



LIFE INSIDE A **BLACK HOLE**

Beneath the glitter of India are dark alleys in which are trapped poisonous gases and millions of Dalits who do our dirty job in return for disease and untouchability. **S. ANAND** reports

to two years now without a murmur of protest from viewers or civil rights groups. Perhaps the idea that even the faceless manhole cleaner is happy, listening to FM radio, is comforting. A Radio Mirchi official believed the ad would “elicit the maximum amount of laughter.” A blogger praised the ad for its “simple concept, beautiful execution, high recall value.” After all, we develop a capacity to be blind when we see an open manhole and “men at work”.

What is the weather really like inside a manhole? What happens to the shit, piss and other waste flushed down by 18.02 percent of the billion-plus population — those with the luxury

When sewage decomposes, hydrogen sulphide is formed. An explosive gas, it also affects oxygen supply to brain and stem cells

of a water closet facility in India according to Census 2001? What is the fate of the lakhs of Dalits forced to do sanitation work? At least 22,327 Dalits of a sub-community die doing sanitation work every year. (see box). Safai Kamgar Vikas Sangh, a body representing sanitation workers of the Brihanmumbai Municipal Corporation (BMC), sought data under the Right to Information Act in 2006, and found that 288 workers had died in 2004-05, 316 in 2003-04, and 320 in 2002-03, in just 14 of the 24 wards of the BMC. About 25 deaths every month. These figures do not include civic hospital workers, gutter cleaners or sanitation workers on contract. Compare this with the 5,100 soldiers — army, police, paramilitaries — who have died between 1990 and 2007 combating militancy in Jammu & Kashmir.

It is only in the fantastic world of Hindi cinema — *Don*, *Dhoom-2* — that a character nonchalantly enters a drain and emerges unscathed. In Delhi, on May 6, 2007, three men — Ramesh (30), Santosh (32) and Ashish (35) — died of asphyxiation in a manhole in Dabri. Subcontracted by the Delhi Jal Board (DJB), Ansal Constructions had employed three migrant workers from Uttar Pradesh to enter the clogged manhole. With no prior experience, they inhaled noxious gases, and died instantly. The Dabri deaths merited a routine mention in some dailies. In July 2006, when six-year-old Prince Kumar Kashyap fell in a 50-feet deep borewell pit in Haldheri village,

Haryana, and was rescued by the army, it became national news. The rescue was televised, with Chief Minister Bhoopinder Singh Hooda, Kurukshetra MP Naveen Jindal and others camping at the site. Prince received gifts worth Rs 7 lakh. *The Times of India* headlined him as the “Rural Page 3 kid”. However, a Dalit dying in a sewer is a non-event.

The men and women — invariably Dalits — who ceaselessly manage to keep our cities, towns and villages clean, die every day around us. We never notice their lives or deaths. These are the soldiers who, bereft of the honour of uniform and the posthumous glamour of martyrdom, sacrifice their lives making sure the rivers of filth flow unhindered. Forced to touch, immerse themselves in — and perforce taste — the fermented faeces of millions, they are condemned to untouchability. The genocide passes unnoticed since there are a million invisible Dalits who will quietly take the place of the dead.

THE BELLY OF THE BEAST

What does this beast that gobbles human lives look like? Who feeds it? In Delhi, it is a humongous many-mouthed subterranean creature — a network of 5,600 km of sewers with about 1.5 lakh manholes, managed by the DJB — which consumes 2,781 million litres of the sewage Delhi generates daily. The journey begins from kitchens, bathrooms and toilets through four-inch house drains that empty into the main sewer. The 9-inch trunk sewers carry the slush to bigger lines of 2m to 3m diameter. This network of pipes is laid below ground level with “sufficient gradient” to ensure a “self-cleansing” velocity of about 1 metre per second.

Reared on a mixed diet of domestic, commercial and industrial wastewater, with storm-water drains sometimes hitching a ride and burdening its mangled intestines, the beast develops serious indigestion every day. It is indiscriminately fed a wide range of objects that causes clogs — condoms, sanitary pads, non-degradable thermocol, a variety of plastics, industrial sludge, kitchen waste, toilet cleaning acids, medical waste (syringes, blades, even placenta), glass shards, household gadgets, construction debris. It is then that the 5,500 *beldars* — as sewer workers are designated by the DJB — enter its bowels. (In Chennai, the sewerage network spreads across 2,800 km with 80,000 manholes — a manhole every 35 metres.)

The indigestion produces a variety of gases. When sewage decomposes and ferments in a stagnant state, hydrogen sulphide is formed.

*Yeh suhana mausam, yeh khula aasmaan,
kho gaye hum yahaan, haye, kho gaye hum
yahaan...*

(This lovely weather, these wide open skies,
we are lost in this bliss, oh, we are lost here ...)

IN THE Radio Mirchi television commercial, a paan-chewing man in a safari suit is shown wondering what keeps the man down in the manhole so happy that he should sing. Zooming in on the trousers and footwear left beside the manhole cover, the tagline says: “*Mirchi Sunnewaale... Always Khush*”. Conceived by Prasoon Joshi of McCann Erickson, the ad has been on air for close

COURTESY, SAFAI KAMGAR VIKAS SANGH

Known as sewer gas, it has a distinctive smell of rotten eggs. Overexposure to this gas can cause olfactory fatigue — an inability to detect its odour — which most manhole workers suffer from. Hydrogen sulphide, which is explosive, acts as an irritant and asphyxiant, affecting oxygen supply to the brain and stem cells. More than 100 parts per million (ppm) of this gas in a manhole can result in instantaneous suppression of respiration. Less than 10 ppm, which is routine, can result in conjunctivitis and headaches.

METHANE IS the other lurking danger. Not only does it displace oxygen, it is also explosive. Provided with no gas-detecting devices, most manhole workers have ingenious methods of checking the concentration of these toxic gases. After opening the manhole cover, they let it vent a while, then light a match and throw it in. If there's methane, it burns out. Once the fire abates, the worker prepares to enter. Sateesh, a DJB worker from Nandnagari, reveals another strategy: "After opening the cover, we check if the cockroaches are alive. If they are dead, we leave the sewer open for some time and then enter." Roaches are not known to die easily.

Entering the narrow, dark drain, the worker pushes his only weapon, the *khapchi* — a spliced bamboo stick — to dislodge the block. This exercise could take hours. "Holding our breath, closing our eyes, we plunge headlong. We feel our way poking with the *khapchi*," says

'After opening the cover, we check if cockroaches are alive. If they are dead, we leave the sewer open for some time,' says a worker

Sateesh. It is then that a sudden blast of putrid sludge — besides methane, hydrogen sulphide, carbon dioxide and carbon monoxide — assaults the person. "Even if we manage not to swallow the toxic muck, it manages to enter our bodies." Odourless and colourless, the carbon gases can cause suffocation. If the worker survives the initial ordeal, he crouches inside and loads the sludge into leaky metal buckets or wicker baskets for his team to haul out. Depending on the clog, the entire operation could take up to 48 hours. "We often work after midnight. When people sleep, the flow in the sew-



HEMA KASOTIA

DYING IN THE GUTTERS

At the very least, 22,327 Dalits die every year cleaning sewage. Their deaths rarely attract attention of either the State or society. Isn't it genocide, asks S. ANAND

AHMEDABAD NGO Kamdar Swasthya Suraksha Mandal believes that at a conservative estimate, there could be over 1,000 manhole worker deaths per year across India. Santosh Choudhary, chairperson of the National Commission of Safai Karamcharis (NCSK), told TEHELKA that at least "two to three workers must be dying every day inside manholes across India." Another

wards in the Brihanmumbai Municipal Corporation (BMC), the figure stands at 3,495 deaths over 10 years in the city with a population of 13 million. At 350 deaths per year from among 22,000 permanent sanitation workers in the BMC, the mortality rate (MR) is 16 for every 1,000 SKs. Says demographer Leela Visaria, former director of the Gujarat Institute of Development

Officially, India has 6.76 lakh 'manual scavengers' — those who dispose human excreta with bare hands

Ahmedabad NGO, Manav Garima, led by Balmiki activist Parshottam Vaghela, has documented the deaths of 145 manhole workers in seven years in the municipalities of Vadodara, Surat and Ahmedabad.

According to data obtained in Mumbai under the RTI Act, 2,039 safai karamcharis (SKs) died between 1996 and 2006 in 14 of the city's 24 civic wards. Projected to all 24

Research, "The death rate for urban Indians aged 15-59 years is 3 per 1,000 population. This gives you an indication about the deplorable health status of the Safai Karamcharis."

In neighbouring Pune, there were 227 deaths between October 2005 and September 2007 for a population of 4.4 million.

In the four metros, there are 1,07,400 SKs

URBAN ENTRAILS

CITY	NO. OF SANITATION WORKERS	POPULATION OF THE CITY	SKs PER MILLION POPULATION
New Delhi	50,400	14 million	3,600
Mumbai	30,000*	13 million	2,307
Chennai	14,000*	4.34 million	3,225
Kolkata	13,000	4.5 million	2,888
	TOTAL	TOTAL	AVERAGE
	1,07,400	36 million	2,983

*Information based on official websites of civic bodies. *Includes temporary staff*

serving a population of 36 million (see table). At an MR of 16, at least 1,718 of these workers are dying every year. For the urban population of 286 million, assuming there are 2,000 SKs per million, conservatively there must be 5,72,000 SKs servicing urban India. At an MR of 16, a minimum of 9,152 of them must be dying in our cities every year.

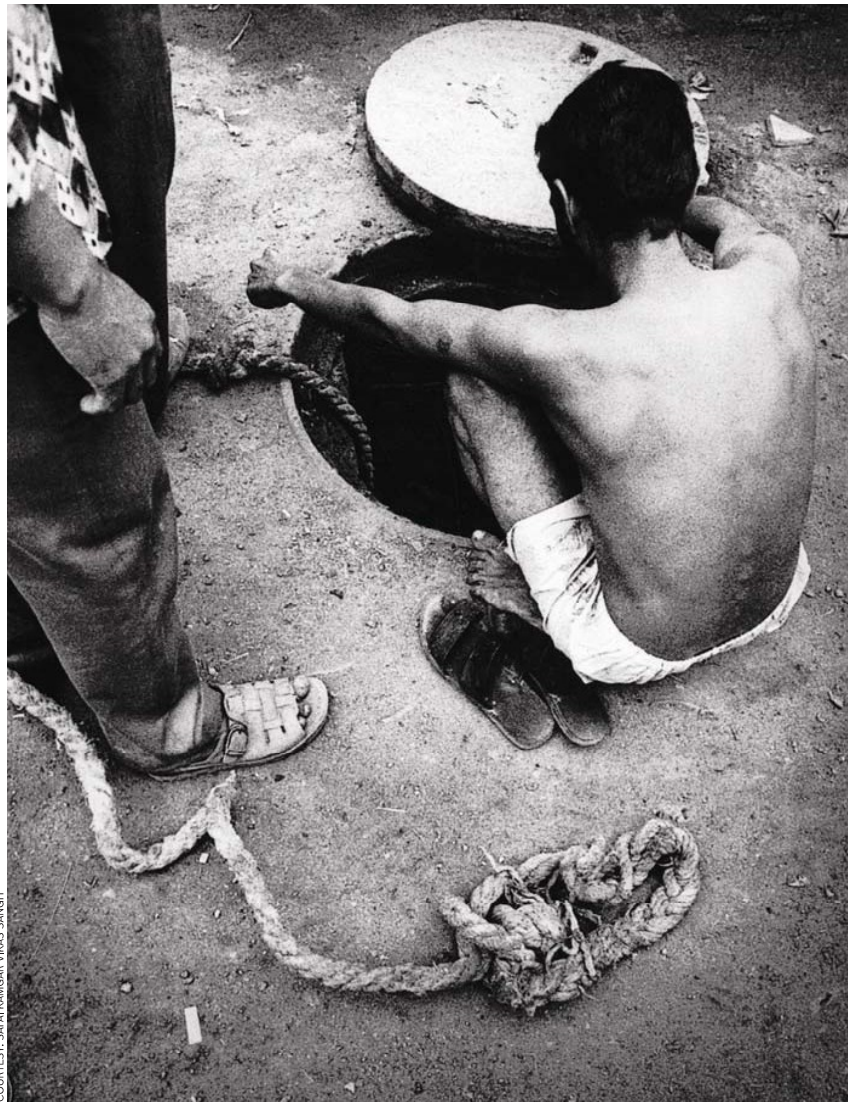
Officially, India has 6.76 lakh manual scavengers — those who dispose human excreta with their bare hands — working in 96 lakh dry latrines. The Planning Commission sub-group on SKs says, “Independent estimates indicate that there could be about 12 lakh manual scavengers.” For these 12 lakh manual scavengers, if we assume a reduced, conservative MR of 8 per 1,000 workers, we arrive at 9,600 deaths per year.

With 5,500 permanent and 1,500 temporary *beldars* engaged in sewer work for Delhi’s 14 million population, there are 500 sewer workers per million general population. India’s 286 million urban population must be served by at least 1,43,000 sewer workers. Assuming a higher MR of 25 among this group, since their job is most hazardous, 3,575 sewer workers must be dying every year.

All this adds up to 22,327 deaths every year among a cross-section of sanitation workers. Visaria, who is on the advisory council of the Population Foundation of India, says TEHELKA’s projections are “very conservative”.

Unnoticed by the world, India has been subjecting a particular sub-caste within Dalits to this genocide for decades. Article 2 of the 1948 United Nations Convention on the Prevention and Punishment of the Crime of Genocide, of which India is a signatory, defines genocide as “any of the following acts committed with intent to destroy, in whole or in part, a national, ethnic, racial or religious group, as such: killing members of the group; causing serious bodily or mental harm to members of the group; deliberately inflicting on the group conditions of life, calculated to bring about its physical destruction in whole or in part...” Supreme Court advocate Colin Gonsalves of Human Rights Law Network, says: “Viewed thus, the Indian State definitely stands guilty of genocide.”

—with inputs from Shalini Singh in Mumbai



COURTESY: SAFAL KANGAR VIKAS SANGH

ers is lesser, and our work does not disturb road-users,” says Sateesh. Among sewer workers, there’s a category called “divers”, whose brief is to *swim* through the large pipelines, find the blocks, and clear them.

According to Ashish Mittal, an occupational health physician who co-authored *Hole to Hell*, a 2005 study of sewer workers by the Centre for Education and Communication (CEC), New Delhi, a manhole is “a confined, oxygen-deficient space where the presence of noxious gases can cause syncope — a sudden and transient loss of consciousness owing to brief cessation of cerebral blood flow. The brain cannot tolerate even a brief deprivation of oxygen. The long-term neurological effects of syncope can be debilitating.” In most developed nations, manhole workers are protected in bunny suits to avoid contact with contaminated water and sport a respiratory apparatus; the sewers are well-lit, mechanically aerated with huge fans and therefore are not so oxygen deficient. In Hong Kong, a sewer worker, after

In Delhi, the workers wear a ‘safety belt’. It’s a joke. The thick ropes, at best, only help haul them out when they faint or die

adequate training, needs at least 15 licences and permits to enter a manhole.

In India, the manhole worker wears nothing more than a loincloth or half-pants. In Delhi, since the directives of the National Human Rights Commission in October 2002, the majority of the DJB’s permanent workers wear a “safety belt”. It’s a joke. This belt, connecting the worker through thick ropes to men standing outside, offers no protection from the gases and the sharp objects that assault the worker. At best, it helps haul them out when they faint or die. The CEC’s 2005 survey of 200 DJB manhole workers found that 92.5 percent of the workers wore the safety belt. This did not prevent 91.5



PHOTOS: SALMAN USMANI



Gautam Jadhav, 33, says: "I suffer from sinus; my eyes swell up. I recently had typhoid. No one likes standing next to us because of the stink."

NOT SURPRISINGLY, most of the workers die before retirement. Owing to loss of appetite and inevitable alcoholism, many men shrink to half their size if they work 20 years. The average lifespan of a manhole worker is about 45. And if a worker does not die inside a manhole, the civic body does not offer any monetary compensation for illnesses/deaths owing to occupational hazards. In Delhi, permanent workers get a monthly "risk allowance" of Rs 50. In some states this rises to Rs 200. The entry-level salary of a sanitation worker in New York is \$30,000 per year. In the sixth year, he could earn \$67,141 (Rs 2.18 lakh per month). In India, a permanent sanitation worker with 20 years experience could make Rs 12,000 a month.

THE ILLOGIC OF REFORM

Human rights activists, Marxists, Gandhians, journalists, NGOs, lawyers and courts have always believed that the work of safai karamcharis, especially that of manhole workers, must be "humanised" and "mechanised" to minimise contact with waste. This school of "amelioration and reform" says working conditions must be improved, that safai karamcharis should be paid minimum wages, provided with insurance cover, masks, gum boots, bunny suits, oxygen cylinders and other safety equipment. "It's like saying a woman should be raped only after she is allowed to wear her bridal best and covers her face with a veil. The point is, Dalits should not be going down these drains at all. Provided with bunny

Scum of the earth

Manual scavengers, these men work in 'dry latrines', which are otherwise illegal

suits and Rs 50,000 per month, will Brahmins start immersing themselves in these sewers?" asks Parshottam

Vaghela, a Balmiki activist who runs Manav Garima in Ahmedabad.

In Ludhiana, when two sewer workers died this July, the corporation provided 50 safety kits to about 800 workers. The kit included a mask that weighed 18 kg. The workers could not get down into 12-inch diameter manholes with such a weight. In Delhi, workers were provided with a "mandatory gas cylinder" that weighed an unwieldy 13 kg. "It made things worse. It's like tying us with a millstone and pushing us down the sea of slush," says DJB worker Rajinder Kumar. According to Mittal, "Given the



If a worker does not die inside a manhole, no compensation is given. In Delhi, workers get Rs 50 as monthly 'risk allowance'

percent of them from suffering injuries and 80 percent suffering eye infections. The survey found that diseases like leptospirosis, viral hepatitis and typhoid were common. "During the course of our six-month study, three of the 200 workers died," recalls Mittal.

KM Chabukswa, 50, a manhole worker with the BMC since 1981, says: "After the work, there is no provision for water to clean ourselves. We end up walking a kilometre looking for water. We are prone to every possible disease; workers take to drinking or doing drugs to get over the atrocity of the job." Another BMC worker,

'EVERYDAY, WE SMELL DEATH'

Balmiki Bara in Delhi's Aryapur is a basti of sewerage workers. Rajinder Kumar, a resident, tells his story

I JOINED THE Delhi Jal Board (DJB) in 1984 as a temporary worker. I became permanent in 1989. I am 44. My present duty is at Ashok Vihar water tank. My salary is Rs 9,600, but after deductions I make Rs 5,000 every month. The job is hazardous. Most of the accidents and deaths occur because of inhaling the dangerous gases. We receive no safety equipment, except a safety belt sometimes. We received no training on how to use the other equipment. The litmus paper test to check the gas concentration level is never conducted. I have worked in sewers as deep as 28 feet. Every day, we smell death. I am never sure if I will safely return home.

My eldest brother Mahavir Kumar, a DJB *beldar* since 1976, died recently. He was 46. On May 24, 2004, he was working with three men on a blocked manhole in the Ashok Vihar/Wazirpur industrial area. Praveen, a 24-year-old, was inside the gutter, about 14 feet deep. At some point, Praveen was not responding. His colleagues realised he had been overcome by the gases. My brother instantly jumped into the sewer to save him. He too was overwhelmed by the gases. He died instantly. There was no supervising official or engineer present. Taken to Jagjeevan Ram Hospital, both were declared "brought dead". The post-mortem report said my brother died due to the inhalation of dangerous gases in the gutter. Both the workers did not have any safety equipment at that time, not even a safety belt. As part of compensation, my brother's son, Sagar, aged 23, was made a *beldar* with the DJB in June 2004. He entered a sewer 12 days after his father's death.



Condemned Rajinder with his mother and a picture of his brother who died inside a manhole

structure and design of our manholes and drains, complete abolition of manhole work is impossible. All this talk of mechanisation and imported machines only gives a false sense of safety and security."

Yet, under some pressure from civil society groups, a few civic bodies have brought jetting machines and deep suction machines. But the jetting and suction machines rarely work. "Imported jetting rods are not compatible with our manholes. Where they are, we have to make

Sewer cleaning and sewage treatment plants are being handed to contractors. The State is simply washing its hands of the dirty business

three entries into the manhole: to fix the rod, to make it work, and to detach it," says Jassubhai Atmaram, 42, who has been working in the Sabarmati area of Ahmedabad for 21 years. The few super-sucker machines cannot enter narrow lanes; even a metro like Delhi has only three of them.

In response to a special civil application filed by Ahmedabad-based NGO Kamdar Swasthya Suraksha Mandal, the Gujarat High Court ordered in February 2006 that "unless it is absolutely necessary to have sewage cleaning operation done through a human agency, none of the civic bodies in the state will now employ human agency to carry out drainage cleaning operation."

Despite the HC order, workers have been entering Gujarat's manholes on a routine basis. HP Mishra, who heads KSSM, says, "Fourteen workers have died inside manholes between March 2006 and August 2007." Of these, 12 died as contract workers despite the HC order also stating that "civic bodies are directed to discontinue the practice of engaging contractors."

Like other sectors in post-liberalisation

India, sewer cleaning, construction and maintenance of sewage treatment plants and sanitation work are being privatised in many cities and towns. Whether contractors offer a minimum wage or implement even the prescribed safety norms — themselves laughable — is not monitored. The State simply washes its hands of the dirty business.

For instance, in 2003, the Chennai Metropolitan Water Supply and Sewerage Board outsourced "250 sewer divers for working in 161 depots of CMWSSB for removal of sewer obstructions in the sewer system, silt removal from manholes and allied works for one year." The contract was bagged by KK Kumar Constructions for a bid of over Rs 1 crore.

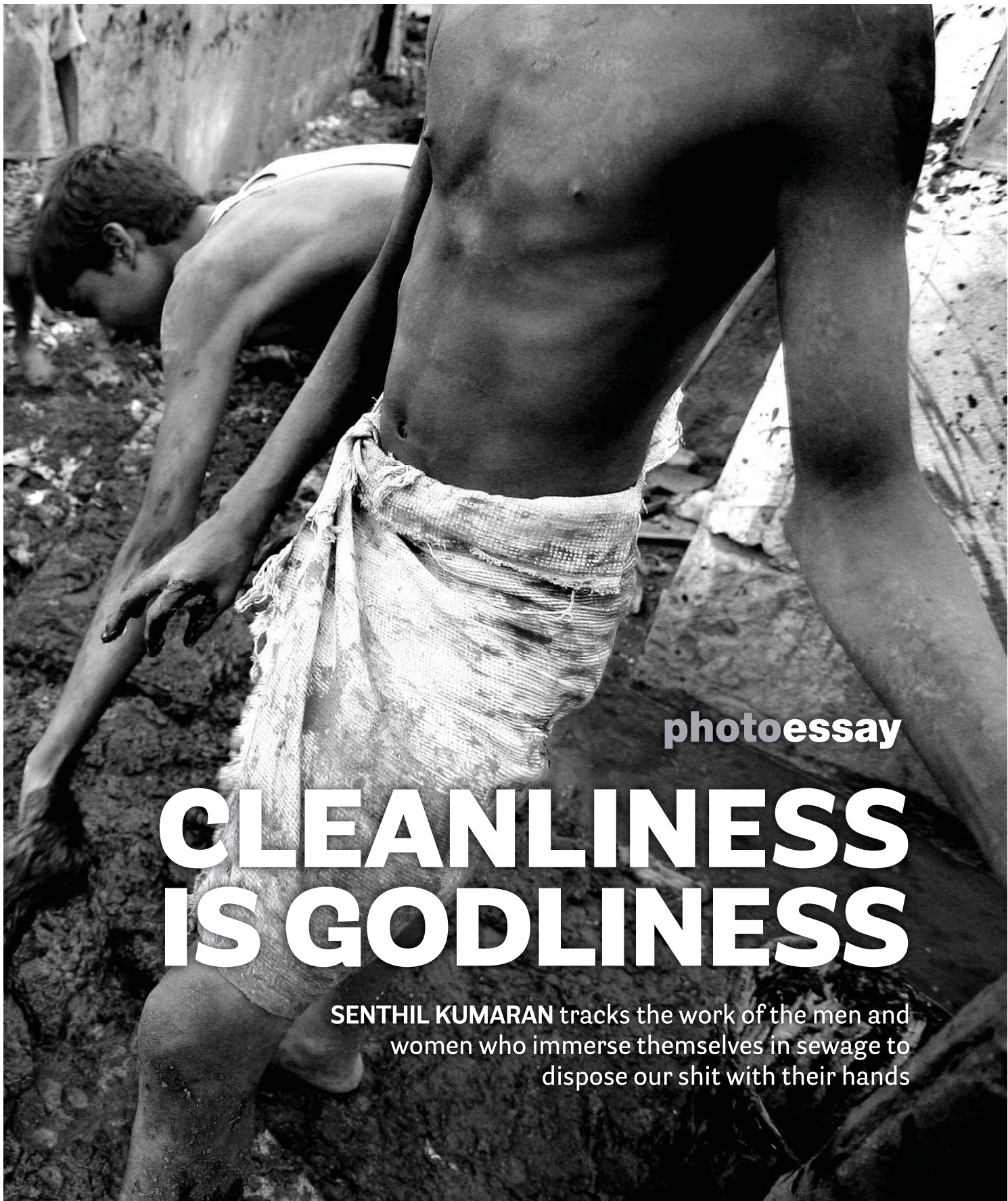
According to the Bangalore Water Supply and Sewerage Board Sanitary Workers Union, there are only 88 manhole workers in the Karnataka capital. Says union president Lakshmaiah, "When we started the union in 1982, Bangalore officially had 385 manhole workers. BWSSB does not want to recruit since it prefers privatisation and outsourcing."

WHAT IS the solution? Governments over six decades have bypassed the issue. While Nehruvian India saw a great push towards technological solutions in every sector, the State only had apathy for safai karamcharis. It is not the lack of funds or technology that poses problems. If technology can be used to launch satellites and the Rs 386-crore Chandrayaan (the mission to moon), why can it not be used for garbage and sewage? The Jawaharlal Nehru Urban Renewal Mission (JNURM), hatched by the Ministry of Urban Development in 2002, envisages spending Rs 1,20,536 crore over seven years on urban local bodies. Of the projects approved so far under the JNURM, 40 percent have been allotted for drainage and sewerage work. Why does so much money get spent on laying/relaying pipes and drains that are designed to kill?

India's urban planners, designers and technologists have never felt the need to conceive a human-friendly system of managing garbage and sewage. Instead, they rely on an unending source of disposable, cheap, Dalit labour.

—with Shalini Singh in Mumbai,
M. Radhika in Bangalore and
PC Vinoy Kumar in Chennai

STINK OPERATION Next week: What happens to the 2.74 lakh litres of raw human waste generated daily by the Indian Railways?



photoessay

CLEANLINESS IS GODLINESS

SENTHIL KUMARAN tracks the work of the men and women who immerse themselves in sewage to dispose our shit with their hands

photoessay

THESE IMAGES of sewerage workers have been shot in Madurai, the third largest city in Tamil Nadu, and otherwise famed for its temples. The “community dry latrines” are located in Keerathurai and Goripalayam, where uniformed government staff work as “manual scavengers”. In Koodal Nagar, contract workers — including a 14-year-old — are seen cleaning a septic pit. These images, however, can be from anywhere in India, where an estimated 12 lakh manual scavengers and countless sewerage workers toil in subhuman conditions. Faceless. Left to live and die in our gutters.



