Government and Garbage: Local Administration, Public Sanitation and the 'Clean India' Campaign[1]

The paper examines a crucial component of public sanitation and waste management – the role of local government. It concludes that improvement of public sanitation in India, which is the goal of the Bharatiya Janata Party (BJP)-led government's 'Clean India' campaign launched in 2014, hinges on the capacities of local government; but these capacities are limited, for reasons that the paper seeks to make clear. The paper examines Indian local government under the following headings: history, jurisdictions, technology and people.

Robin Jeffrey[2]

History

One of India's largest local governments is in Chennai, the capital of the southern state of Tamil Nadu. Tamil Nadu has been zealous in eliminating names imposed by the erstwhile British

---

[1] This paper arises from a workshop on "India's Worlds of Waste", organised in Singapore by the Institute of South Asian Studies (ISAS), an autonomous research institute at the National University of Singapore, on 27 and 28 July 2015. An executive summary of the dialogue at the workshop has been published as ISAS Special Report No. 28 on 17 September 2015.

[2] Professor Robin Jeffrey is Visiting Research Professor at ISAS. He can be contacted at isasrbj@nus.edu.sg and robin.jeffrey514@gmail.com. The author has used pseudonyms for people and places, but both will be readily identified by those who work on waste in India. The author, not ISAS, is responsible for the facts cited and opinions expressed in this paper.

regime, but the name of the building that houses its local government is the Ripon Building after George Robinson, Marquis of Ripon (1827-1909), Governor-General of India from 1880 to 1884. The Ripon heritage haunts local government and its capacities today. Ripon's name survives because he widened the scope of public participation in government in India sixty years before independence. The Resolutions on Local Government of 1882 are a landmark in the stumbling expansion of local government.

Ripon was probably the most liberal Governor-General the British ever sent to India. He was appointed by William Gladstone's remarkable Liberal government of 1880, which fell six years later when it attempted to grant a form of self-government to Ireland. Ripon, moreover, succeeded a notably imperialist Governor-General, Lord Lytton, who had passed the ineffectual but annoying Vernacular Press Act and taken India into the costly Second Afghan War.

Why should Ripon's initiatives 130 years ago be significant for campaigns to clean up India in the twenty-first century? First, Ripon's reforms provided a long-lasting framework for local government, which has gone through many contortions but whose underlying assumptions remain even today. Second, the idealism that one can read into "the Ripon reforms" masked economic and political calculations about taxation and the provision of services which still affect local government operations.

The Ripon reforms enabled better-off property owners in towns and cities to elect representatives to local councils with powers to levy fees and taxes and deliver services, such as schools and sanitation. This initiative was presented as a way of educating the subjects of the empire in representative government. Coming from a Gladstone government, which only ten years earlier had introduced compulsory education in Britain with the idea that "we must educate our masters" (i.e., future voters), the rationale for Ripon's reforms was plausible.

However there were other reasons for attempting to transfer some responsibilities to elected Indians. The provision of services by local authorities cost money. Taxes are never popular and were intensely unpopular in India where families, caste and communities looked after their own needs and saw little benefit in some sort of "public" cause or initiative. Yet, at the same time, "government" – the *sirkar* or the *raj* – was expected to provide stability and a tolerable environment. It was attractive for foreign rulers to push such responsibilities away from

themselves and onto their subjects: let them carry the responsibility for extracting taxes and cleaning gutters.

These experiments with local government laid foundations that survive more than a hundred years later. In the 1890s, conservative British governments and their appointees in India withdrew some of the prerogatives that the Ripon reforms had bestowed on elected local councils and returned such powers to British officials. British rulers argued that the Ripon reforms had failed and local government was best handled by superior officials.[3] At the time of independence in 1947, most Indian towns and cities had only spasmodic experience of local government. A few larger cities like Kolkata and Allahabad had had national celebrities as mayors, but these were largely ceremonial appointments, useful for putting pressure on the British as part of the national struggle, but less useful for building sewers and cleaning streets.

After independence, the framers of the constitution omitted local government and *panchayats* from early drafts. Eventually, pressure to pay some heed to M K Gandhi's vision of revitalized village communities led to a "directive principle" about the need for state governments to "organise village panchayats and endow them with such powers and authority as may be necessary to enable them to function as units of self-government." It was one of 51 "directive principles," including references to motherhood and world peace, tacked onto the end of the Indian Constitution.[4] The emphasis, too, was on rural local government; development of towns and cities was seen almost as something to be discouraged. The Gandhian vision of a purified village life lingered into the 1980s.

The British vision of local government, somewhat camouflaged in the Ripon reforms, was that local governments existed to take pressure off higher levels of authority and should work to the needs (and whims) of such authority. This spirit was embodied in the constitution of 1950. It left to the individual states of India's federation the right to legislate the terms under which city, town and rural local governments would operate, if they were to operate at all.

---

[3] David Arnold, *Colonizing the Body: State Medicine and Epidemic Disease in Nineteenth-Century India* (Berkeley: University of California Press, 1993), pp. 204, 274-6.

[4] Constitution of 1950, Part IV, Directive Principles of State Policy, Article 40, "Organization of Village Panchayats." Articles 42 and 51 dealt with motherhood and peace.

State legislators, however, had little interest in creating a tier of elected politicians who might challenge them for patronage and influence. In the first decade after independence, community development programs, run by officials who rode in jeeps and lived somewhere else, "failed to evoke people's participation," and led to renewed calls for genuine local government of the kind Gandhi advocated and romantics believed had existed in a distant past.[5] The Balvantray Mehta committee report of 1957 recommended creation of a three-level system of *panchayati raj*. State governments were called on to implement it, but, contrary to the recommendations of the Mehta committee,[6] these new units of government were not given powers to raise funds or to decide what the needs of their localities might be. Their role, as it was spelled out in most states was to provide a local institution to carry out the plans of officials and state governments.

In the generation between 1961 and 1981, India's urban population doubled – from 79 million people (18 per cent of the total population) to 160 million (23 per cent). The capacity of towns and cities to manage schools, clinics and sanitation, which was never great, exhibited deficiencies that were increasingly apparent to town and city dwellers.[7]

A report in 1988 recommended constitutional recognition of urban and rural local governments as a way of ensuring that they existed in every state at every level and that they had sufficient powers to take care of the well-being of their localities.[8] The eventual outcomes of such recognition and pressure were the 73rd and 74th amendments to the constitution, which came into effect in 1993. They made it mandatory for each state to constitute rural and urban local governments, to establish mechanisms to fund them and to carry out elections every five years. If states failed to do so, their authorities were in breach of the constitution. Citizens could take them to court.

The lack of enthusiasm for local government has had waste and rubbish at its core. They are the everyday, inescapable reality of urban life: somehow "mess" has to be dealt with, whether

---

[5] Girish Kumar, *Local Democracy in India* (New Delhi: SAGE, 2006), pp. 16-17.
[6] *Report of the Team for the Study of Community Projects and National Extension Service*, Chairman: Balvantray G. Mehta, 1957, especially para 2.8, http://goo.gl/CrJStl (accessed 31 October 2015).
[7] V. Nath, "Urbanisation in India. Review and Prospects," *EPW¸* 22 February 1986, pp. 339-52
[8] Bibek Debroy and P. K. Kaushik, *Energising Rural Development through "Panchayats"* (New Delhi: Academic Foundation, 2005), p. 82. P. K. Thungon, the Member of Parliament whose name is associated with the 1988 report, was jailed for four years for graft in 2015. "Ex-Minister PK Thungon Gets Jail Term for Corruption by a Delhi Court," NDTV, 27 July 2015, http://goo.gl/xiDNmt (accessed 7 September 2015).

well or badly. The disdain and the politics were captured during discussion of Ripon's reforms in 1882:

> We shall not subvert the British Empire by allowing the Bengali Baboo to discuss his own schools and drains. Rather shall we afford him a safety valve if we can turn his attention to these innocuous subjects.[9]

This attitude that local government was something that superior authorities could use to further their own goals – imposing taxes, transferring blame or cultivating clients – is still pervasive.

Jurisdictions

The constitutional amendments of 1993 made local government a requirement, not an optional extra, for every state. The 73rd amendment spelled out the rules for the countryside; the 74th amendment did the same for urban and semi-urban areas.[10] The amendments made it unconstitutional for state governments to keep local governments in abeyance. In the past, for example, the state of Tamil Nadu did not hold local-government elections for twenty years.[11]

The 74th amendment prescribed three levels – municipal corporations for populations of more than one million, municipal councils for areas less than one million and *nagar panchayats* for "an area in transition from a rural area to an urban area."[12] It also attempted to provide for "metropolitan planning committees" that would have the ability to coordinate development across a number of jurisdictions. Every state was to constitute a Finance Commission to ensure that federal and state funding flowed equitably and predictably to local governments. The details of these initiatives, however, were left to the individual states, and responsibility for a number of key decisions was vested in the Governor, an appointed official expected in normal circumstances to accept the advice of the government of the day.

---

[9] Evelyn Baring to Louis Mallet, 25 September 1882, quoted in S. Gopal, *The Viceroyalty of Lord Ripon, 1880-1884* (London: Oxford University Press, 1953), p. 95.

[10] This working paper is primarily concerned with urban local government, covered by the 74th amendment. Problems of rural sanitation are different, and random defecation is a more pressing concern than management of solid waste.

[11] T. M. Thomas Isaac and Richard W. Franke, *Local Democracy and Development. People's Campaign for Decentralized Planning in Kerala* (New Delhi: LeftWord, 2000), pp. 19-21.

[12] 74th amendment, Part IXA, para 243q (a).

Basic political calculations have not changed greatly since Ripon's time. National and state-level governments still want to treat local government as an agent to deliver programs devised higher up and to take blame for inadequate services and unpopular taxes lower down.

State governments vary in the way in which they have sought to comply with the two constitutional amendments. In Kerala, the southwestern state that often returned Communist parties to power, a government led by the Communist Party of India (Marxist), or CPI(M), began an ambitious decentralization program in 1996. It transferred a large proportion of the state's development budget to Kerala's 1,000 units of local government.[13] Elsewhere, however, state-level political parties were less enthusiastic. In Gujarat, with Narendra Modi as chief minister, the state government created 26 "industrial townships," a loophole in the 74th amendment. In theory, this enabled a state government to work with industrialists to run a streamlined urban unit, geared up for industrial production. In practice, "the entire management of these townships is by a small board of industrialists and nominees of the government."[14] It was also left to state governments to lay down the boundaries of local-government units and to promote coordination among them. In neither of these tasks were state governments notably diligent or successful. "The boundaries of individual towns and cities are changed casually, without much thinking."[15] In Bengaluru, India's celebrated IT centre, an enlarged municipal corporation was created in 2007; but by 2015, this was found to be inadequate to deal with a mushrooming city, and an inquiry committee recommended creation of five entities to replace the single corporation.[16]

Two examples illustrate the implications of thrusting major responsibilities onto fragile institutions. The examples relate to public sanitation and garbage.

---

[13] Isaac and Franke, *Local Democracy*, pp. xi-xii.
[14] K. C. Sivaramakrishnan and Bhanu Joshi, "Who Rules the City?", *Indian Express*, 10 February 2015, http://goo.gl/YBMe25 (accessed 16 October 2015).
[15] Ibid.
[16] *Bengaluru: Way Forward. Expert Committee: BBMP Restructuring. June 2015* (Bengaluru: Government of Karnataka, 2015), pp. 10-12, 42-3. The Bruhat Bengaluru Mahanagar Palike in 2007 grew from about 210 square kilometres to more than 700 square kilometres.

The first example is Lammapuram,[17] one of the 37 units of local government that form the metropolitan area of Chennai.[18] At the census of 2011, the municipality of Lammapuram had 76,000 people living in 18,800 households. Lammapuram was divided into 21 Wards, each of which elected a representative to the municipal council.[19]

Lammapuram was not a typical unit of local government. From the mid-1990s, it had generated spirited non-government organizations, which grew out of a need to deal with waste and public sanitation. In 1994, a group of women banded together to try to improve waste disposal in a single Ward, a task that the *nagar panchayat* was unable to perform satisfactorily.[20] At that time, Lammapuram was still a *nagar panchayat*, the third tier of urban local government, designating an area making the transition from rural to urban. Lammapuram became a full-fledged municipality in the early 2000s. The original organization joined with an umbrella all-India NGO in 2005, and this entity was contracted by the Lammapuram municipality to collect and manage the waste of all 21 of its Wards.[21]

Why had a municipality taken the unusual step of handing over responsibility for waste management to an NGO? And why does the Lammapuram experience with waste management highlight the role of local government and public sanitation? The Lammapuram experience is well documented and widely known among people who care about such things. Its evolution helps to clarify problems that beset local governments in India in the achievement of better public sanitation and waste management.

Lammapuram was once a semi-rural settlement sitting on the south-eastern fringes of Chennai, just beyond the city's antiquated airport. When the 74th constitutional amendment came into force in 1993, Lammapuram was classified as a *nagar panchayat*, a locality no longer rural but not yet fully urban. Metropolitan Chennai came out to meet it, and Lammapuram grew from 36,000 people in the census of 1991 to 76,000 in 2011. Although the locality has polluting

---

[17] I have given the municipality a made-up name to prevent any possible embarrassment
[18] A broader geographical definition of Chennai pushes it into semi-rural areas which include more than 200 village *panchayats*. "Chennai Metropolitan Area," Wikipedia, 1 September 2015, https://goo.gl/KqiJxo (accessed 1 November 2015),
[19] *Census of India, 2011*, http://goo.gl/8n5uXd (accessed 16 October 2015).
[20] *Inspiring Progress. Learning from Exnora Green Lammapuram's Solid Waste Management Partnerships in South Localities* (Chennai: Exnora Green, 2010), p. 11. Bharat Dahiya, "Hard Struggle and Soft Gains: Environmental Management, Civil Society and Governance in Lammapuram, South India," *Environment and Urbanization,* vol. 15, no. 1 (April 2003), pp. 95-6.
[21] *Inspiring Progress*, p. 11.

industries like tanning and leatherwork, Lammapuram also has comfortable suburbs and was the birthplace of the lawyer deemed to be "the father of modern Tamil theatre." Such solid middle-class roots in 1994 sprouted the association of residents that aimed to do something about the lack of any system of garbage disposal around their homes. At the centre of the group was a particularly dynamic woman who had returned to Chennai after a career in development, partly spent as an adviser to one of the foreign embassies in New Delhi.[22] The group did not collect waste themselves, but "began by hiring a few workers, buying a tricycle, and collecting waste from 264 households" in a single Ward. This was accompanied with appeals to residents for cooperation, street theatre about garbage and pollution, and eventually a request to each household to pay Rs 10 a month towards the wages of the workers who collected the waste.

At this point, one of the stumbling blocks in involving local government emerged. Before 1996, Lammapuram had no elected local government. The low-level officials who administered such services were pleased to see a clean corner of the locality for which they were responsible (though not necessarily "accountable"). They cooperated with the residents' association to send a vehicle once a week to clear the waste bins where the collectors deposited the rubbish they gathered in their daily rounds. The truck carted away the waste to an unspecified destination. At this stage, the residents' group was satisfied to be keeping their locality clean.

In 1996, the first elections to the new *nagar panchayat* introduced unexpected political dimensions. The Ward now was one of 21 Wards in Lammapuram and had its own elected representative. On the face of it, one might have expected these circumstances to streamline and strengthen the ways in which citizens and governments could cooperate to improve sanitation. This, however, was not the case. The elected councillors were members of state-level political parties, and the Ward representative with whom the residents' association had to deal was "not well educated." Because the Ward was kept relatively clean, the new council withdrew the lorry that came each week to cart away the Ward's waste collected in the previous seven days. The reasoning was that dirty Wards needed the vehicle more urgently. The residents' association blamed the Ward's councillor for not speaking up. "He never thought," one of the members explained to Bharat Dahiya, "that cleaning has to be done on a continuous basis."[23]

---

[22] *Inspiring Progress*, p. 11; Dahiya, "Hard Struggle," pp. 95-6.
[23] Dahiya, "Hard Struggle," p. 97.

No locality is an island, especially when it comes to waste. The residents' association in the single Ward in Lammapuram had depended on the local government to remove the waste it collected from householders. In the early years, the association does not seem to have asked where the truck went after it left Lammapuram. When the arrangement with the council's truck became unpredictable, the association got the blame for waste accumulating around bins that were not being cleared. Forced to innovate or give up, the association began segregating waste for recycling and turning wet waste into compost. This required space – somewhere to sort recyclable materials and to build composting beds. A private hospital offered a location, and from these beginnings, the association grew in 1996 into a full-fledged NGO after securing some sponsorship from PepsiCo, the soft-drink company.[24] The municipality found half a hectare of land where the NGO could expand its composting and recycling. By 2013, the municipality had contracted with the NGO to collect and manage waste for all 21 Wards.[25] The municipality paid the NGO a fee for each household, and this was the basis for regular wages paid to the workers who did the daily collection.

The story of Lammapuram and its 75,000 people and 18,000 households in 2013 was impressive and promising. It had grown in twenty years from an association of exasperated residents seeking to clean up their immediate neighbourhood into an NGO servicing its entire municipality. It had projects in other parts of India and enjoyed international recognition.[26] Other areas attempted to learn from the Lammapuram example.

In spite of its notable successes, Lammapuram's experience also illustrated the administrative problems – leave aside for now the social ones – that confront attempts to improve public sanitation and waste management. One of the earliest, as we have seen, was collision between a well-meaning self-help group and the newly elected Lammapuram municipal council. Why send a truck to carry away waste from an area that was cleaning itself? The Ward representative made no protest and the truck stopped regular visits.

A similar problem of free-riding arose when Lammapuram found itself in dispute with a neighbouring municipality. Tamil Nadu has more than 700 urban local governments, 152 of

---

[24] Interview, NGO leader with R. Jeffrey, Lammapuram, 15 November 2013.
[25] *Inspiring Progress*, pp. 11-12.
[26] Exnora Green Pammal, *Annual Report, 2012-13* (Pammal: Exnora Green, 2013), pp. 9-14, 32-34.

them municipalities like Lammapuram.[27] A neighbouring municipality with rough-and-ready waste-management practices began spilling its unsorted rubbish into open land next to Lammapuram's composting and recycling yards. The Lammapuram operation got the seepage, the spill-over and the blame. In 2013, Lammapuram's managing director explained:

> When you go to the compost yard, you will see a lot of rubbish there. That is not our municipality's rubbish. Both municipalities belong to the same political party, so the neighbouring municipality has been dumping a hundred tonnes every day. They don't have the space at all and they are spoiling our work.
>
> We always have a problem. We want to do good work, but there a lot of problems.
>
> I had to go to the courts. I got a stay order from the courts to prevent them [the neighbouring council], but whatever the damage – they have done it. It is huge. But now they are not doing anything. Again now I am going to the courts to remove all those things and give me a neat place. So it takes time. Any legal battle always takes time. But at the same time I'm working with the government, with the political party, so I cannot hurt their feelings. I have to do it in a very subtle manner ... so the local party people know I only went to the court to get it stopped ... and they are very happy. But they want me to take all the initiatives.[28]

The Lammapuram experience highlights key problems of local governments and waste. First, local government representatives need to be convinced about the importance of the task. They will face various political compulsions and temptations. But their endorsement and support are essential for improvement of public sanitation. Such support is vital for the next two stages that the Lammapuram example illustrates. First, residents and waste workers need to be motivated to adopt new methods. Second, local authorities have to find sites where recyclable waste can be sorted, wet waste can be composted and, least desirably, where other unusable waste can be "scientifically" dumped. A further lesson from Lammapuram is the need for persistence and for sustainability. Finally, the conflict with the neighbouring municipality underlines the need for overarching authorities able to resolve disputes. They are also necessary to ensure

---

[27] "About Us," Municipal Administration and Water Supply, Government of Tamil Nadu, http://www.tn.gov.in/maws/about_us.htm (accessed 20 October 2015).
[28] Interview, NGO leader with R. Jeffrey, Lammapuram, 15 November 2013.

cooperation among jurisdictions to create facilities – such as "scientific landfills" – to serve populations of millions, not Lammapuram's mere tens of thousands.

Jurisdictional problems are not exclusive to small municipalities like Lammapuram. In the National Capital Territory of Delhi (NCT), the official name for India's capital, local government is a labyrinth of authorities. They collide with each other in a confined area of 1,500 square kilometres, in one of the world's most rapidly growing cities. Delhi's population is estimated at 16.8 million,[29] giving a density of about 11,000 people per square kilometre. By contrast, a metropolitan area like Melbourne, Australia, has a density of about 400. More important for purposes of waste management, however, Melbourne is part of the state of Victoria. A vast hinterland under the same state jurisdiction lies beyond urban boundaries. Melbourne has elbow room; Delhi does not. Delhi is bounded by two states of the Indian Union, each of which has problems of its own and neither of which has an incentive to help solve the problems of the national capital.

As the example of the tiny municipality of Lammapuram illustrates, effective management of waste requires space. Some of that space is necessary for sanitary or "scientific" landfills, but space is also essential for sorting, recycling and composting. The aim is to reduce the need for landfill. Delhi, however, has no space to spare; it bursts at its seams.

The jurisdiction of the National Capital Territory of Delhi was created in 1991 by the 69th amendment to the constitution, which itself was a landmark in growing awareness that urbanization was irresistible and local government was desirable. An attempt after independence to institute democratic local government in Delhi was abandoned in 1956. Thereafter, India's capital was administered directly by the national government until the amendment of 1992 and the formation of the first NCT government in 1993.

The 69th amendment provided for a 70-member assembly with a Chief Minister and gave the assembly many – but not all – of the powers of a state of the Indian Union. Reasoning that the country's capital needed to be under the ultimate control of the Government of India, the latter retained various powers. The NCT has as its formal head an appointed Lieutenant-Governor,

---

[29] *Census of India 2011,* "C -1 Population by Religious Community – 2011," http://goo.gl/ZHfO2z (accessed 21 October 2015).

not a full-fledged Governor like states of the Union, and the national government retains, for example, control of the police. The complications were great. In 2015, decision-making in the NCT involved eight jurisdictions, close to 400 elected representatives, two ministries of the Government of India and dozens of appointed representatives. The list of authorities included:

- the Delhi Development Authority (DDA), under the national government's Ministry of Urban Development[30]
- the Lieutenant-Governor, appointed by the Government of India, as the more-than-ceremonial head of the elected legislature and chairman of the DDA
- a legislature of 70 members, elected from territorial constituencies and empowered to form a government under a Chief Minister
- three Municipal Corporations – for North Delhi, South Delhi and East Delhi, which account for more than 95 per cent of the NCT's area and together have 308 representatives elected from territorial Wards
- the New Delhi Municipal Council, covering the area of "New Delhi," built by the British in the 1920s and 1930s, where the president's palace and many government offices are located
- the Cantonment Board, presiding over the military establishment located in the heart of the NCT, and under the authority of the Directorate General of Defence Estates in the Ministry of Defence

With the NCT's crushing population density, complicated by the unsympathetic states of Haryana and Uttar Pradesh on its borders, this proliferation of authorities leads to constant unresolved confrontations and has major implications for waste management.

First, space is vital and no one has enough. The use of land in the NCT of Delhi is controlled by the Delhi Development Authority, a central government body under the Ministry of Urban Affairs. The central minister comes from a faraway state: "Delhi waste is not his concern."[31] The municipal corporation is responsible for waste management and deals with Delhi's citizens each day. In 2014, the South Delhi Municipal Corporation (SDMC) had taken the DDA to the Delhi High Court to demand that it release 650 hectares of land on which to create a new,

---

[30] Ministry of Urban Development, "Mandate," http://goo.gl/ckqCWi (accessed 21 October 2015).
[31] Interview, senior official, South Delhi Municipal Corporation, with R. Jeffrey, New Delhi, 1 May 2014, from which the following discussion comes.

sanitary landfill and waste management facilities. "I cannot take a gun and put it [at] their [the DDA's] head," said an exasperated senior official of the SDMC.[32] Thus two government agencies were confronting each other in the courts – a similar experience to tiny Lammapuram's suit against its neighbouring municipality.

Possible solutions to these jurisdictional problems are not easy or uniform. It would appear on first consideration that larger local-government units would allow for more coordinated planning. Local government in Delhi, however, was revamped in 2012 to divide the single Delhi Municipal Corporation into three – South Delhi MC, North Delhi MC and East Delhi MC. The argument was that a single corporation could not deal effectively with Delhi's vast population. In contrast, local governments in Hyderabad were consolidated into a single Greater Hyderabad Municipal Corporation in 2007. And Bengaluru, which in 2007 had been enlarged to triple its geographical area, was considered unwieldy in 2015 and ripe to be split into smaller units.[33]

Technology

Delhi presents greater complications than other Indian cities. It also presents most of the stratagems and nostrums that local governments consider when dealing with mounting volumes of waste.

The first of such possibilities is the "garbage dump" or, to give it the name of its reformed cousin, the "landfill" or even "sanitary landfill" or "scientific landfill." The principle is the same: "get rid of the stuff – dump it somewhere." But dumps need space, and great cities need great dumps to accommodate what their residents discard each day. And as a Delhi official ruefully pointed out, "dumps" are not "landfills." A "sanitary landfill" not only needs space; it is costly. It needs scientists, engineers and technicians and relentless supervision and maintenance. Such landfills are an inescapable part of a system by which a great city can

---

[32] Ibid.
[33] *Bengaluru: Way Forward. Expert Committee: BBMP Restructuring. June 2015* (Bengaluru: Government of Karnataka, 2015), pp. 10-12, 42-3. As constituted in 2007, the Bruhat Bengaluru Mahanagar Palike grew from about 210 square kilometres to more than 700 square kilometres.

manage waste, but such landfills are better started from scratch. It is difficult to make the silk purse of a "scientific landfill" out of the sow's ear of an existing 50-metre-high dump.

Pressured authorities look for quick technical solutions. Private companies with varying credibility are ready to offer them. At one end of the spectrum of such quick-fixes are the "mobile incinerators" sold to the Thiruvanathapuram Municipal Corporation in 2012. To prevent residents from random burning of waste on the roadside, the corporation purchased incinerators mounted on trucks. The idea was that they would travel to local dumping grounds and burn what they found. But the mobile incinerators worked irregularly, required fuel to keep their furnaces burning and had dubious processes for removing noxious gases from the discharge and exhaust.[34]

Incineration plays a major part of waste management in countries like Japan, Singapore, Germany and Sweden. But high-combustion incineration, which protects as effectively as possible against poisonous emissions, requires very expensive incinerators. They in turn need relentless high-level maintenance and a diet of high-calorie waste – waste that will burn. None of these conditions is likely to be met except perhaps in one or two India's largest metropolises. Indian towns and cities produce a higher proportion of wet waste than the cities of Europe, North America and industrialized Asia, and torrential monsoons at fixed periods of the year accentuate the effects of the relatively low-calorie value of Indian waste.

Composting is the most practical method for reducing India's need for landfill. Effective composting has the added advantage that it requires sorting and separation of waste, a process that enables recycling and reuse of materials that are not compostable. But as we have seen, composting requires space, which is always contentious, motivated organization and reliable labour.

Recycling of glass, paper, plastic and other materials similarly requires space, labour and relentlessness. Materials need to be collected sorted, warehoused, transported and, most importantly, sold. When recycling works, people at various levels make money; but the value of various commodities fluctuates. When petroleum prices fall, so does the value of recycled plastic of most varieties. The things made out of recycled materials must have markets. Local

---

[34] *Hindu*, 10 December 2012, http://goo.gl/h18hfr (accessed 23 October 2015).

governments can create conditions that make it easier to prepare materials for recycling, but global market conditions influence prices. A godown overflowing with unwanted paper or plastic has "landfill" or "incinerator" written in its horoscope.

People

Because of the stigma surrounding public sanitation in India, especially waste management, knowledgeable engineers and urban planners are scarce. Local governments, if they are well-intentioned, search almost in desperation for solutions to a problem – accumulating waste – that grows every day before people's eyes. At best, they turn to advice from NGOs or consultants that appear to have experience.[35] At worst, they are sold inappropriate technology or make arrangements with organizations unable to deliver the necessary services.

A town in Karnataka – let's call it Hurichpur[36] – provided an example of good intentions contending with the problems of government structures and paucity of knowledgeable, motivated personnel. Hurichpur in 2015 had a population of about 250,000, and a municipal council of 35 members, each elected from a geographical Ward.[37] The council elected its president from among its members, but the municipal commissioner – the chief executive officer – was a member of the Karnataka state administrative services and an appointee of the state government. The town of Hurichpur, however, is located in the district of Hurichpur. And Hurichpur town is the headquarters of the district. The commissioner of Hurichpur district is also appointed by the state government, but he or she is member of the Indian Administrative Service (IAS), a more prestigious body. An IAS officer has more clout than an officer of a state bureaucracy.

In 2015, the *Swachh Bharat* or 'Clean India' campaign of the new BJP government in New Delhi was being trumpeted around the country. The young IAS commissioner of Hurichpur

---

[35] The All India Institute of Local Self-Government, founded in 1926 and based in Pune, has branches in some state capitals, but its influence seems limited, http://www.aiilsg.org/objectives/ (accessed 3 November 2015).
[36] I give the town a pseudonym to prevent any embarrassment to people involved in waste management.
[37] http://www.raichurcity.mrc.gov.in/node/84 (accessed 28 October 2015).
http://www.raichur.nic.in/ (accessed 28 October 2015). http://www.raichur.nic.in/DCList.htm

district, aware that successfully accomplishing the new government's programs would benefit one's career, looked for ways to clean up Hurichpur town.

The municipal commissioner, however, was a member of the Karnataka administrative service, approaching retirement, and not much attracted, it was said, to the demands of public sanitation. Hurichpur was not a clean town. It had a classic unmanaged dump on what was once the fringe of the town. Squadrons of pigs did much of the street cleaning in the past and were still prominent workers. From the town's famous city wall, people taking an evening promenade looked down into a moat that doubled as the cess pool for the town's sewers.

Where did an ambitious officer who wanted to carry out national policy begin? Officers of the IAS or state administrative services are rarely specialists in a particular area. They move from one department of government to another, often at very short intervals and at the whim of politicians or influential citizens. They may begin an assignment with almost no special knowledge about the institution to which they have been assigned. This is especially true of local government and, more specifically, of the tasks of public sanitation and waste management.

The district commissioner of Hurichpur consulted a retired member of the Andhra Pradesh administrative service who a wide reputation for having cleaned up the towns in which he had worked. Now a freelance activist, Rao Saheb[38] advocated local of handling of waste – diligent segregation, local composting and organized recycling – to bring increased benefits and security to the customary waste pickers. He had put the Hurichpur district commissioner in touch with a nearby NGO with a record of success in dealing with the fly ash from a coal-fired power station. The district commissioner had engaged the NGO to plan and oversee the cleaning up of Hurichpur town and its uncontrolled garbage dump.

As a result of its work in dealing with fly ash, the NGO had a reputation for recycling However, as one of its officials said, they had had no knowledge of other facets waste management until six months earlier when they were asked to take on the Hurichpur clean-up. In consultation with Rao Saheb, they began to create a program to collect and segregate waste regularly in the town and to turn its filthy dump site into recycling and composting centre.

---

[38] A pseudonym.

This experience of a small town highlights large themes. The first is the lack of widely shared knowledge about practical aspects of waste management. Though the town's website paid tribute to the Solid Waste Management Rules of 2000, the references to waste management in 2015 had not been updated for five years. When the district commissioner looked for help and advice, he fell back on a retired public servant from another state and turned to an NGO with some experience in recycling and reuse.

The second theme lies in the uncertain powers of municipalities. Though their elected bodies are guaranteed by the constitution, their powers are limited. Their executive officers are appointed and transferred by the state government. At the district level, Hurichpur had 15 district commissioners in the ten years between 2005 and 2015. The turnover of municipal commissioners may have been as great.[39] Different states have slightly different rules, but in many states, including Karnataka, a municipality must get permission from the state government before it can spend money above a relatively low limit. Local governments face shortages of authority, continuity and expertise.

The shortage of skilled and committed people in local government, and especially public sanitation, is evident in the Hurichpur example. In countries with more developed systems, people build their careers as local-government specialists. They move among local governments and back and forth between state-level and local administration. Municipalities make senior appointments through advertisement and selection. In India, on the other hand, people arrive in local government and public sanitation largely by accident. A few find the work important and stimulating and stay on – subject to transfers by higher authorities. But for most officers of the elite Indian Administrative Service, a stint in local government is simply a rung on the ladder.

This lack of a trained and committed cadre was felt long ago. In the 1890s, British officials with genuine interests in public health "declared the urgent need for a 'sanitary service' for India." They believed that without a cadre of specialists working with local governments, local government itself would be discredited for not performing tasks allotted to it.[40] Seventy years later, the Third Five Year Plan (1961-6) echoed the dismay: "most municipal administrations

---

[39] See *Hindu*, 4 September 2005, 21 February 2010 and 12 February 2014, to note frequent changes.
[40] David Arnold, *Colonizing the Body* (Berkeley: University of California Press, 1993), pp. 275-6.

are not strong enough to carry out these functions" because "resources and personnel" were lacking.[41] In Hurichpur in 2015, well-meaning authorities had to search for expertise, beginning with a retired official with a reputation for achievements in public sanitation. Even with such advice, the best the local government could find was a NGO with experience in recycling industrial waste from coal-fired power stations. Their representatives admitted that they had a lot to learn about repairing uncontrolled garbage dumps and organizing regular household waste collection and segregation.[42]

In the short term, things in Hurichpur seemed to go well. The redoubtable Almitra Patel, who pursued the legal action that led to the Solid Waste Management Rules of 2000, visited Hurichpur ten months after the new system began and described waste management in the town as "quite good" – better than in Bengaluru. The manager of the former dump, which was being reengineered as a waste segregation and composting centre, reported progress, which included a whittling down of the refuse from the old dump site and steady processing of daily arrivals from more systematic collection in the town.[43]

Four kinds of people form the nexus between local governments and public sanitation. The first category are the elected representatives of thousands of Wards in towns and cities throughout India. Not many are interested in the science and policy related to urban waste; but a few are. For most, waste is either a problem that their constituents grumble about or a potential source of funds through deals done with contractors hired to make garbage go away. And a Ward representative may sometimes cultivate support among the low-paid municipal employees who deal with waste or among the informal rag-pickers who scratch a living from sifting through thrown-away things.

The second category are the people who dirty their hands to remove waste, whether employees of the urban body or freelance waste-pickers. Their numbers in urban India run to many millions.

---

[41] Third Five-Year Plan, ch. 33, para 33, http://goo.gl/MEKTVk (accessed 15 September 2015).

[42] *Hindu*, 19 October 2015, http://goo.gl/ziJ0nk (accessed 30 October 2015).

[43] *Hindu*, 19 October 2015, http://goo.gl/UZszYf (accessed 14 December 2015). Interview, Raichur dump site supervisor, with R. Jeffrey, Bengaluru, 27 November 2015.

The third category are the officials of local government – the administrators who are appointed by state governments as executive officers and who come either from state administrative services or the elite IAS. Their careers may take them on zigzagging paths – today running a rural husbandry program, tomorrow a spell in the public works department and later perhaps a commissioner of a large urban government. Few officials, if given a choice, choose local government. Even if they did, their political bosses at the state level have the final say about where an official is posted. There are no obvious career paths for specialists in the administration of towns and cities.

Finally, a subset of the latter category are the engineers, medical people and scientists who work in public sanitation and waste management in local government. Almost without exception, they arrive there by accident, usually trained in a broad discipline, such as engineering or medicine, and are transferred into a local government role, which is sometimes seen as a punishment posting. Some take to it, and throughout India one meets skilled officers who see the importance of, and develop a zeal for, public sanitation. They are unsung heroes of Indian urbanization.

Conclusion

India has too many freelance waste pickers. Though they may scrape a living, they experience galling prejudice and constant uncertainty.[44] They also do an inadequate job of cleaning towns and cities. Their goal is survival, not public health or civic beauty. For local governments, an effective system requires trained and motivated people from the other three categories – politicians, administrators and technicians; but informal waste-pickers must be included in any system of improvement. One of the essential puzzles of public sanitation in urban India is to find ways to integrate waste-pickers beneficially into an organised waste-management structure. Informal waste-pickers enjoy one benefit: they are their own bosses. They do not have to punch clocks, tick boxes or wear uniforms. To surrender these very modest privileges, there have to be rewards. To find such rewards, requires patience, knowledge and resources from people belonging to the other three categories.

---

[44] Kaveri Gill, *Of Poverty and Plastic. Scavenging and Scrap Trading Entrepreneurs in India's Informal Economy*, (New Delhi: Oxford University Press, 2010), p. 76, points out that none of the people collecting plastic waste in northwest Delhi, was "poor," according to definitions of "poverty" at the time of her surveys.

To deal effectively with urban waste, India needs to build career paths in local government. To do this requires greater powers and finance for local governments: larger financial transfers from state and central governments and more powers for local governments to enforce the collection of their own rates and taxes. Local governments need to be able to advertise for trained technical people at good salaries and thus create careers to which talent will be attracted. In 1888, Florence Nightingale bemoaned "the want of sanitary engineers in India."[45] More than 130 years later, there were still nowhere near enough – nor enough skilled local government administrators or properly remunerated and led collectors of refuse. The human element is the essential ingredient if local governments are to build the relentless systems to keep urbanizing India clean.

. . . . .

---

[45] Florence Nightingale, Notes, June-October 1888, in Lynn McDonald (ed.), *Collected Works of Florence Nightingale*, vol. 10, *Florence Nightingale on Social Change in India* (Waterloo, Ont.: Wifrid Laurier University Press, 2007), p. 331,