the Salappa Report is considered as a benchmark for determining progress in guaranteeing decent and dignified living and work conditions for Pourakarmikas, it is extensively evident that we have not only failed these health workers who secure our health, but that we have trapped them in a web of exploitative relationships. It is only when the Pourakarmikas organise and protest that their voices are heard. In the lack of it, the situation is reflective of enslavement, an aspect that is often ignored in the mass media, by administrators and the political set up. In fact, it may even be said that the organised exploitation of Pourakarmikas is due to a deep entrenchment in feudal-caste based exploitative systems of organising labour. The result is an acute lack of sensitivity in addressing Pourakarmikas' human and dignified work and living needs, and quite certainly of their aspirations for a better life.

A way forward, therefore, is to acknowledge such gross failures. If anything, the Salappa Report is a benchmark to work towards, a report written with extraordinary sensitivity and care for the Pourakarmika. Perhaps, in the minimum, every civic body can make a sincere effort to respond to the recommendations made in this report from 1976. This needs to be done not as a bureaucratic exercise, but one where the city administrators sit equally with Pourakarmikas in determining the pace for implementing the recommendations, for which the State Government must extend its complete and unreserved backing. A movement in this direction would be the first and necessary step towards ensuring Pourakarmikas get their due, and which has been denied to them for generations. Such a movement would also reflect on a metropolis like Bangalore as genuinely progressive, and not as posturing to be a progressive city.

## 6) Conclusion

In the conclusion, we outline that the human, environmental and social-economic impacts in Mavallipura and the other places where landfills are located around Bangalore highlight the failure of governance and regulatory mechanisms, and draw our attention to the long term implications of such neglect. We argue that urgent attention, enforcement, and remediation is needed to claim back a human city by managing solid waste in a manner that guarantees dignity of workers who handle waste, and restoring dignity of communities contaminated by waste. In this manner a socially just and ecologically sustainable system would emerge.

This report has brought evidence from various sites, across different forms of waste dumping illegalities, that the tragedy unfolding in Mavallipura is merely indicative of what is being repeated across Bangalore's periphery and villages. Unfortunately, we see these impacts as elaborated in previous chapters repeated in newer sites and zones, as solid waste malpractices are systematically wrecking the lives of entire communities, their livelihood systems and causing deleterious impact on environmental quality.

Solid waste management is a pivotal domain of the overall urban governance structure and practice, and for this to ensure sustainable outcomes for the city, it takes individual responsibility, but more importantly institutional accountability. The report argues that there has been extensive lack of compliance with environmental and public health standards prescribed in law and of reforms directed by the Karnataka High Court in regard to the siting and operation of waste processing sites, ward level composting and recycling units and landfills in Bengaluru. As a consequence, Bangalore's toxic legacy due to mis-management of solid waste continues to affect adversely environment and human health, much more extensively now than was the case in 2012.

The irresponsibility of the city makes the villagers pay the burden of ill-health and its consequences on their financial status, livelihood and community: Medical expenditures for which they take loans, treatments they can't conclude, the health of other family members they have to compromise on and

loss of livelihood. The level of pollution has even displaced certain families, pushing them to leave their own house and joining slums in the city.

The gaps between the enforcement of judicial orders and the actual practices are wide and contrary to regulatory specifications:

- 1) Decision-making regarding municipal solid waste management according to the Constitutional mandate, statutory provisions and particularly the Municipal Solid Waste Management Rules 2016 require the system to be decentralized and transparent, yet devolution has not happened. Ward committees are yet to be made fully operational and cultivate the capacity to function optimally.
- 2) After the court's investment into the Mavallipura case, the phasing out of the practices of dumping in landfills was directed.. But Section 3 on landfills shows an expansion of this practice.
- 3) Orders regarding bio-mining of legacy waste in landfills have not been enforced and untreated leachates continue to pollute soil and water.
- 4) Decentralisation of the waste management sites have been ordered by the High Court, so that needless transportation of waste for processing is avoided, and that waste is processed locally everywhere. However, a concentration of these sites emerges in the western arc of the city's fringe. This concentration of landfill sites and the state of affairs of its management, is increasingly contributing to the pollution of the of the catchment area of the Arkavathi basin, a precious source of drinking water for the city and surroundings.

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