

## **Air, Water, Earth And The Sins Of The Powerful**

*The factory that killed 15,000 in 1984 is still poisoning new victims. As survivors march to Delhi, **RAGHU KARNAD** tells the chilling story of Bhopal's ongoing disaster.*

THERE IS a face of our democracy that you only see when you follow a 60-year-old woman marching 800 kilometres on swollen knees. That is the distance from Bhopal to Delhi, and she hopes that if she walks for a month, instead of taking the overnight train, she will remind Delhi about something in Bhopal. Not that the gas that leaked from the Union Carbide factory on December 2, 1984, killed 15,000 people. That is world history; that is not why she is marching. Some people remember that the five lakh Bhopalis who survived that night had their bodies ruined. This explains her swollen knees, her painful lungs, the sudden dizziness that occasionally drops her onto the roadside.

Fewer people heard that after being denied a hearing in court, after being denied a humane compensation, the gas peedith are spending their lives being denied medical care they were supposed to receive, being denied jobs they were trained to do, being denied justice. But there is another reason she is marching. Almost nobody ever heard that the factory which leaked poison into the air in 1984 has been leaking it, constantly, into the soil and water ever since.

For 23 years, the chemicals that went into Carbide's pesticide process have been ignored, left to leach into the groundwater. That groundwater feeds tubewells and handpumps from which 25,000 people in neighbouring areas drink. Most of these people were nowhere near the gas leak on December 2. They belong to a new category of victims, the paani peedith, and every year their numbers and their toxicity symptoms increase. Their existence is being denied altogether. Everyone knows the Union Carbide gas leak killed more than 15,000 people. Almost nobody has heard that the killing never stopped. That is why the woman is marching.

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AS YOU READ this, 50 padyatris between the ages of 11 and 82 will be entering New Delhi. For a month, they have been hitting the highway at 5 am, marching until the sun burns the neck like a rash, breaking for a nap, then marching again until Delhi is 25 km nearer. They've been sleeping in school houses, wedding halls, open fields. Most are in ill-health from exposure to toxic gas or water: what keeps them going is sweet tea in the morning, painkillers at night and a fierce desire to hold their Prime Minister to account. This is not the first time they have made the padyatra: it is a Bhopal survivors' tradition. In 2006, a group marched to Delhi and presented their demands to Manmohan Singh.

In essence, the demands were: provide support to the survivors. Clean up the toxic waste at the plant. Give water to the communities whose water it has poisoned. Take legal action against Dow Chemicals, which bought over Union Carbide in 2001. They say the Prime Minister nodded as they read out the first three, and when they reached the fourth, he placed his hands over his ears. He would not endorse any bans or any arrangements for the special prosecution of Dow. Many of the padyatris from 2006 are marching again this year, to remind him of those promises.

There has been a little progress on the first three demands – not much, but enough to put the survivors' movement on its strongest footing in years. But as it turned out, that fourth demand is a wedge under the door. Ever since 2001, Dow Chemicals has maintained that while it acquired Carbide's assets, it did not inherit its liabilities. The survivors are determined to see Dow held to account. The Centre is determined to see it let off. For two years, the tangled question of Dow's liability has ensnared progress on every other front.

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NATHIBAI, HER HUSBAND and their three-year-old son Sonu left their village in 1990 and moved to Atal Ayub Nagar. This mohalla presses up against the wall of a dilapidated factory, and terrible stories about what had happened there were repeated to Nathibai often. Many of her neighbours were gas peedith – survivors of that night – their lives were pitiful, wasted waiting in lines at the hospitals. The factory still looked desolate, perhaps haunted, but the compound was full of ponds and birdsong.

IT WAS two years before Sonu began having problems. He never learnt to talk, and although he continued to grow, he became uncontrolled and erratic. His mind was regressing; he drooped and was incontinent. Today he is 21, but mentally still an infant. Nathibai is around 50, but looks two decades older. She can never leave Sonu alone. Some times he becomes violent, striking and scratching her. Doctors never explained what was wrong. Something was poisoning the community.

Children who had been healthy for years developed neurological conditions, even regressed into mental disability. New borns had low birthweight, grew too slowly, suffered from cerebral palsy and deformities. Healthy children began to behave in frighteningly abnormal ways, with disorders like Pica: compulsively eating mud, faeces, bone, even glass. People who had never been near the gas found their families beginning to sicken, and sometimes die. In two wards – 18 communities – there was a slow escalation of the rate of anaemia, skin disease and cancer. Girls in their late teens had not started menstruating and women in their mid-thirties had stopped. Entire communities sagged under fatigue, nausea and bodily pain. 'Now people here just stay ill constantly,' Nathibai says, 'There is no respite.'

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WILDFLOWERS GROW INSIDE the Union Carbide compound; palash trees are in full bloom and look like dynamite suspended mid-explosion. Cowherds graze cattle on the thick brush until guards come by and threaten them. The rust monsters tower above this pastoral scene, skeletal arrangements of girders, inscrutable valves, disembowelled regulators and long, long intestines of rusted piping. Nostril-singeing chemicals cling to the machinery, especially the huge, corroded storage vats in the processing plant. In the summer, says the guard, the wind blows a stinging scent through their quarters. They develop headaches, and become dizzy on their rounds. He knows the word – dichlorobenzene – even though he was never warned about toxicity when first posted here. He hustles us on, 'It is not good to stay here long.' An hour wandering through the buildings leaves you swooning like a seven-year-old smoking a cigarette.

THREE YEARS ago, all the visible toxic material scattered around the premises was gathered together in one vast warehouse. The guard teases we won't find what we're looking for – it's all been locked up. But he leads us to the building and to a peep-hole in the wall. Hidden under tarpaulin sheets, sackfuls of chemicals are heaped like haystacks, one heap after another, as far as the eye can see in the dim interior light. In any case, the guard is wrong. There is a barren field in the north-east corner, from where you can throw a stone in three directions and hit someone's jhuggi. This is where, in the mid-90s, Carbide made a landfill for the industrial residue excavated from their solar evaporation ponds. It was buried and soil was bulldozed on top.

Today a depression has formed in the earth, where toxic tar is creeping back to the surface. It looks gratifyingly evil, like a small prehistoric tar pit, reliquified and shimmering in the March sun. It is not shallow – place a large rock in the puddle and it is slowly swallowed, until the tar closes over it like a mouth. How is it possible that Ground Zero of the worst industrial disaster in history was left so vividly and potently contaminated?

After 1984, the Carbide management had only one thing on its mind: to get out of India before its liability was fully calculated. This required them, on the one hand, to restrict proof of the extent of

damage and, on the other, to unload assets as fast as possible. They did both ruthlessly. For example, Carbide refused to disclose proprietary research that would help doctors understand the physiological effects of gas exposure and treat victims. It disrupted independent research on drugs like sodium thiosulphate, which would have helped detoxify victims but would also have proved that the gas entered the bloodstream and caused multiple-organ damage.

The Indian Council of Medical Research began a study on the impact of the gas on the next generation – this was mysteriously cancelled when results began to point to extreme damage. Satinath Sarangi, 54, is one of the principal leaders of the Bhopal survivors' movement. He abandoned a doctorate in metallurgy at Benares Hindu University to arrive in Bhopal the day after the gas leak. He co-founded the clinic that ran the improvised sodium thiosulphate trials – until it was raided by the police and every single datasheet confiscated. Today, by compulsion, he is a self-trained physician, lawyer and detective.

'Carbide had the best emergency response you could imagine for bringing down the appearance of damage,' Sarangi says. 'It was like there was a Department of Dirty Deeds dedicated to this, a system in readiness – and it involved scientists and researchers, which makes it seem even more evil.' Sarangi can spend hours listing the ways the company co-opted the government to suppress evidence of damage. 'First it happened with the gas deaths, then with the gas injuries, now with the contamination.' Carbide was relieved of all civil liabilities after paying a \$470 million settlement – leaving each bereaved family with Rs 63,000, and each injured person with Rs 25,000. Warren Anderson, Carbide's CEO, could not be extradited, so their criminal liabilities were immaterial.

WHAT THAT left was the actual factory site. A month after the gas leak, the gates were padlocked, the factory abandoned in suspended animation. The dial for tank E-610, which had released the lethal methyl isocyanate (MIC), stayed stuck on Overload. All the chemical ingredients of Sevin, the pesticide end-product, stayed exactly where they had been that night – in warehouses full of iron drums and sacks, inside the pipes and the tanks of the actual plant. Residual waste sat in solar evaporation ponds. For a decade, only time touched the factory: the sacks ruptured and the pipes corroded, loosing the chemicals onto the ground.

Pesticide is a form of poison, so it should come as no surprise that its ingredients, like MIC, were highly toxic: mercury, dichlorobenzene, hexachlorocyclohexanes, lead. On nights of heavy rain, the factory became a toxic marsh. The land had been given to Carbide on lease by the state government; in order to relinquish it, Carbide needed the Madhya Pradesh Pollution Control Board (MPPCB) to certify the land was not contaminated. In 1989, and then again in 1994, the National Environmental Engineering Research Institute (NEERI) of Nagpur was asked to measure soil and water contamination.

Carbide had been privately testing their own samples, and found high levels of naphthol and Sevin. But NEERI's reports summarily acquitted Carbide. It said the soil in the area was clayey and impermeable, and would keep contaminants from reaching the groundwater table for at least 23 years. It declared that 'the water meets the drinking water quality criteria.' This was such cavalier logic that even Carbide's consultant, Arthur D. Little (ADL), found it insupportable. In a private response to NEERI, they urged: 'The sentence 'The groundwater appears to be suitable for drinking purposes' is too strong,' and, 'The conclusions regarding travel time to the water may significantly underestimate the potential for contamination... clay is only present to a depth of 6.1 meters... The worst case scenario travel time would be 2 years.' But NEERI's final report included none of ADL's revisions.

The MPPCB, a body so corrupt it was fired en masse three years later and its chairman arrested, looked at the flimsy report and discharged Carbide's lease: the land became the problem of the Madhya Pradesh government. Since then, the NEERI report has been the touchstone for both Carbide and government officials. Both use it as proof that there is no groundwater contamination, or if there is, it is not on account of the factory waste. They steadfastly ignored the multiple studies

that found contamination present and growing – that was to be expected from pesky activist groups like the Boston-based Citizens' Environmental Laboratory and Greenpeace. In 2002, the Delhi-based Srishti environmental research group found heavy metals, the pesticide HCH-BHC and volatile organic compounds (such as dichlorobenzene) in samples of soil, groundwater, vegetables and breastmilk collected in the areas. But the NEERI report overrode all contrary indications. The issue of cleaning up was mothballed. The official response became: of course, people in these areas are sick. The poor always are.

THERE WAS little urgency for the first 20 years about planning the 'site remediation'. According to Digvijay Singh, the CM of Madhya Pradesh from 1993 to 2003, the main issue during that span was funding. 'There were very few experts, and the foreign firms we contacted wanted to charge 30 million dollars.' Singh also believes that the contamination issue 'is being played up by activist groups for publicity and funds.' Scepticism persists among the state officers whose support matters most.

Ajay Vishnoi, the BJP Minister of Gas Tragedy Relief and Rehabilitation, denies the contamination firmly. 'A total survey has just been conducted, but it has not been announced yet. What has been reported to us is that there is no contamination of the groundwater in any of the tubewells in those areas,' he said, adding, 'beyond tolerable limits.' Arif Aqeel, the former Minister of Gas Tragedy Relief, has an even slicker response to claims of water contamination. 'While I was the Minister, the locals were complaining. They asked me to come drink the water myself,' he says, chuckling, 'I asked, this water is bad? And I drank two glasses right in front of the entire media, in front of the public. If there had been something wrong with it, I'd also have had the problem – but nothing happened at all.' Sarangi was there to watch Aqeel drink the water. He swears in all seriousness that the Gas Minister excused himself straight away, went around back and vomited it back up.

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OUT OF THE factory gates, and a few minutes later we are in Atal Ayub Nagar, across the wall from the tarpit. It is one of 18 communities ranged around the factory's northern perimeter, collectively home to 25,000 people. Ninety percent of residents, including Nathibai's family, draw water from its wells. It tasted like phenyl was mixed into it, and often it had an oily sheen. 'But what other water was there?' Nathibai explains, 'Eventually we stopped tasting it.'

It is eerie to be a visitor in a community of illness. The adults suffer diseases that are mostly internal and invisible. Some, from foot to knee and hand to elbow, have skin that burns and is cracked so deep it bleeds. But the horror is what has happened to the young: every alley has households with children with developmental problems – like five-year-old Amit, who cannot walk or talk and whose parents are still praying; older ones, like 32-year-old Munni Bai, who was a normal teenager before 'her mind was lost.' She can no longer feed herself.

ONLY IN the last few years have state officials been compelled to acknowledge that this is happening. At first, all that happened was that workers came through, painted the hand-pumps red, painted – 'Paani peene योग्या नही है' – and left. In 2004, the recalcitrant MPPCB admitted it had found pesticide in water-samples from around the plant. IIT Kanpur found high concentrations of endosulphan in the breast milk of mothers. The same year, acting on a contamination report from its monitoring committee, the Supreme Court directed the state government to provide clean drinking water to the contaminated areas.

Fourteen crores were allocated to pipe water in from the Kolar reservoir; in none of these areas has that arrived, but some are serviced by tankers or water piped from the Rasla Kheri bypass. The day we visited Annu Nagar, the Rasla Kheri water was cloudy pink. Where the tankers go, each family receives less than four litres per day. On days when the pipes are empty or the tankers missing, residents return to their handpumps, and mothers urge their children not to drink. As we crossed

from Atal Ayub Nagar to Annu Nagar, we passed a child pissing on the railway track, his urine almost orange.

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EARLIER THIS YEAR, VS Sampath, secretary, Department of Chemicals & Petrochemicals as well as Chair of the Central Task Force on Bhopal, addressed a CII conference. In his speech, he said that India needs to attract Rs 80,000 crore of investment in the petrochemical sector. Sampath refused to be interviewed for this story. But one could guess that he does not consider this a good time to antagonise the world's second-largest chemical manufacturer. On the contrary, the government has been most patient with Dow's errors. For example, last year Dow disclosed that its Indian subsidiary, DE-Nocil, had slipped more than Rs 80 lakh under the table to Indian officials to get approval for three pesticide products – including one called Dursban. Local people were charged with bribery and criminal conspiracy, but no action was ever taken to revoke the product approval.

Dursban was banned in the United States in 2000, after it was found that exposure to it caused headaches, vomiting, and diarrhoea, and risked permanent neurological damage to children. It is still manufactured and sold here. Dow has already begun investing in major new projects, including an R&D facility in Shinde-Vasuli in Maharashtra, where it is already embroiled in controversy. Civil society groups claim it concealed information about 20 hazardous chemicals it would manufacture at the plant. Last month, the residents of Shinde- Vasuli dug up their own roads to keep out Dow's construction teams.

IT WAS A SMALL, upstart motion that finally gave the issue of site remediation a shot in the arm. In 2004, a PIL filed in the Jabalpur High Court requested that the Court direct the government to get on with the clean-up. The Court's proactive instructions in this case had two effects: they threw a new momentum behind the survivors' efforts to haul Dow back into the picture. They also revealed the Central government's determination to keep Dow out of it. Among the Court's first actions, it directed the formation of a Central government Task Force to implement the clean-up. To advise it, the Court constituted a Technical Sub-Committee, which included the eminent biologist PM Bhargava.

When the Sub-Committee drew up a list of recommendations, the topmost was that Dow be made responsible for taking the surface waste and contaminated soil out of country for disposal; and that it should pay for the long-term decontamination of the water, which might take upto 20 years. This was endorsed unanimously. 'My strong view is that there is simply no alternative to Dow doing this,' Bhargava says. 'No one in this country has the expertise to evaluate the waste, and we have no capacity to incinerate waste of this kind and quantity. Besides, the principle is simple – the polluter pays.'

Mysteriously, when the minutes of the meeting were presented to the Task Force, the suggestion involving Dow had fallen from first to last in the order. The Task Force ignored it, preferring instead a proposal to incinerate some of the waste at an industrial incinerator in Ankleshwar, Gujarat, and to bury the remainder in a sealed tank in Pitampur, MP. Preparations for this went ahead full-steam until the end of last year, when the Gujarat Pollution Control Board took stock of its facility and suddenly refused to participate. 'It's very clear that the government isn't interested in Dow's responsibility,' Bhargava says, 'but the incineration in Gujarat could have been another disaster.'

The Gujarat PCB's rejection has not yet sunk in – in Bhopal and in Delhi, officers insist the plan is moving ahead. There has been no talk of an alternative. The Jabalpur High Court put in motion another chain of events, which again revealed that on questions of Dow's liability, the government had its hands over its ears. This time its soft spot for Dow was not just the Central Insecticides Board or the Task Force on Bhopal. It was the most powerful men on the Union Cabinet. When

Alok Pratap's PIL was registered, Dow found, to their horror, that they had been named as one of the respondents. This was the first time since their acquisition of Union Carbide that Dow had been implicated in a case relating to Bhopal.

To represent them, they secured the services of Abhishek Manu Singhvi, the Congress Party spokesperson. The High Court was restless to see action on the clean-up front – but who was going to pay? To general surprise, in an application in May 2005, the Union Ministry of Chemicals and Fertilisers (MoCF) coolly suggested that Dow pay the government an advance amount of Rs 100 crore. Work could then begin. They could pay the difference afterwards.

THIS WAS exactly the kind of payment against which, for years, Dow had barricaded itself with deadly seriousness. " We all ask the same question: 'Why isn't this site cleaned up?' "says Dow's spokesperson Scot Wheeler. 'As owners of the site, it is the government of Madhya Pradesh that has the ability and, more importantly, the authority to clean up the site.' Ever since it bought out Carbide, Dow has emphasised that it never owned or operated the Bhopal plant. 'Union Carbide Corporation had stopped doing business in India long before Dow acquired UCC's shares in 2001,' says Wheeler. 'UCC remains a separate company, which manages its own liabilities.'

In the United States, however, barely a year after completing the acquisition, Dow settled an asbestos-related lawsuit that had been filed against Union Carbide in Texas. The MoCF proposition was a nightmare sprung to life – not because Dow, which made Rs 11,600 crore in profits last year, was daunted by a pay-out of Rs 100 crore, but because of the precedent such a payment would set. What might litigants expect them to pay for once their gates of liability were cracked open? For further clean-up costs, if the Rs 100 crore were to fall short?

Last year Yashveer Singh, the officer incharge of the MoCF Bhopal wing, guessed that final costs might reach Rs 500 crore. What if Dow were asked to pay compensation and medical expenses for the victims of the groundwater contamination? Where might it end? It was time for lateral thinking. The MoCF was dragging Dow into the harsh light of liability because it needed the money. If the money could somehow be arranged, the MoCF would relent and Dow would be back in the clear. Dow made its move around the time of the high-powered US-India CEO Forum in New York, in October 2006. The Forum, a bilateral government initiative to encourage trade and investment, is co-chaired by Ratan Tata, the benevolent giant of Indian business. Dow CEO Andrew Liveris was a member as well.

On July 9, months before the Forum began, Tata wrote to Finance Minister P. Chidambaram and Planning Commission Deputy Chairman Montek Singh Ahluwalia, about resolving the 'legacy issues' of Bhopal. In his letter to the FM, he made a striking offer: 'We should be concerned about the lack of action on remediation of the old Union Carbide disaster site... I believe that responsible corporates in the private sector and in the public sector might be willing to contribute to this initiative in the national interest and Tatas would be willing to spearhead and contribute to such an exercise.'

At the Forum, Dow held a meeting to discuss its liability problem. Afterwards, Ratan Tata resumed the correspondence. In another letter from him to MS Ahluwalia, copied to the PMO: 'It is critical for [Dow] to have the MoCF withdraw their application for a financial deposit by Dow against the remediation cost, as that application implies that the GoI views Dow as liable in the Bhopal Gas Disaster case... My offer for the Tatas to lead and find funding... still stands. Perhaps it could break the deadlock?'

The Cabinet leapt at Tata's overture. Chidambaram gave his support. So did Cabinet Secretary BK Chaturvedi. MS Ahluwalia said: 'The Chairman of Dow indicated that they would be willing to contribute to such an effort voluntarily, but not under the cloud of legal liability.' Minister of Commerce & Industry Kamal Nath came right out with it: 'While I would not like to comment on

whether Dow has a legal responsibility or not, as it is for the courts to decide, with a view to sending an appropriate signal to Dow Chemicals, which is exploring investing substantially in India, and to the American business community, I would urge that a group... look at this matter in a holistic manner.' The idea quickly fizzled out after the press and activist groups caught wind of it.

By January 2007, the Tatas were playing defence. They released a statement regretting the 'considerable misalignment and misunderstanding' of Tata's offer, which was 'no different from any public-spirited initiative to clean a polluted river or a site damaged by some abnormal phenomenon.' The Tatas' reputation for philanthropy did not incline the survivors to believe in Ratan Tata's public spiritedness. In their eyes, Tata's corporate responsibility only arrived in time to relieve Dow's corporate liability. A clearer picture never emerged about what motivated Ratan Tata to offer his shareholders' money to clean up the Carbide site – and to enable Dow to contribute voluntarily to a cost it might have to pay involuntarily if the court finds it liable. But it was made quite clear that key Cabinet Ministers are ready to work to keep Dow out of trouble in the 'holistic' interest, even to the extent of helping it evade judicial process.

If a national economy could accept a bribe, this is what it would look like. Then again, would it be so terrible if somebody else cleaned up the plant? At this point, many officials say, the survivors are their own worst enemies. Their desire to see Dow's atonement is limiting the scope for quicker alternative solutions. Ratan Tata's consortium might have begun the clean up already. Arif Aqeel has ideas about why the survivors pursue Dow, even though it prolongs their poisoning. 'What I'm saying is clean it up! Let Dow do it, let the Indian government do it, let a foreign country come and do it,' he says. 'But once the chemicals are gone, certain leaders will be unemployed, they won't have anything to do without their zindabad-murdabad.' The government wrings its hands and says the same – why are they making this so difficult?

The answer to that depends on another question: who are these people? Two views contend. Either they are the typical poor: exploited and misled, as always, but this time by activist leaders who are careerists or ideologues. Or, they are people in whom tragedy and poverty, and also education and leadership, have realised a potential for participatory citizenship. Survivors talk about 'moral responsibility' less often than the media makes it seem. More often, they talk about deterrence – making sure Bhopal never happens again.

Their insistence on Dow's liability is not vindictive; it is to ensure that their own personal justice becomes a precedent for wider justice. Jabbar Khan, who is marching with his daughters, says: 'If Dow is let off now, it will go somewhere else in the country and Bhopal will be repeated. We don't just want to be paid off. We want justice to be done. Even if we have to wait another 20 years.' Many of the survivors, whether or not they articulate it this way, are insisting on corporate and industrial liability.

That is why they have allied with other groups – mercury survivors from Cuddalore, Endosulphan survivors from Kasargode – people even more obscure and powerless than them. Some of the marchers – like 82-year-old Shantha Bai, who marches with her sari hitched up above her sneakers, and with a pace so fierce they call her the Bhopal Express – may not survive to see vindication even if it comes. Their fight stopped being about personal recompense a long time ago. To a great extent it is about the lives of their children, and their children's children. There is also a whole country to be saved from contaminated lives.

As you read this, the padyatris will have entered Delhi, carrying 20 questions to put to their Prime Minister. They can anticipate what his answers will be. Reaching Delhi may not mean the end of their road. But neither will it mean the end of their tether. If your swollen knees have carried you 800 kilometres, they will not fail you when it is time to stand your ground.