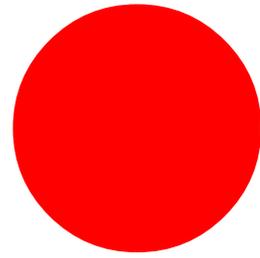


# medico 340- friend 341 circle bulletin



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April - July 2010

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## Survivors of the Bhopal Gas Disaster *Twenty five years after*

- Vinod Raina<sup>1</sup>

It is over twenty-five years since the Bhopal Gas Disaster happened; on the night of December 3, 1984. The impact, when it happened, was catastrophic and genocidal. Men, women and children, unaware of what was making them choke and fight for life-saving breath fled their warm beds in panic, running distraught, hopefully away from the murderous poisons that had clouded the skies. In an hour or so, over 3000 of them could not outrun the deathly poisons, and they collapsed all over the city, in a grotesque dance of death that had no dignity. And hundreds of thousands from a city of million plus vanished from the city, retching, coughing and mortally scared. They escaped death, but the poisons have made life hell for them, and they continue to suffer, and die from the effects even now. Over 15,000 have died till now. (Raina, 2001)

But in this 26th year after the disaster, it is worth taking note of the fact that the US, which is now faced with the oil spill in the Gulf of Mexico due to the negligence of British Petroleum is seeking accountability from BP at a level that it has consistently ignored in the case of Union Carbide and its new owner, Dow Chemicals, both responsible for a much bigger disaster. In a letter sent to President Obama on June 16, 2010, the Bhopal victims and another 125 eminent persons all round the world have reminded Obama of the responsibility of the US to the countless victims of Bhopal. The Indian government, confronted by angry victims is already considering reopening the legal issues surrounding the disaster.

That is because the legal situation continues to remain as murky as it was just after the disaster happened. After the Government of India promulgated an ordinance that gave it powers to file a class action suit against the Union Carbide on behalf of all the victims, the US courts threw out the case claiming that the jurisdiction existed

only with the Indian courts. The Indian Supreme Court, instead of deciding the case, controversially brokered an out of court settlement between the Indian government and the Union Carbide for a one time and final compensation of 470 million US dollars, in the process absolving Union Carbide of any criminal or civil liabilities

The 1989 Bhopal Settlement was based on the assumption that only 3000 people died and about 102,000 person's sustained injuries due to the poisonous gases that leaked from the Union Carbide owned pesticide plant in 1984. However in its order of 26 October 2004, almost twenty years later, the Supreme Court, hearing review petitions filed by victim groups, ordered the disbursement of the remaining over 15000 million rupees from the settlement amount on a pro rata basis to all the 572,173 gas victims who had already been awarded compensation. The Court also gave its seal of approval to the figure of 15,248 deaths, reported by the Bhopal Gas Tragedy Relief and Rehabilitation department. (Raina and Kumar, 2004)

This was a victory of sorts for the thousands of ailing and diseased victims who have refused to let up pressure on the concerned parties, the Union Carbide, Dow Chemicals, the Madhya Pradesh Government and the Central Government all these years, while keeping the Supreme Court of India, the Bhopal Courts and the Courts in the US engaged with a barrage of petitions. If the Union Carbide thought that it had found an escape from its culpability by selling its assets to Dow chemicals, the victims have refused to let it off the hook. And the Dow Chemicals plea that it had no responsibility since the incident occurred when the assets did not belong to it has been challenged on the streets and in the courts. The respective Governments who had hoped that the incident would die away after the shabby settlement, with the victims getting tired

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<sup>1</sup>Email: <vinodraina@gmail.com>. English version of an article published in Spanish in Ecologica Politica, Barcelona

and fatigued, underestimated the resilience of the poor and ill victims - they have refused to be cast into the dustbin of history. For those who have witnessed the struggles, been friends and supporters of the victims and their organizations, the experience is as empowering as inspiring. The victory is however somewhat muted since even after accepting that the magnitude of the disaster was so overwhelming, the nature of compensation disbursement hasn't been altered. It remains unscientific and unconnected to the degree of disability.

### Medical Disabilities

There was no public knowledge of the medical effects of the main gas that escaped from the plant, namely, methyl isocyanate (MIC). Union Carbide Corporation (UCC) initially pleaded ignorance about its medical effects, though later it was revealed it had results of research that it had commissioned on precisely this aspect, though on rats, before the disaster happened. However it continued to maintain that MIC could not cause permanent impairment. Unfortunately, sections of Government-of-India-controlled scientists were of the same opinion. The victims' organizations, activists and NGOs, however, have fought to have their opinion acknowledged, namely, that thousands of people have been permanently disabled by the gases (Eckerman, 2005).

The Government of India had assigned the task of long term medical studies to the Indian Council for Medical Research (ICMR). Unfortunately, the ICMR studies were terminated ten years after the disaster, in 1994. But in their annual reports from 1990 to 1992, ICMR reported many long term health effects on the survivors. The International Medical Commission on Bhopal (ICMB), set up because of a great deal of personal initiative of Rosalie Bertell also investigated long term effects, 10-15 years after the exposure. According to these reports, the survivors complain of breathlessness, coughing, chest pains, fatigue, body aches, abdominal pain, numbness and tingling in the limbs, weak sight and runny eyes, anxiety attacks, bad memory, concentration difficulties, irritability, headache and mental illness. An unusually large number of women have menstrual irregularities and excessive vaginal secretions. Mothers complain of retarded physical and mental growth in children exposed at infancy or born after the disaster. Symptoms of fever, burning sensations in the body, loss of appetite, numbness and tingling in the limbs, backache, giddiness and panic attacks seem to have manifested 3-4 years after the disaster and are getting worse. A reasonable estimate is that between 100,000 and 200,000 people are permanently impaired (Eckerman, 2005).

After the closure of the ICMR research studies in Bhopal in December 1994, the Centre for Rehabilitation Studies (CRS) of the Madhya Pradesh Government has taken over responsibility for long term research. The cohort studies show an overall over-morbidity among the gas affected compared to the control group (GoMP, 2004). The eyes show chronic conjunctivitis, scars on the cornea, deficiency in the watering of eyes, permanent corneal opacities and the early onset of cataracts (Dhara, 1992). Eye diseases during the period 1996-2002 were twice as high in an exposed group to a non-exposed one (GoMP, 2004).

One of the major health impacts has been on the respiratory tract. This includes abnormal lung function with obstructive and/or restrictive disease, aggravation of old diseases like tuberculosis and chronic bronchitis, and pulmonary fibrosis (Dhara, 1992). Permanent effects on the respiratory tract, 10 years after the leakage, were shown by the IMCB (Cullinan, Acquilla and Dhara, 1997). Doctors working in the areas affected by the gases agree that there has been a marked increase in the number of tuberculosis cases in Bhopal (Bhopal Memorial Hospital, 2000/2001).

The neurological impacts have been studied and neurobehavioral tests show impairment of memory, attention response speed and vigilance (Dhara, 1992), as well as finer motor skills (Eckerman, 1996). There are also neuromuscular symptoms such as tingling, numbness and muscular aches (Dhara, 1992). The investigation by IMCB (Cullinan, Acquilla and Dhara, 1996) showed clinical signs of central, peripheral, and vestibular neurological disturbance.

Regarding genetic impacts, chromosomal aberrations were found to occur in exposed persons (Ghosh, 1990; Goswami 1990). An ongoing study on chromosomal changes and birth defects indicates an increased rate of birth defects in gas affected families without previous history. A population-based cancer registry has been established in Bhopal, but the onset of gas leak related cancers is not expected to occur before the 30 to 40 year lag period (Dhara, 1992). It has however been stated by local groups that there is a definite rise in the incidence of different kinds of cancers in the gas affected population over the last few years. Cancers of the lungs have increased up to 20 percent compared to other cities of the country, they claim.

Probably the worst sufferers in Bhopal are the women survivors, since with all the other health impacts, their reproductive health seems to have been badly affected. Three months after the exposure, a small study showed a high proportion of leucorrhoea, pelvic inflammatory disease, cervical erosion, excessive menstrual bleedings

and suppression of lactation (Morehouse and Subramaniam, 1986). Later menstrual cycle disruption, leucorrhoea and dysmenorrhoea, especially among young women were reported. Even though no long term studies on women's reproductive health have been done, it is common knowledge in Bhopal that a very large number of gas affected women, and their daughters, suffer from menstrual irregularities, profuse menstruations and premature menopause. One of the very harsh social impacts of this has been the reluctance of households to wed their sons to a gas affected woman or her daughter. In 1989, the still birth rate, the crude birth rate, the perinatal death rate, the neonatal death rate and the infant mortality rate were all high in severely affected areas, compared to the rates in control areas (ICMR Bhopal, 1990). The affected children have the same symptoms as the adults, and in addition, there are reports of intellectual impairment and epilepsy (BGIA, 1994). Failure to grow, delay in gross motor and language sector development were found in children born a considerable time after their mothers' exposure to the gases (BGIA, 1992).

The lack of accurate data on medical disabilities and the extent of affected population is directly connected to the enumeration of the people who ought to receive compensation, and the quantum of compensation is related to the severity of disability. It is also at the heart of the continuing struggle of the affected survivors and the official and corporate agencies, the latter always making attempts to minimize both the numbers and the severity, in order to reduce their liabilities. The lack of motivation of the official agencies to put into place a long term medical research mechanism and an effective curative health system, or the corporates to fulfill such a responsibility is obviously a consequence of their attempts to limit their liabilities.

### The Toxic Wastes

One of the worst lingering issues of the Bhopal Gas Disaster is the dispute over the disposal of the 350 metric tonnes of toxic wastes that are still present in the abandoned Union Carbide factory premises, taken over by the Dow Chemicals in 1999. Evidence suggests that these wastes have continuously polluted air, water and land in these 25 years after the disaster. Heavy monsoon rains have made the toxic chemicals leach into underground water aquifers, a source of drinking water for a large population that continues to live close to the abandoned factory. Greenpeace found evidence of mercury in the breast milk amongst women living close to the factory.

The dispute resolves around who ought to be responsible and bear costs, where the wastes should be disposed or

incinerated and the suitability of the methods of disposal. Dow chemicals have continued to maintain that their acquisition of the factory does not imply their taking over of liabilities pertaining to the period when they were not the owners. This was in response to the plea of the central Ministry for Chemicals and Fertilizer (MOCF) to the Madhya Pradesh High Court to direct Dow chemicals to deposit rupees 1000 million for the clean-up (*Frontline*, 2007). The Madhya Pradesh High Court finally gave directions for the packing and disposal of the wastes, to be partly buried at a facility about 180 kilometers away in Peethampur in Madhya Pradesh state and the large chunk, about 310 metric tonnes, to be incinerated at a facility in another state, in Ankleshwar in Gujarat, 680 kilometres away. The Gujarat government petitioned the Supreme Court against the High Court order sending the wastes to Gujarat, claiming a back log at the facility in Ankleshwar and the dangers of transporting the wastes long distance. Survivor groups, who in the first instance were forced to petition the courts for the disposal, have voiced their concern against the modes of disposal - burying and incineration - calling them hazardous. The stalemate continues while the wastes continue to pollute the water and air of Bhopal, further threatening the already debilitated health of the survivors.

It remains to be seen whether the renewed interest, spurred by the liabilities BP is likely to face for the Gulf of Mexico oil spill, push the Indian and US governments to finally put into action appropriate measures that give adequate justice, compensation and medical relief to the long denied Bhopal victims.

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## Letter to President Obama

Mr. Barack Obama  
President  
United States of America

June 2010

Dear President Obama,

With a great deal of interest we have been following your tough stand against British Petroleum for the oil spill in the Gulf Of Mexico, particularly your demand to know whose 'ass needs to be kicked'. We think your demand for corporate accountability for causing huge environmental damages is worthy of emulation by other governments around the World.

May we draw your attention to a bigger disaster that took place in the city of Bhopal in India in December 1984 that has officially killed over 15,000 people (about 25,000 people unofficially) and seriously injured nearly half a million people by now (the situation after twenty five years is attached for ready reference). This disaster was caused by another mega corporate entity called Union Carbide, headquartered in the United States of America, unlike BP that belongs to Great Britain.

Through 'friendly' interventions of the Reagan administration that ruled the US in 1984, not only was Warren Anderson, the CEO of Union Carbide sent back from India even though he was arrested and cases were registered against him and the Union Carbide, but similar overtures resulted in all criminal cases against Union Carbide to be dropped in a shameful out of court settlement for a paltry US\$470m. Twenty six years later, the local court in Bhopal, fettered by these collusive legal manipulations could at best convict six Indian officials of the Union Carbide India Limited for two years of jail, for which all the accused were given instant bail. The parent company based in the US, against whom charges exist in Indian Courts, is unanswerable. So no one pays for the death of over 15,000 people! Another giant US corporate, Dow Chemicals, that bought Union Carbide some years ago refuses to accept its liability for cleaning up the toxic wastes at the closed factory, that is still harming citizens of Bhopal, mainly from water that is contaminated with leached poisons stored in the abandoned factory.

Is it too much to expect that you use the same yardsticks of accountability you are using for BP for the terrible oil spill in the Gulf of Mexico, for corporations based in the country you rule?. Whose 'ass' should the citizens of Bhopal kick if governments selectively shield their corporations and officials from legal accountability? How would you react, for example, if because of the pressure of the British media that is asking Prime Minister Cameron to stand up to you, Mr. Cameron made a 'friendly overture' to you to back off from 'kicking anyone's ass', meaning British Petroleum's? If you wouldn't back off, then consistent with your stand, the citizens of Bhopal and the whole World demand from you that:

1. You signal/order that judicial processes be allowed, both in the US and India, to take their course in fixing responsibility of corporations and individuals of the US, responsible for the Bhopal carnage; dismantling the manipulative obstacles put up in these intervening years. This is necessary to restore the subverted system of justice.
2. You set processes in motion that make Dow Chemicals own up their responsibility for cleaning up the toxic mess that resides in the closed factory they now own.
3. You work with the same sense of collaboration with the Indian government on this issue to provide justice and proper compensation to Bhopal victims, that you proclaim you have achieved with the Indian government on the issue of 'global terrorism'.

Yours sincerely,

1. Abdul Jabbar - Bhopal Gas Peedit Mahila Udyog Sangathan (biggest organisation of Bhopal gas victims)
2. Vinod Raina - a resident of Bhopal

(cc: Prime Minister of India, Mr. Manmohan Singh)

*Editorial***Bhopal was Inevitable****-Dhruv Mankad\***

*Bhopal is also a metaphor for development as a disaster of sorts which demands that the casualties be forgotten and dictates that a community that fails to develop is obsolescent. An entire structure of propaganda, erasure and amnesia on Bhopal was orchestrated by science, government, and corporations which allowed the language of compensation as the only avenue of expression of outrage and injustice - and even compensation was precarious at best.*

- Arturo Escobar, *Encountering Development*

The Bhopal Gas Tragedy was an industrial catastrophe that occurred on the night of December 3, 1984 at the Union Carbide India Limited (UCIL) pesticide plant in Bhopal, Madhya Pradesh. Estimates vary on the death toll. The official immediate death toll was 2,259 and the government of Madhya Pradesh has confirmed a total of 3,787 deaths related to the gas release.<sup>1</sup> Other government agencies estimate 15,000 deaths. Around midnight on the fateful night, there was a leak of methyl isocyanate (MIC) gas and other toxins from the plant, resulting in the exposure of over 500,000 people.

**But, this Disaster was Inevitable!**

The MIC gas leakage caused to the disaster, but this was not as sudden as it seems. We were warned about the leakage and its consequences. Here, 'we' I mean - the UCC, UCIL management, workers, public and our democratic representatives and the rulers.<sup>2</sup> The technology to produce Sevin - a pesticide, used by UCIL the then Indian subsidiary of the US company Union Carbide Corporation (UCC), (which is now a subsidiary of Dow Chemical Company), was faulty and insecure. Reports before and after the disaster by independent experts, organizations and auditors have brought this to our notice.

If no actions were taken either by UCC or UCIL or the Government of India or of MP despite these reports, was it really an accident? Or Act 2 of the Epic of The Bhopal Tragedy?

Some 25 years after the gas leak, 390 tons of toxic chemicals abandoned at the UCIL plant continue to leak and pollute the groundwater in the region and affect thousands of Bhopal residents who depend on it, though there is some dispute as to whether the chemicals still stored at the site pose any continuing health hazard. No actions are taken either by Dow Chemicals (because according to Dr Abhishek Manu Singhvi, Dow Chemical is not liable to do so. And H Rajan Sharma has challenged his opinion.)<sup>3</sup> or by UCC or by UCIL or by any public health authorities!

**... And such Disasters are Still Inevitable!**

Today, in the political arena, there is a debate about how and why Warren Anderson, the Chairman and CEO of Union Carbide, had been arrested and released on bail by the Madhya Pradesh Police in Bhopal on December 7, 1984. Or Arjun Singh the then Congress Chief Minister ran away etc. etc. Anderson was arrested at the airport and was taken to Union Carbide's house after which he was released six hours later on bail and flown out on a government plane. Now, he was declared absconding by the police although his New York residential address is well known. Was this an error of omission or of commission - the Act 3 of the Epic of The Bhopal Tragedy?

The UCC established a pesticide plant in India under a subsidiary UCIL since the security rules for such industry are stringent, costly and are enforced strictly in the US. It is not profitable to do so there. Wasn't it the Act 1 of the Epic of The Bhopal Tragedy. Once the Government of India had accepted it under such 'relaxed' rules, its consequences were inevitable. Wasn't Anderson's arrival in India after the Act 2 and his release was also a part of the drama?

Nowadays, these issues are discussed and debated by the politicians but the Politics of Governance does not limit it to the politicians - it includes the intellectuals, the law makers, the entrepreneurs, the citizens. There are contradictory news in the press<sup>4</sup> about the Supreme Court bench headed by Justice Ahmadi in 1996 or the Bhopal police in 1984 diluted charges to those of criminal negligence against the accused including Anderson. Under the Indian Penal Code, culpable homicide not amounting to murder (under Section 304 IPC) carries a maximum punishment of 10 years. Causing death by negligence not amounting to culpable homicide carries a maximum punishment of two years. That no action will be taken against Anderson was a part of the plot. If it wasn't, then why the appeal in the court of arresting him through Interpol when he was on a tour of South East Asia was dismissed on assurance from an eminent lawyer that he would come on his own? Was it not a sub plot of Act 3, since Justice Ahmadi on his retirement became the Chairperson of the UCIL's Trust for the victims of the Tragedy? If the charges of culpable homicide were not dropped, why the June judgment, otherwise quite well argued, logical and balanced, has punished the culprits for 2 years, as if it was a criminal negligence?

Using the victims as guinea pigs was another 'side-business' carried out with blind eyes by medical councils, research organizations and drug controlling authorities. No clear laws and codes for clinical trials in India were framed even when loud and shrill whistles were blown by the 'referee and the linesmen.' Whatever rules were there, they were not inspected or applied. Where the Sanjays of our Hastinapur are or made eye turners by visually impaired Dhritrashtra, aren't colossal Mahabharats inevitable?

**Politics of Law (Non) Enforcement**

US laws and its enforcement agencies do not allow such disasters. Because its citizens including its entrepreneurs ensure that they do not allow such tragedies to happen. The culture of liberal democracy in US is embedded along with the principles of justice. Rule of law is framed by the citizens and applied by them. There are harsh punishments for breach of laws in the US. (I am aware that this American 'liberal' democracy is limited to the territories of its interest and priorities.)

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In contrast, we are 'liberal' in enforcement. How many around us were fined heavily for not following the traffic rules of signal crossing, overtaking, and speed limit? How many doctors' registrations in the medical council were struck off for not following the medical practice ethics and protocols? How many were caught giving bribes? How many of us follow the principles of 'equal before law' in day to day practices? Even if these rules are broken, we get scot free with a nominal fine or punishment. My friend who is a traffic police person will 'mujhe kuchh nahin karega, woh chhod dega'. We abhor the agencies that are empowered - by us, to enforce these rules albeit, on 'others' but not on 'ourselves'!

The British did reform the practices of personalized justice by the kings, vassals and their bureaucrats, by the caste panchayats. In the past 60 years, we are taking a U turn to the previous feudal system of law enforcement and justice. And that too, this is under the guise of liberalism and democracy! We talk about Anderson, as a 'free criminal'. What about the free criminals as rulers - at the cities, at the states and at the centre? What about the Ketan Desais? Where enforcement of laws and rules like BNHRA and PNNTs are considered impractical, disasters like Bhopal Tragedy are inevitable. We empower the status quoists because they come with solutions and programmes which satisfy our immediate needs. Toothlessness of those who are committed to the principles of justice will maintain the status quo, in this case, for the victims of Bhopal - the Bhopals will not change.<sup>5</sup>

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**A Note from the Guest Editor:** This issue of the bulletin carries articles on the aftermath of the Bhopal Tragedy particularly for the millennium members of medico friend circle.

Some older mfc members were involved in the movement of the victims of the Tragedy (see Bulletins 109,112-119, 121, 135. Also see. *The Bhopal Disaster Aftermath: An Epidemiological and Socio-Medical Survey*, medico friend circle, March 1985) as an organization or in individual capacity (see 'Learning from the Relief Work', Abhay Bang, *mfc bulletin*, Issue 109, January 1985). There were debates and controversies within mfc and with organizations working with the victims. But, there was a unanimous agreement that what occurred before, during and after the Tragedy, the state had failed in preventing the tragedy and in treating, rehabilitating or in providing justice to the victims. The failure prevails but we hope that the consensus also prevails.

Summary of *Clouds of Injustice: Bhopal Disaster 20 years on*, an Amnesty International Report, is an indictment of all the actors of this epic - the UCC, UCIL, the Governments of India and Madhya Pradesh. It recommends that "Laws in host countries must be developed and enforced to allow national governments and local communities to control the activities of companies operating in their territory." Samanvay Rautray in his story 'Bhopal misses recompense law', reproduced from *The Telegraph*, Calcutta, of June 9, 2010, highlights that the US tort laws - which provide for substantial financial compensation to the victims and the fees to the 'ambulance chasing' lawyers - that Americans enjoy a greater degree of protection against industrial disasters. 'Bhopal and the U.S. Courts, Catastrophe and the Dilemma of Law' by H. Rajan Sharma, a lawyer who is representing residents of Bhopal in a Federal class action against Union Carbide in US courts, brings the legal story, outlines his case, and looks at what Bhopal means for the future of human rights. 'Causes of Bhopal disaster analyzed' by Davis Smith, a Collegian Science Writer of the *Daily Collegian Online* published independently by the students at Pennsylvania State (the e-newspaper <<http://www.collegian.psu.edu>> is still online!) narrates a seminar at the University in 1988 about Who was responsible for the chemical plant disaster in Bhopal, India - the worst industrial accident in history - two and a half years ago. The report is fresh and relevant today because this worst industrial accident in history happened only twenty six years back.

**Dhruv Mankad, Guest Editor**

## Bhopal Gas Victims Used as Guinea Pigs

Following the 1984 Bhopal gas disaster that killed thousands and maimed over half a million, a government-funded Bhopal Memorial Hospital and Research Centre (BMHRC) was set up in the year 2000 with the avowed aim of "providing super-speciality care to the survivors of the tragedy." The hospital was also supposed to carry out "research on long term effects of methyl-iso-cyanate (MIC)" chemical that caused the holocaust. MIC-afflicted patients suffer from a variety of serious disorders involving respiratory, ophthalmic, gastro-intestinal, reproductive, nervous and immune systems. In other words they are seriously sick suffering from multiple disabilities.

Instead of concentrating on MIC-related issues, the Hospital became a hot spot for conducting clinical trials on untested drugs that were primarily designed to help pharma companies. Drugs in the trials included telavancin (patented by US company Theravance), tigecycline (Wyeth), prasugrel, fondaparinux (GlaxoSmithKline) and fixed-dose combination of cefoperazone with sulbactam (Magnex) sold by Pfizer in India.

Curiously cefoperazone is no longer marketed either in the United States or other advanced countries like Australia, United Kingdom, Ireland etc. Its fixed dose combination with sulbactam was never approved in the United States, the home base of Pfizer though it is sold in some developing countries like India (annual sales Rs. 70 crores), Chile, Colombia, Peru and Vietnam.

Except for fondaparinux, other agents tested in Bhopal were all new chemical entities (NCEs) or investigational new drugs not approved for human use anywhere. Consequently their side effects were not fully known when the trials started in Bhopal. The morbidity and mortality caused by these NCEs on unfortunate, unsuspecting victims in the Bhopal trials is not known.

Despite repeated requests, the Hospital has failed to produce copies of prior approvals from the Drugs Controller General, India (DCGI) which are mandatory for all trials involving human beings and legally should be in public domain. The trials started in 2004 when phase III trials of new medicines discovered abroad were not allowed in the country unless the same were approved for sale in developed

countries. Apparently the laws governing clinical trials were violated by administering unapproved drugs.

Since testing new chemical compounds on humans always involves unpredictable risks, the Indian Council of Medical Research (ICMR), Council for International Organisations of Medical Sciences (CIOMS) and WHO have issued codes of conduct for drug trials. Guidelines require that:

- People with "reduced autonomy" should not be subjected to trials. Bhopal gas victims have zero autonomy since they are totally dependent on treatment provided by the BMHRC. Can a patient refuse to take a drug prescribed by the attending doctor at the only hospital in the country meant for gas victims?
- Trials are not normally mixed with medical care. If the investigator is serving both as a researcher and the patient's physician, this fact should be told to the subject. In such cases the informed consent should be sought by a third party (e. g. by a neutral, independent physician or in the presence of an NGO).
- In disaster areas, the research should be aimed at effectively dealing with similar events in future and not on non-specific drug trials.
- Ethical standards applied in a host country (such as India) should not be less stringent than they would be for the same trials conducted in the country of innovation (such as United States or Britain). Can any hospital in the West dare to conduct clinical trials on victims of disasters like the one in Bhopal?
- The source of funds for the trial must be disclosed to patients.
- Subjects should be reimbursed for lost earnings, travel costs and other related expenses while participating in trials.
- The results of the trial should be communicated to the participating subjects.

Many patients interviewed by NGOs and the media have categorically said that while being treated at the BMHRC they were never told that they were "voluntarily participating in any drug trial."

Source: *MIMS*, Editorial, July 2010. Reproduced with thanks.

## Causes of Bhopal Disaster Analyzed<sup>1</sup>

-Davis Smith<sup>1</sup>

Collegian Science Writer

Who was responsible for the chemical plant disaster in Bhopal, India -- the worst industrial accident in history -- two and a half years ago?

A great deal of often heated discussion accompanied this question in a seminar sponsored by the Chemical Engineering department yesterday on different perspectives of the Union Carbide chemical plant disaster in Bhopal, India which killed about 1,500 people and injured tens of thousands more.

The two primary speakers at the seminar, held yesterday in Fenske laboratory, were T.R. Chouhan, a former plant operator, and Praful Bidwai, a senior assistant editor of the *Times of India*, an English language daily newspaper published in New Delhi, India.

The two men were preceded by University Professor of Chemical Engineering John McWhirter, who was vice president and general manager of Union Carbide's Agricultural Products division before coming to Penn State.

McWhirter outlined for the audience of about 65 students and faculty how the chemical involved -- methyl isocyanate, commonly referred to as MIC - is used as an intermediate in the production of pesticides. Some of the pesticides are sold in the U.S. under such brand names as Sevin and Temik.

MIC is an extremely reactive chemical, which is why it is used to produce the pesticides, McWhirter said. The MIC reacts with other compounds to produce a pesticide, and the particular pesticide produced depends on what is added to the MIC, he said.

Because MIC will react with almost anything, special safety precautions must be taken when dealing with the chemical. The disaster in Bhopal occurred when 2,000 pounds of water was accidentally introduced into a storage tank containing 90,000 pounds of MIC, and the resulting reaction released a huge cloud of toxic gases which spread over the southern part of the city, McWhirter said.

"It was easily the worst industrial accident on record," McWhirter said.

Chouhan talked about his experience with the MIC plant in Bhopal, using diagrams to supplement his assertions. He received 18 months of training for his position when he was hired in 1975 by Union Carbide India Limited, the Union Carbide Corporation subsidiary which managed the Bhopal plant, he said.

After 1975, the training periods for plant operators began to decline, he said. In the late '70s, operators were receiving one year of training. This declined further in the early '80s, so that by 1982, operators received six months of training before being put on the job, he said. By 1984, operators received only three months of training, Chouhan said.

"In the two months of 1984 preceding the disaster, plant operators were receiving only one month of training," Chouhan said.

Chouhan's diagrams showed how supervision decreased in the plant in the years preceding the disaster. When the plant opened in 1980, all of the personnel working in the plant were trained for work at that plant. At the time of the disaster, the vast majority of the workers had been transferred from other plants, he said.

Bidwai added that the safety features within the plant were inadequate and had been dismantled.

"What we found was that each of the safety systems of the plant had such a low design capacity that it couldn't have possibly worked adequately to contain, prevent or minimize the toxic release of the plant," Bidwai said.

"The safety features of the plant could not possibly have been designed to control a runaway reaction. That's the nature of a runaway reaction. (The safety features) were designed to prevent such a reaction in the first place," McWhirter countered.

Bidwai and Chouhan maintained that the local management of the Bhopal plant had no power to act independently, and had to clear every action with the Union Carbide head office in Danbury, Conn. Bidwai interviewed the manager of the Bhopal plant hours after the disaster, and the manager said that in his management, he was told to refer everything to the head office.

When he asked the manager if he was referring to the head office of Union Carbide India Limited, the

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<sup>1</sup>Reproduced with thanks in public interest from The Daily College Online, Wednesday, March 30, 1988 and archived at <<http://www.collegian.psu.edu/archive/1988/03/03-30-88tdc/03-30-88dnews-06.asp>>.

manager responded that he was referring to the head office of Union Carbide Corporation in Danbury, Bidwai said.

"He was lying. He was flat out lying," McWhirter said.

"If (the management of Union Carbide Corporation) had been aware of what was going on in India, all hell would have broken loose. People make the mistake of thinking that Union Carbide Corporation and Union Carbide India Limited are the same company. UCC owns 50.9 percent of UCIL, and all of the management decisions were made at the local level," he said.

Chouhan spoke about what he experienced on the

morning of Sunday, December 3, 1984, at about 2:00 a.m. -- about two hours after the release of toxic gases into the atmosphere had begun. Chouhan was awakened by the crying of his young son, and found the entire family to be suffering from severe eye irritation, he said.

The next day, as Chouhan walked through Bhopal toward the plant, he saw literally hundreds of people in intense agony and suffering. The city hospital, which was on the outskirts of the area affected by the cloud, was swamped with thousands of people. The hospital was largely powerless to aid these people, he said.

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## Nariman, pay your dues to Bhopal before memory fades

Bharat Desai, 01 July 2010

<<http://blogs.timesofindia.indiatimes.com/roving-i/entry/nariman-pay-your-dues-to>>

There is perhaps one way Fali Nariman can erase the blot of Bhopal on his legal career - by donating to the gas victims the legal fees which Union Carbide Corporation (UCC) paid him.

I am not the first to suggest this. The idea came five years ago from Nariman's close friend and legal luminary, Prof. Upendra Baxi, who battled valiantly through the 1980s for the survivors of the world's worst industrial disaster.

Nariman's autobiography 'Before memory fades', which was released on June 15, has a chapter on Bhopal, where Baxi's suggestion can be found. A former Delhi University vice-chancellor, Baxi has much better credentials as a human rights campaigner than Nariman. He currently teaches law at the University of Warwick, UK.

The spat between Baxi and Nariman has its roots in a comment by the then Supreme Court Chief Justice, R S Pathak, who presided over a Constitution Bench which approved the woefully inadequate \$470 million settlement which left Bhopal aghast in February 1989.

In December 2004, Nariman wrote a piece on 'Twenty Years after the Bhopal Gas Tragedy' in the journal 'Seminar'. He quoted Chief Justice Pathak as saying in the order: "It is indeed a matter for national introspection that public response to this great tragedy which affected a large number of poor and helpless persons limited itself to the expression of understandable anger against the industrial enterprise but did not channel itself in any effort to put together a public-supported relief fund so that the victims were not left in distress, till the final decision in the litigation." In his article Nariman pleaded for, among other things, voluntary contributions to such a fund.

Prof. Baxi slammed Nariman as well as the judges. Seminar carried his response to Nariman in the February 2005 issue which said: "Mr Nariman's invocation of Chief Justice Pathak's sonorous invocation is the ultimate perfidy. Pathak ostensibly

and extravagantly laments, in his judicial performance, that the friends of Bhopal victims "did not channel itself in any effort to put together a public-supported relief fund so that the victims were not left in distress, till the final decision in the litigation. This is a scandalous lie because, as already noted, we persuaded the V P Singh Cabinet to put some interim relief in place. Further, as far as we know, neither Pathak (who ordered the unconscionable settlement), nor Venkatchaliah (who ignobly strove to legitimate this against all canons of jurisprudence) has cared, as far as I know, to contribute even a farthing from their earnings and savings for the amelioration of the Bhopal violated humanity. Regardless, may I now publicly urge Mr Nariman to at least dedicate all the attorney fees earned from defending the UCC towards the costs of medical and economic rehabilitation of the Bhopal violated? Many of us have dedicated our far more meagre earnings for the cause!"

When Seminar asked Nariman to respond to Baxi's attack, he wrote back saying: "Lastly, as to what example can I set or have I set for aiding the Bhopal victims, I confess none: except to draw pointed attention to the grave deficiencies in our law (and what the Supreme Court had said way back in 1990 about the grave deficiencies in our existing law and the need to reform it) - in order to guard against, and especially in order to guard against, future Bhopal-like disasters."

Sheer hypocrisy from a person who is having minor pangs of guilt over having taken up the Carbide case, but is still not willing to shed the load off his conscience. Who needs Nariman to point out grave deficiencies in Indian law which he himself exploited to help an American transnational. Journalists i have been speaking to in Bhopal, including ace anti-Carbide campaigner Raajkumar Keswani feel that even the timing of the release of Nariman's autobiography, which hit the stands just one week after the Bhopal gas verdict on June 7, raises suspicion about his continuing pursuit to cash in on Bhopal.

In that case, Bhopal would not condone his actions even if he were to donate the legal fees which UCC paid him. He would also need to donate proceeds from the sale of his autobiography!

## **Bhopal Misses Recompense Law<sup>1</sup>** *Wanted, a law to let in "ambulance chasers"*

- *Samanwaya Rautray*

New Delhi, June 8, 2010:

The jet-set legal hawks, who represent victims of corporate wrong in America, might have made a difference had they been allowed to take up the cause of the Bhopal gas victims.

Under US tort laws, these lawyers can charge as much as 33 per cent of the total amount awarded under any court order or offered as a settlement to the victims as "contingency" fee, lawyers familiar with American law said.

It is because of these tort laws - which provide for substantial financial compensation - that Americans enjoy a greater degree of protection against industrial disasters.

But such award-linked fees are not permitted in India. Lawyers can only charge "professional" fees - not lucrative enough to chase ambulances and get victims to file suits seeking astronomical sums which they get to share.

Even 25 years after the gas tragedy, India does not have a formal law of torts which would allow victims of any industrial tragedy to move court for compensation.

High litigation costs and delays plaguing the Indian judicial system equally deter litigants from approaching courts for compensation in case of a civil wrong.

Even if a litigant were to incur substantial expenses and move court for monetary compensation, there's no certainty that he would win, lawyers said.

Moreover, litigants would also open themselves up to costs slapped routinely by courts, British style, should they lose the case.

All this has meant that class action suits, in which a large number of people move court to seek compensation, have been a rare phenomenon in India, unlike as in the US, where such suits originated and thrive, riding on the back of the "ambulance chasers".

In Britain, too, there is no direct equivalent of the US class action suit. But there are various forms of collective action and other mechanisms to pursue "group complaints".

In India, unfortunately, though courts have over the years extended the scope of civil damages, there is still no structured law to deal with mass-scale tragedies such as Bhopal, lawyers said.

In this case, the central government hurriedly brought in a law - the Bhopal Gas Leak Disaster Act - which allowed the government to represent the interests of the victims. The idea was to stop the ambulance chasers who flew into India within hours of the tragedy.

But no attempt has since been made to put in place a law that would address such gross cases of corporate negligence - both in terms of compensation and the inescapable criminal consequences that must follow, lawyers said.

Not even, they said, when the debate peaked over a stalled nuclear liability bill that limits the responsibility of foreign firms in giving compensation to victims of nuclear disasters.

If another tragedy on the scale of the one in Bhopal were to hit Indians, victims would still have no legal recourse to compensation, activists have warned.

However, the history of the law of tort in India is old. The first tentative attempt to draw up a formal law of tort was first made in 1886 by Sir Frederick Pollock. The law, called the Indian Civil Wrongs Bill, was never passed.

Public interest petitions have helped pushed the cause of class action victims, especially in cases of custodial deaths and other instances of abuse of power by state authorities. The doors have also opened for class action suits in consumer cases.

A much-awaited companies' bill has a clause that would permit corporate class action suits. But for now everything still remains on paper, lawyers said.

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<sup>1</sup>Reproduced in public interest from The Telegraph, Calcutta, Wednesday, June 9, 2010

## Bhopal Survivors' Letter to GOM

June 17, 2010

The Chairman and Members of the  
Group of Ministers on Bhopal.

### *Ensuring justice and a life of dignity for the people poisoned by Union Carbide Corporation in Bhopal*

On behalf of the survivors of the Union Carbide disaster in Bhopal and those exposed to ground water contaminated by Union Carbide's hazardous waste, we the undersigned seven organizations in Bhopal, wish to present our consensus regarding the decisions and actions that must be taken by the Group of Ministers on Bhopal to meaningfully address issues of justice and the opportunities for a life of dignity for the survivors.

We hope that the increased national and international awareness on the negligence of successive Central and State governments towards the survivors of Bhopal in the last 25 years, will inspire you to consider our long pending demands from the Central government in your meeting on June 18, 2010.

#### **A) Medical, Economic, Social and Environmental Rehabilitation of the survivors of the disaster and those exposed to ground water contaminated by Union Carbide's hazardous waste**

1. Set up an Empowered Commission on Bhopal with adequate authority and funds to be able to design and implement plans for medical care, training and employment generation, monthly pensions for those in need of support, supply of clean drinking water and protection from poisons in the soil and ground water in and around the abandoned Union Carbide factory. The earlier GoM headed by Mr. Arjun Singh in its meeting on June 11, 2008 has already approved the setting up of the Empowered Commission on Bhopal (ECoB) and the Government of India has conveyed its commitment to setting up the ECoB through public declarations by M/s Prithviraj Chavan and Ramvilas Paswan on May 29 and August 8, 2008 respectively. The proposal for the ECoB has been approved by several ministries and the Planning Commission.

2. Make good the shortfall in compensation in accordance with the directions of the October 3, 1991 revised order on settlement of the Supreme Court of India. There is documentary evidence to show that the settlement amount of 470 million dollars was not decided on the basis of deaths and injuries caused by the disaster but on the ease with which Union

Carbide Corporation could pay the amount from its insurance coverage and special fund. The actual number of people who died and are injured as a result of the disaster is at least five times more than the figures used in arriving at a settlement amount. There is also substantial documentary evidence to show that injuries suffered by claimants were deliberately under assessed so that the overall damage caused by Union Carbide could be tailored down to fit the paltry settlement amount. While exposure related deaths continue to occur to this day, registration of exposure related deaths was stopped, without forwarding any reason or basis, in 1997. We believe that it is still possible to right the wrongs deliberately committed in the distribution of compensation if the Central government summons the necessary political will to do so.

3. Ensure provision of clean drinking water to the residents of the communities within 3 kilometers of the abandoned Union Carbide factory particularly in the North and North-east directions as per Supreme Court order of May 7, 2005. Despite allocation of Rs. 14.12 crores in 2006, due to the negligence of the Madhya Pradesh State government in this vital matter, today over 20, 000 people are forced to drink water contaminated with cancer and birth defect causing chemicals and heavy metals and chemicals that cause damage to liver, kidneys, lungs, brain and the skin. The toxic contamination of ground water in these communities has been documented in 12 government and independent studies starting from 1990 and most recently in December 2009 by the Central Pollution Control Board (CPCB) and the New Delhi based Centre for Science and Environment.

4. Ensure excavation and containment of thousands of tonnes of hazardous waste that lie all over the surface in the factory premises and are buried within the factory premises and the Solar Evaporation Landfill 400 meters north of the factory. The safe excavation and containment of hazardous waste will stop the ongoing leaching of toxic chemicals and heavy metals in to the aquifer and prevent further environmental damage.

#### **B) Criminal Liabilities against Indian and Foreign Accused**

1. Set up a Special Prosecution Cell in the CBI for securing the extradition of the absconding foreign accused and enhancement of sentences against the Indian accused.

2. Send appropriate requests for extradition of

authorized representatives of Union Carbide Corporation, USA and Union Carbide Eastern Incorporated, Hong Kong and Warren Anderson.

3. Ensure execution of summons issued by Chief Judicial Magistrate, Bhopal against authorized representative of The Dow Chemical Company, USA on January 6, 2005. There has been a stay on the execution of summons in the MP High Court for the last 5 years.

4. Ensure that the prosecuting agency inspects the Methyl Isocyanate plant in Institute, West Virginia, USA as per order of Chief Judicial Magistrate (CJM), Bhopal, on 06 July 1988, to substantiate charges of double standards of design safety.

5. Ensure that the prosecuting agency takes cognizance and criminal action against the sale of Union Carbide patented technology to Reliance Petroleum Limited and other agencies while it is absconding.

6. Ensure that a revision petition is filed by the prosecution against the June 7, 2010 order of the Bhopal, CJM against the Indian accused in the Sessions or the High Court.

7. Ensure that the Central government files a curative petition in the Supreme Court for a revision of the order dated September 13, 1996 that diluted the criminal charges against Indian accused.

### C) Environmental Liabilities

1. Pursue the application filed by the Central government in the High Court of Madhya Pradesh in May 2005 for making The Dow Chemical Company, USA pay Rs.100 Crores as advance for cleaning up the toxic contamination in and around the abandoned Union Carbide factory. Enforce the appearance of The Dow Chemical Company, USA in the case by piercing the corporate veil and taking action against its Indian subsidiary, Dow Chemical International Private Limited.

2. Ensure safe transportation and disposal of the thousands of tonnes of hazardous waste in hazardous waste treatment facilities in OECD countries.

3. Join the ongoing litigation in the US Federal Court against Union Carbide and others for environmental clean up, payment of compensation for personal and property damages and costs of health monitoring.

### D) Action against crimes of The Dow Chemical Company, USA in India

1. Revoke registration for Dursban and three other

pesticides registered by payment of bribes by Dow to Agriculture Ministry officials.

a) Revoke the registration of the pesticides registered by payment of bribes

b) Initiate prosecution against Dow AgroSciences India Ltd and responsible company officials for abetting the commission of the crime of bribe taking by Agricultural Ministry Officials, under Section 12 of Prevention of Corruption Act, 1988.

c) Prosecute Indian officials including members of the Central Insecticide Registration Board who received the bribe totaling 200 thousand dollars.

2. Revoke approval given to Reliance Industries to purchase absconder Union Carbide Corporation's trademark UNIPOL (PP) technology through Dow Global Technology Inc.

a) Get CBI to submit application before CJM Bhopal in MJC 91/1992 seeking attachment of licensing and service fees paid by Reliance Petroleum Limited to Dow Global Technology Inc. towards UNIPOL technology.

b) Revoke the approval given to Reliance for licensing UNIPOL

3. Stop all work on GACL-Dow's joint venture factory in Dahej, Gujarat.

a) Direct FIPB to decline permission to Dow-GACL joint venture, or revoke any such approval if already given.

b) Investigate and take action, including prosecution of GACL-Dow officials for violation of environmental and labour legislations. The plant on which work has begun has no environmental clearance, no Consent to Establish and no permission from the Directorate of Industrial Safety and Hygiene.

Thanking you.

Yours sincerely,

Safreen Khan, Children Against Dow-Carbide, Mob. 9826994797

Balkrishna Namdeo, Bhopal Gas Peedit Nirashrit Pension Bhogi Sangharsh Morcha, Mob. 9826345423

Abdul Jabbar, Bhopal Gas Peedit Mahila Udyog Sangathan, Mob. 9406511720

Syed M Irfan, Bhopal Gas Peedit Mahila Purusg Sangharsh Morcha, Mob. 9329026319

Rashida Bee, Champa Devi Shukla Bhopal Gas Peedit Mahila Stationery Karmchari Sangh, Mob. 9425688215

ND Jayaprakash, Bhopal Gas Peedit Sangharsh Sahayog Samiti, Mob. 09968014630

Rachna Dhingra, Satinath Sarangi, Bhopal Group for Information and Action, Mob. 9826167369

## Press Statement from Bhopal Survivors on GOM Recommendations

June 22, 2010: Calling the Group of Minister's offer of compensation a smokescreen, all seven organizations for survivors' rights have strongly condemned the recommendations of the Group of Ministers on Bhopal. The Group of Ministers pretends to offer relief and rehabilitation but the details reveal that issues of compensation, rehabilitation and corporate liability are totally ignored. The organizations said that the recommendations demonstrate more concern for the welfare of American corporations than for Bhopal survivors.

The organizations said that the compensation recommended by the Group of Ministers will go to less than 10% of people known to be exposed to Union Carbide's toxic gases. "The GoM has based its decision on the notoriously flawed system of damage assessment that was designed to downplay and diminish the death and injury caused by Union Carbide Corporation. It has made no recommendations regarding review of death claims or registration of exposure related death claims after 1997, when such registration was arbitrarily stopped. "The GoM has denied any additional compensation to 521,000 [91%] survivors who received a paltry sum of Rs. 25, 000 for life long injuries," said Abdul Jabbar, convenor of the Bhopal Gas Peedit Mahila Udyog Sangathan.

The Group of Ministers has gone back on its June 2008 decision to concede Bhopalis long-standing demand to set up an Empowered Commission on Bhopal to oversee rehabilitation. Instead, it proposes to transfer Rs. 720 crores to the Madhya Pradesh Government for medical, economic, social, and environmental rehabilitation. "More than Rs. 530 crores have already been spent by the M.P. Government in the name of relief and rehabilitation, and there is nothing to show for this. The Rs. 720 crores will go the same way – into the pockets of the Ministers and bureaucrats" said Rachna Dhingra of the Bhopal Group for Information and Action. "The Madhya Pradesh Government's list of equipment to buy includes fictitious equipment such as 'automatic micro-organism detection instruments' and 'identification & sensitivity of micro organism' that cost more than 35 lakhs," Dhingra added. "The Group of Ministers could just as well put the money straight into these bureaucrats' pockets and save on overhead costs."

The organizations also expressed dismay that the GoM has failed to recommend action for extraditing the authorized representatives of Union Carbide Corporation, USA and Union Carbide Eastern, Incorporated that is now reincarnated as Union Carbide Asia Pacific and Union Carbide Asia Ltd. "As 100% percent owner of Union Carbide, USA, Dow Chemical is guilty of sheltering a fugitive from justice punishable by 3 years imprisonment under Sec 212 of the Indian Penal Code and the Group of Ministers has made no directions regarding the summons against Dow Chemical

issued by the Chief Judicial Magistrate of Bhopal District Court, on January 6, 2005," said Balkrishna Namdeo, president of the Bhopal Gas Peedit Nirashrit Sangharsh Morcha.

The Group of Ministers has also failed to recommend any action to make Dow Chemical pay for the clean up of the thousands of tonnes of hazardous waste and extensive damage to human health caused by contamination of ground water. "The Group of Ministers and in particular certain members of it who are known to be Dow Chemical's agents have made appropriate noises but their money is not where their mouth is," said Safreen Khan of Children Against Dow Carbide. "It has decided to spend Rs. 300 crores of public money towards removal of toxic waste -- something which is the legal responsibility of Dow Chemical." Survivors' organizations pointed out that Dow Chemical, through its lawyer Abhishek M. Singhvi, has refused to accept jurisdiction of the Madhya Pradesh High Court for the last six years. Despite this, the Group of Ministers has not made a single recommendation towards making Dow Chemical answerable to Indian courts, even as the company continues to do business in India. "This clearly displays an intention by the government to let Dow Chemical off the hook and is just as criminal as the act of helping Anderson escape justice. It is in fact a greater crime because Dow Chemical's ongoing environmental disaster continues to maim and kill people, including the unborn, as we speak today," said Rashida Bi, president of the Bhopal Gas Peedit Mahila Stationery Karmchari Sangh.

The organizations said that the recommendations of the Group of Ministers are designed to please the US-India CEO Forum, that is meeting today in Washington, DC. Survivors' organizations point out that the Group of Minister's recommendation of spending money from the public exchequer to address the lingering issue of toxic contamination follows from one of the founding principles of the US-India CEO Forum that prescribes a "specific focus on resolving legacy issues such as those impacting Dow / Bhopal tragedy of 1984 ... to send a strong positive signal to US investors." (<http://planningcommission.nic.in/reports/genrep/USIndia.pdf>)

The organizations said that the GoM's recommendations demonstrate the failure of the media attention and public awareness to change the UPA government's priorities of FDI over the survival of ordinary people in this country. They said that hundreds of survivors will be traveling to New Delhi tomorrow to place their concerns before the Cabinet Committee that is expected to issue directives based on the recommendations of the GoM in its meeting on June 25, 2010.

## Bhopal and the U.S. Courts

### *Catastrophe and the Dilemma of Law*

- H. Rajan Sharma\*

*The juridical field is the site of a competition for monopoly of the right to determine the law. Within this field there occurs a confrontation among actors possessing a technical competence which is inevitably social and which consists essentially in the socially recognized capacity to interpret a corpus of texts sanctifying a correct or legitimized vision of the social world. Such a process is ideal for constantly increasing the separation between judgments based on the law and naive intuitions of fairness.*

-Pierre Bourdieu'

Around midnight on December 2-3, 1984, a pesticide plant leaked some twenty seven tons of a methyl isocyanate, a highly toxic chemical gas, leaked out into the air over the sleeping city of Bhopal. The results took the form of an enormous tide of death that welled up in the city's hospitals and morgues. Official estimates, probably understated, put the toll at a staggering 2,000 dead but reliable unofficial estimates suggest a soul-numbing figure of nearly 6,000 or more dead in the 48-hour aftermath of the disaster.

The cause of death was described in most cases as pulmonary edema, a polite medical euphemism for an excruciating manner of death by slow drowning in one's own bodily fluids. According to the Indian Council for Medical Research, more than 250,000 people continue to suffer from permanent disabilities and chronic ailments as the result of exposure to the poisonous gases on that night. This December marks the twentieth anniversary of this unparalleled disaster, perhaps the single worst industrial catastrophe ever to befall a civilian population. By some accounts, at least 20,000 persons have died over the past two decades. The International Commission for Medical Research on Bhopal has concluded that, due to chromosomal and genetic damage among the victims, the wake of this unprecedented catastrophe will continue to ripple through the next three to four generations in Bhopal in the form of birth defects.

The word 'tragedy' has shown a talismanic insistence in appearing and reappearing in the context of this incident. Perhaps it helps us soothe the conscience

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\* H. Rajan Sharma, a lawyer who is presently representing residents of Bhopal in a Federal class action against Union Carbide in US courts, brings the legal story up to date, outlines his case, and looks at what Bhopal means for the future of Human Rights. A chapter, written in 2004, from *The Bhopal Reader*, edited by Bridget Hanna, Ward Morehouse, Satinath Sarangi, Apex Press, 2006.

by lending an air of the inevitable or unavoidable to these events or maybe it helps us invoke that Faustian mythology so typical of modern society in which nameless others are sacrificed at the hallowed altar of progress for our technological hubris. But this Anniversary should not just memorialize the tragedy of Bhopal. It should be an occasion to recall the travesty of what the victims have been made to endure over the past twenty years. Despite all the fine sentiments and noble ambitions expressed in what the Indian Supreme Court, in this case, referred to as the "uncertain promise of law," the fact of the matter is that the law, in all its abstract majesty, has utterly failed to provide the victims of the world's worst industrial disaster with so much as a semblance of justice over the past two decades.

Instead, the law has been the principal author of a kind of Kafkaesque parody of justice that has played itself out in the courts of the United States and India. The so-called wheels of justice have, in this case, turned only to crush the hopes of the survivors beneath them. The seemingly endless processes of the law have, in fact, perpetuated and compounded an injustice too fearful to contemplate, which has been allowed to stand without redress or remedy for twenty years, seven thousand three hundred days (to be precise), each day a shameful vindication of the maxim that holds that laws are like cobwebs, strong enough to only detain the weak and too weak to constrain the strong.

The epitaph has yet to be written on the sordid record of what may justifiably be called the Bhopal travesty.

The plant belonged to Union Carbide India Limited, an affiliate of Union Carbide Corporation, a multinational corporation headquartered in the United States. Union Carbide owned 50.9% of its Indian affiliate at the time of the disaster and was responsible for transferring proprietary technology to the Bhopal plant for manufacturing Sevin, a patented product in which methyl isocyanate was one of the key ingredients. It was determined shortly after the disaster that a "runaway reaction" of a highly volatile chemical, methyl isocyanate or MIC, had taken place in one of the plant's storage tanks.

The most likely cause was the introduction of water into the tank. It is undisputed that a routine "water-washing" operation prescribed by the American company's operating manuals were being conducted on the night of the disaster. Numerous independent investigations have concluded that, while the entry

of water into the storage tank may have triggered the runaway reaction, the real causes of the catastrophe can be traced to the decision to store methyl isocyanate in large quantities for long periods of time, the badly flawed design of the plant as well as the near-total absence of safety provisions and emergency-preparedness measures. Needless to say, Union Carbide has strenuously contested this version of events, disclaiming any managerial responsibility for the design, day-to-day operation of the UCIL facility or its safety features and asserting that its relationship with its Indian subsidiary was a hands-off or arm's length relationship.

The survivors and their representatives, meanwhile, have maintained that the U.S. company deliberately chose to bequeath to Bhopal an obsolete, dangerous and ill-equipped plant, with grossly inadequate technology, pointing to Carbide's methyl isocyanate facility in Institute, West Virginia as an example of the company's discriminatory imposition of double standards of risk, safety and emergency-preparedness. The Institute plant, they argue, was designed with significantly higher parameters for safety and emergency-preparedness: e.g., computerized warning systems, larger capacity safety devices, and safer processes for storage and containment of methyl isocyanate. For the past two decades, Carbide has insisted that standards of design, technology, safety and emergency-preparedness were either uniform or at least comparable at all of its worldwide operations, including at Bhopal. To date, Union Carbide continues to withhold scientific and medical research on the toxicology of the leaked gases which could assist in the treatment of innumerable victims on the specious grounds that this information constitutes a "trade secret."

In the disaster's aftermath, hundreds of lawsuits were filed in jurisdictions across the U.S. against Union Carbide by American contingency-fee lawyers. These were ultimately consolidated into a single proceeding before Judge John Keenan in the Southern District of New York. Fearing that the victims claims might be exploited by an army of private lawyers, the Indian Parliament enacted the Bhopal Gas Leak Disaster (Processing of Claims) Act, on March 25, 1985. The legislation was based on a doctrine under international law known as "parens patriae" (literally, "parent of the country"), which held that the State was empowered to act the legitimate protector of its citizens and their environment. The Act conferred upon the Indian government the full power and authority to act as the exclusive legal representative of the survivors in all claims for compensation before foreign or domestic courts, subject to its obligation to consult and

cooperate with the victims and their representatives in the prosecution of such claims. Framers of the legislation argued that it would enable the Indian government to provide centralized, integrated decision-making and control to prosecute claims on behalf of the mostly destitute victims, bringing all the nation's resources to bear against the multinational might of the corporation.

Based on this legislation, the Indian government filed suit against Union Carbide on April 8, 1985, in the courts of the United States, where, in what can only be described as a profoundly ironic exercise, India argued that the interests of justice required the case to be tried in the United States on the grounds that its own legal system was backward and procedurally outmoded, lacking any class action device or other provision for representative suits, burdened with the legacy of colonialism, and subject to massive delays caused by endemic docket backlogs. The company countered that the case ought to be tried in the courts of India, without burdening American taxpayers, and showered praise upon the legal system of the "world's largest democracy", particularly to the extent it was "based on sound and established principles of Anglo-Saxon law." On May 12, 1986, Judge Keenan conditionally dismissed the consolidated action on the grounds that India was the more appropriate forum for the resolution of this litigation. The decision rested, in part, on the notion that trying the case in the US courts would amount to "yet another instance of imperialism" imposing foreign legal standards upon a developing country with "vastly different values", different levels of "population" and "standards of living." The dismissal was conditioned upon Union Carbide's "consent to submit to the jurisdiction of the courts of India." Meanwhile, criminal proceedings and investigation had already been initiated against Union Carbide and its former director, Warren Anderson, in the Bhopal District Court in 1984 and formal charges of "culpable homicide" and "causing death by use of a dangerous instrumentality" were framed by India's prosecuting agencies on November 30, 1987. The charge of culpable homicide under the Indian Penal Code is equivalent to manslaughter, causing death by reckless indifference.

By the time the case first reached the Supreme Court of India on the issue of whether interim relief assessed against Union Carbide on behalf of the victims was appropriate, litigation had continued in India for more than five years without even reaching the commencement of pretrial discovery. The mostly destitute victims had received nothing in the way of compensation from their erstwhile 'parent,' the Union of India. On February 14, 1989, Chief Justice Rajinder

S. Pathak interrupted the proceedings to announce that he felt, in light of "the enormity of suffering occasioned by the Bhopal gas disaster and the pressing urgency to provide immediate and substantial relief to the victims," that the case was "preeminently fit for overall settlement."<sup>2</sup> The Chief Justice then entered a judicial decree preliminarily recording the terms of this settlement which required Union Carbide to pay \$470 million in damages in order to extinguish all civil and criminal liability.

The Indian Supreme Court, however, gave the victims and their able counsel a last opportunity to challenge the terms of the proposed settlement. In its final decision of October 1991, the Indian Supreme Court justified the settlement giving it final approval on the grounds that the victims' fate could not be left to the "uncertain promise of law," but modified its terms and conditions by mandating the prosecution of criminal charges against Union Carbide and its former director, Warren Anderson, which had been pending since 1987.<sup>3</sup> Criminal charges against Union Carbide and Warren Anderson were accordingly renewed in the Bhopal District Court. In March 1992, the Judicial Magistrate issued an arrest warrant for Warren Anderson and gave lawyers for Union Carbide a month in which to appear for trial. Neither of the parties presented themselves in court and Union Carbide's official spokesperson stated that the company would flatly refuse to submit to the jurisdiction of India's criminal courts. Summons served on Union Carbide through the U.S. Department of Justice were ignored. In 1992, the Bhopal District Court proclaimed the company and Mr. Anderson to be "absconders", i.e. fugitives from justice. To date, neither Union Carbide nor Anderson have appeared to face the criminal charges pending against them in India. As recently as 2004, the Indian government submitted an extradition request for Anderson under the Indo-US Treaty of Extradition which was, reportedly, rejected. Progress in the criminal case against Indian officials has been, if anything, equally glacial.

The compensation tribunals, established by the Union of India, the erstwhile 'parent' of the disaster victims, did not even begin functioning until 1992. Present-day estimates by non-governmental organizations indicate that over 90% of claimants have received less than \$400 from the claims process in India, an amount insufficient to pay for medications over a five year period. Meanwhile, tests of the water supply of as many as sixteen communities residing near the plant site and surrounding environs have revealed severe environmental contamination of the aquifer in Bhopal resulting from the indiscriminate disposal of toxic

chemicals and by-products produced there. Recent soil and water sample tests conducted by an independent British laboratory for Greenpeace and certain victims' organizations indicate massive contamination of soil and drinking water around the facility in Bhopal. To cite one instance, the Greenpeace report states that water samples taken from the Bhopal site contained carbon tetrachloride, a carcinogenic chemical, which exceeded maximum tolerance limits established by the World Health Organization by 1,705 times. Union Carbide claims that it has no further responsibility or liability for the environmental remediation of the plant site because it has sold its shares in its Indian subsidiary and the land was returned to Madhya Pradesh in 1998.

In litigation before the Indian Supreme Court, the Union of India has sought to utilize the interest earned on the settlement fund, over the many years that it remained undistributed, to clean-up and remediate the badly polluted plant site and the groundwater aquifer which provides the drinking water of as many as 20,000 residents of affected communities. The Supreme Court has, mercifully, denied its request and ruled that the victims must receive the remainder of these sums to which they are legally and morally entitled. But lawyers for political parties have filed objections claiming, with truly democratic largesse, that these funds should be allocated to a dozen or so municipal wards in Bhopal where the effects of the disaster were felt principally in the form of a temporary inability to find good maids and kitchen help.

As an attorney who has had the privilege of representing the survivors' cause in the courts of the United States, it pains me to admit that my own efforts have achieved only modest success in turning the tide of this battle. That litigation, commenced in 1999, consisted primarily of an effort to translate the unresolved criminal liability of Union Carbide into an actionable violation of international human rights law. The complaint also included claims for damages to physical health and property as a result of the contamination of drinking water as well as for injunctive relief in the form of clean-up and remediation by Union Carbide of the severely polluted land for its factory, which still has thousands of metric tons of waste stored above-ground and buried in a landfill on site, and the aquifer in Bhopal. Those efforts were unavailing largely because the American courts gave scant weight to our argument that Union Carbide could not claim the benefit of the 1989 settlement since the company had refused to appear to face criminal charges in India. They concluded instead, ignoring the carefully framed arguments under

international law, that only the Indian government had standing to complain of a breach of that settlement because it was the Indian state, not the victims on whose behalf it was supposedly acting, which was a party to that agreement.

On remand from the appellate courts, Union Carbide was obliged, for the first time, to submit to certain limited discovery for documents relating to the history of its operations at Bhopal. One of the documents was a UCC Capital Budget from 1973 for the transfer of technology which Union Carbide approved to the Bhopal plant for the manufacture of the pesticides including the technology for methyl isocyanate ("MIC").

Under a section entitled "Technology Risks," the document revealed for the first time that the "comparative risk of poor performance and of consequent need for further investment to correct it is considerably higher in the UCIL operation than it would be had proven technology been followed throughout," noting in particular that "even the MIC-to-Sevin process, as developed by UCC, has had only a limited trial run." In March of 2004, the same appellate court ruled that the claims of those affected by environmental contamination may be allowed to proceed, including claims for environmental remediation of the land of the Bhopal factory and groundwater aquifer.

One of the imperatives of this anniversary should be to remedy the failure of law which made the Bhopal travesty possible and to prevent its recurrence when the law is again confronted, as it almost certainly will be in this age of globalization, with another disaster having the same international or cross-border dimensions, and the same vexing complexities of liability, corporate structure, jurisdiction, conflicts-of-law and forum. Legal reform is a cause that has seldom, if ever, managed to fire the activist imagination in India or elsewhere. If anything, however, the Bhopal travesty offers a dizzying, vertiginous glimpse of how the economic logic of globalization can become inextricably intertwined with a politics of catastrophe, in which developing countries bargain with foreign investors and multinational corporations by staking the health and lives of their citizens or their environment like gambling chips. This kind of moral abyss is made possible and underwritten by the failures and lacunae in the 'rule of law', domestic and international.

The forces that created Bhopal are on the march everywhere today. A recently released report by the United Nations Research Institute for Social Development, called for the implementation of such a legally binding international code of conduct, some

60,000 multinational corporations in 1998 accounted for more than one-third of world exports, with annual turnovers that dwarfed the gross domestic products of most of their host states in the developing world. "There is a danger that corporate self-regulation, as well as various partnership arrangements," the report warned, giving the example of Bhopal, "are weakening the role of national governments, trade unions and stronger forms of civil society."

As an Organization for Economic Cooperation and Development ("OECD") study pointed out, as early as 1993: "Environmentally-dirty industries, particularly resource-based sectors, have migrated over the last two decades to lower income countries with weaker environmental standards; the result is a geographical shift in production capacity within sectors with a consequent acceleration of industrial pollution intensity in developing countries."<sup>4</sup> The study adds that "liberalised trade and investment rules among countries with unequal levels of environmental protection may create incentives for companies to relocate to jurisdictions with lower levels of environmental regulation and lower compliance costs."

The dilemma of law, as Bourdieu has pointed out, is that any rule-based system no matter how impartially administered or fairly conceived will tend inexorably towards outcomes that are not necessarily consonant with intuitive constructions of justice. By the same token, one can scarcely conceive of a political dispensation or social configuration that can be trusted, in and of itself, to deliver any 'social justice' worth the name without something closely resembling the normative episteme of the rule of law.

Yet, the law cannot remain indifferent to the demands of justice on the specious grounds of an appeal to higher-order concepts of justice "under the law" as the sole and exclusive foundation of its claims to "universal acceptance through an inevitability which is simultaneously logical and ethical," as Bourdieu has written. In the last analysis, the law must secure acceptance of its moral authority from those who seek its protections by aspiring to deliver some modicum of meaningful justice or else depend entirely on the armed power of the state to justify its pretensions to legitimacy.

In the context of Bhopal, that objective requires India and the international community to undertake the following measures to ensure that the law will finally remedy this perversion of justice on its twentieth anniversary. India must commit itself to legal reform. The Bhopal case presents the spectacle of an official indictment of its own legal system by the country's government before the courts of a foreign power. This is nothing short of an acknowledgement that the

sovereign, with full knowledge of its consequences, has deliberately been unwilling or unable to remedy this problem in the more than half-century since independence. Civil litigation in India remains subject to delays of 20 years or more. These kinds of delays are effectively tantamount to a denial of justice. India is a signatory to the International Covenant on Civil & Political Rights which provides, in Article 14, that: "In the determination... of his rights and obligations in a suit at law, everyone shall be entitled to a fair and public hearing by a competent, independent and impartial tribunal established by law."

Legal reforms in India must include provisions for representative suits or class actions to address mass claims of liability like those in Bhopal. Never again should victims be subjected to something like the Bhopal Act which not only enabled the government to function as their lawyer, without observing the minimal professional duties or ethical obligations of an attorney towards his client, but permitted the government to begin functioning as the client as well, stripping the victims of any legal personality and denying them any meaningful role in the decisions that affected their case. Article 16 of the International Covenant guarantees that: "Everyone shall have the right to recognition everywhere as a person before the law."

In honor of the victims of Bhopal, India should lead the effort to enact into international law by treaty or other instrument a legally binding and enforceable code of conduct for multinational corporations, including provisions of liability concerning the export of hazardous technology. Our legal strategy seems to have presaged the UN Human Rights Norms for Business and its Commentary which were recently approved by the Sub-Commission on the Protection and Promotion of Human Rights. These do not, however, have the force of law. India should work to transform these norms into an international legal framework.

The International Law Commission ("ILC"), an authoritative body charged by the United Nations with the progressive development and codification of international law, has already articulated the majority view that international liability, arising from transboundary environmental harm like Bhopal, should be imposed on states that export hazardous technologies. Even before the disaster, some members of the Commission and the Sixth Committee had suggested that the state of nationality of a multinational corporation should be liable when it "exports" dangerous industries to developing states and harm results. During the discussions on these issues, the U.S. delegation expressed their official view that "under customary international law, States are generally liable for significant transboundary harm

caused by private entities acting on their territory or subject to their jurisdiction or control" adding only that "from a policy point of view, a good argument exists that the best way to minimize such harm is to place liability on the person or entity that causes such harm, rather than on the State." The Union of India agreed that liability for environmental harm originating in another state "must be imputed to the operator who was in direct physical control of the activity." But the split in the Commission on this question, ensured that the Commission's draft articles of "International Liability for Injurious Consequences Arising from Acts Not Prohibited By International Law", remain unsettled on this point.<sup>5</sup> India should work to close this omission in the draft articles and resolve the issue of international liability for the export of hazardous or dangerous technology.

Last but not least, India must secure the appearance of UCC or its new parent, Dow Chemical, to face trial on the criminal charges pending against it in the Bhopal District Court. The criminal case against Indian officials has dragged on for a number of years and judges presiding over the case against UCC have been repeatedly transferred. A single judge should be appointed to preside over the entire matter and expedite proceedings so that the criminal case can be quickly adjudicated and disposed of under the law. India has an obligation to ensure that this crime is effectively prosecuted. Article 8 of the Universal Declaration of Human Rights stipulates that: "Everyone has the right to an effective remedy by the competent national tribunals for acts violating the fundamental rights granted him by the constitution or by law." Pursuant to Article 2 of the International Covenant on Civil & Political Rights, India has undertaken to "ensure that any person whose rights or freedoms as herein recognized are violated shall have an effective remedy," and to "ensure that the competent authorities shall enforce such remedies when granted."

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*Summary*

## **Clouds of Injustice Bhopal Disaster 20 Years on**

*An Amnesty International Report ASA 20/015/2004*

On the night of 2nd December 1984 over 35 tons of toxic gases leaked from a pesticide plant in Bhopal owned by the US based multinational Union Carbide Corporation (UCC)'s Indian affiliate Union Carbide India Limited (UCIL). The gases that leaked consisted mainly of at least 24 tons of poisonous Methyl Isocyanate (MIC) and other reaction products, possibly including toxins such as hydrogen cyanide, nitrous oxide and carbon monoxide.

In the next 2-3 days more than 7,000 people died and many more were injured. Over the last 20 years at least 15,000 more people have died from illnesses related to gas exposure. Today more than 100,000 people continue to suffer chronic and debilitating illnesses for which treatment is largely ineffective.

The disaster shocked the world and raised fundamental questions about government and corporate responsibility for industrial accidents that devastate human life and local environments. Yet 20 years later, the survivors still await just compensation, adequate medical assistance and treatment, and comprehensive economic and social rehabilitation. The plant site has still not been cleaned up. As a result, toxic wastes continue to pollute the environment and contaminate water that surrounding communities rely on. And, astonishingly, no one has been held to account for the leak and its appalling consequences.

Efforts by survivors' organizations to use the US and Indian court systems to see justice done and gain adequate redress have so far been unsuccessful. The transnational corporations involved – UCC and Dow Chemicals which took over UCC in 2001 – have publicly stated that they have no responsibility for the leak and its consequences or for the pollution from the plant. UCC continues to refuse to appear before the court in Bhopal to face trial and the Supreme Court endorsed final settlement has left survivors living in penury.

### **The Human Rights Impact of the Leak**

The leak has claimed more than 20,000 lives so far and left more than a hundred thousand people chronically ill. The gas affected people suffer from

a variety of health problems including chronic respiratory illness, eye disease, immune system impairment, neurological damage, neuromuscular damage, and mental health problems. Pregnant women had high rates of miscarriage at the time of the leak, and higher rates of miscarriage persisted even among those who conceived after the gas leak. Gas affected women also suffer from many gynaecological disorders. Children have suffered severe health problems, including growth defects. There are indications that exposed people have a greater risk of cancer.

Despite the intensive work done immediately after the leak, the extent and the quality of medical research has not been adequate to make decisions about de-toxification, short- and long-term treatment, long-term health consequences and the implementation of a program to compensate victims. Inadequate research has been further weakened by the lack of information from UCC about the nature of the gases released during the leak and their toxicity.

The Union Carbide Bhopal plant has been polluting ground water and soil since it began functioning in the early 1970s primarily as a result of poor waste disposal practices. The plant site, abandoned since the 1984 leak, continues to pollute the groundwater, the sole source of water for those around the plant, with many toxic substances, that according to some reports may be carcinogenic. This has also resulted in thousands more people being poisoned. Despite knowledge about the extent of contamination and repeated entreaties to do so, Union Carbide has not taken substantive action to clean the plant site.

Those exposed to the gas leak were overwhelmingly from the poorest sections of society, and the debilitating effects of the leak has entrenched existing poverty and disempowerment. A large number of gas affected people are unable to work due to their illnesses or injury and have been impoverished. The high cost of treatment and meagre compensation has further aggravated the economic hardships of thousands of survivors. In addition gas affected people are stigmatised and women in particular are vulnerable to discrimination and social ostracism.

Thousands of people in Bhopal were denied their right to life, and tens of thousands of people have had their right to health undermined. Those struggling for justice and the right to a remedy in Bhopal have been frustrated in their efforts. Thousands of poor families have suffered illness and bereavement, further impairing their ability to realize their right to a decent standard of living. Women facing social stigma as a result of gas exposure have been denied their right to freedom from discrimination. Those who were exposed to the gas and those around the plant who continue to be exposed to contaminated water have been denied their right to a safe environment.

### **Role of Union Carbide Corporation**

UCC owned 50.9% of the equity of UCIL, and maintained extensive corporate, managerial, technical and operational control over UCIL. Despite that, since the leak UCC has argued that the Bhopal plant was not under its control or management and that UCIL was responsible, prior to the leak. However, in its general policy UCC detailed the intention to “secure and maintain effective management control of an affiliate”. The company decided to store quantities of the “ultra-hazardous” MIC in the Bhopal plant in bulk, but did not equip the plant with the corresponding processing or safety capacity. On the night of the gas leak crucial safety systems including the cooling system, the liquid nitrogen pressure and the vent gas scrubber—were not functional.

UCC transferred technology that was not proven and entailed operational risks. It did not apply the same standards of safety in design or operations to Bhopal as it had in place in the USA. Most importantly for those who lived and worked around the plant, and unlike in the USA, the company failed to set up any comprehensive emergency plan or system in Bhopal to warn local communities about leaks.

As early as 1982, a UCC safety audit had highlighted many major and minor safety concerns regarding the Bhopal plant. There had been a number of accidents at the plant prior to the leak and local media and the workers union had repeatedly raised safety concerns in public.

Months before the December 1984 disaster, the UCC was warned of the possibility of a runaway reaction in its similar to the one that caused the eventual leak in Bhopal occurring at the West Virginia MIC plant.

Amnesty International is not aware of any evidence to show that this report was shared with UCIL or of any appropriate preventive measures taken at the Bhopal plant.

After the leak UCC maintained that MIC was nothing more than tear gas even though the company's own manuals clearly said that MIC was a fatal poison. Till date UCC has refused to identify the reaction products released and related toxicological information of the products that leaked. This has prevented doctors from developing an appropriate treatment protocol for victims.

Later UCC also claimed that the leak was an act of sabotage caused by a disgruntled employee, whom it has since refused to name. After UCC was taken over by Dow Chemicals, both companies used the new ownership structure in an attempt to avoid any responsibility for the Bhopal disaster.

Urging that the case be thrown out of the USA, UCC argued before the US District Court that, “Indeed, the practical impossibility for American courts and juries, imbued with US cultural values, living standards and expectations, to determine living standards for people living in the slums or 'hutments' surrounding the UCIL, Bhopal, India, by itself confirms that the Indian forum is overwhelmingly the most appropriate. Such abject poverty and the vastly different values, standards and expectations which accompany it are commonplace in India and the third world. They are incomprehensible to Americans living in the United States.”

UCC appealed against the orders of the Bhopal and Madhya Pradesh High Court to pay interim relief to the gas affected victims of Bhopal.

### **The Settlement**

In 1988 the Madhya Pradesh High Court upheld with some modifications a Bhopal District Court ruling and ordered UCC to pay 250 crore rupees (approximately US\$ 157 million at the prevailing rate) as interim compensation to the victims. On 14th February 1989, even as UCC's appeal against this decision was being heard in the Supreme Court, the apex Court pronounced an order that endorsed a settlement that involved UCC paying 750 crore rupees (approximately US\$ 470 million at the prevailing rate) not as fines, penalties or punitive damages but “for the benefit of all victims” of the gas leak. In return all civil and criminal liabilities and

charges against UCC and UCIL were dropped. Following widespread protests and an appeal the Supreme Court however reinstated criminal proceedings in 1991.

None of the victims or their representatives were consulted by the Supreme Court or the Indian Government before accepting this full and final settlement. At the time of settlement the number of victims and the full nature and extent of the damages suffered was not even known. The settlement was based on an estimate of 105,000 victims (3000 dead, 30,000 permanent or total disabilities, 20,000 temporary or partial disabilities, 2,000 serious injuries, and 50,000 minor injuries). This figure was arbitrary; at the time of the settlement, even though victims had filed over 600,000 claims only 29,000 of them had been categorized.

Over the years this has resulted in grave injustice to victims since the money meant for 105,000 victims has been distributed amongst more than more than five times the numbers of dead, injured and disabled used by the Supreme Court to calculate the settlement. The 2003 annual report of the Madhya Pradesh Gas Relief and Rehabilitation Department reveals that by October 2003, compensation had been awarded in 15,248 cases of death and at least 554,895 cases of injury or disability.

### **Role of the Governments of India and Madhya Pradesh**

The government of India and the state government of Madhya Pradesh were aware that the Bhopal plant used hazardous substances and processes, There were also public warnings by the media and by workers' unions in the plant about dangerous conditions at the plant, as well as several accidents, some fatal. Just months before the accident, the state government granted legal titles to thousands of people who had built homes around the plant site. However, Amnesty International has been unable to find evidence that the central or state government took adequate steps to assess the risk to these local communities, most of whom would be the first victims of the gas leak, or the surrounding environment. Nor did the government impose strict safety standards or press Union Carbide to review safety mechanisms.

In 1985 the government of India enacted the Bhopal Claims Act and took away from victims the right to represent themselves and vested itself with the

exclusive right to represent victims.

In 1989 the government agreed to a settlement with UCC. In return for a modest and arbitrarily determined financial payment to victims, the settlement bestowed sweeping civil and criminal immunity on UCC, trading off its legal liability. The government negotiated settlement entirely excluded the victims of the disaster from shaping the end of the case.

The payment of compensation to victims did not, however, begin until 1992 and involved numerous problems including payment of inadequate sums, delayed payments, arbitrary rejection or downgrading of claims. Excessive bureaucracy in the claims process led to the entry of middlemen and rampant corruption, further reducing the amount of compensation money that victims were able to finally get.

In 1994, the Indian Council for Medical Research (ICMR) stopped all further research on the medical effects of the Bhopal disaster without explanation. The full results of the research carried out and the data with the ICMR have yet to be published.

The state Government efforts to provide rehabilitation have proven largely ineffective. The poor quality of the health care system has meant that most survivors have had to spend most of their compensation money on private medical treatment. The hospitals set for the treatment of gas victims provide only symptomatic treatment.

The social and economic rehabilitation measures have been poorly implemented and have failed to lessen the impoverishment of already economically vulnerable survivors. Those orphaned and widowed by the gas leak are in a particularly precarious condition.

Despite a Supreme Court order in May 2004 to provide clean drinking water to communities affected by the contaminated water the government of Madhya Pradesh has not yet implemented the order in full.

### **Conclusion**

It is clear that both UCC/Dow and the Indian/Madhya Pradesh government failed to comply with their respective obligations and responsibilities to (a) prevent the gas leak and address its consequences, and (b) prevent and stop the continuing pollution

of the environment and water through the dispersal of toxic and hazardous substances. The Bhopal case also illustrates how companies evade their human rights responsibilities and underlines the need to establish a universal human rights framework that can be applied to companies directly.

Governments have the primary responsibility for protecting the human rights of communities endangered by the activities of corporations, such as those employing hazardous technology.

However, as the influence and reach of companies have grown, there has been a developing consensus that they must be brought within the framework of international human rights standards. There is already a clear trend to extend international obligations beyond states, including to individuals (for international crimes), armed groups, international organizations and private enterprises. Amnesty International supports this trend and believes that companies have an inalienable responsibility for the human rights impact of their operations.

These human rights are explicitly guaranteed in international treaties which are legally binding on the Indian state. Such obligations can be enforced by Indian courts if they are incorporated into Indian law. The Indian Constitution guarantees the right to life, and the Indian Supreme Court has held that this includes the right to health and to protection from environmental pollution. The Court has also determined that companies are responsible for environmental damage and for compensating anyone harmed by their activities.

The UN Norms on the responsibilities of transnational corporations and other business enterprises with regard to human rights (UN Norms)—adopted by the UN Sub-Commission in 2003—is a significant step towards generating universally recognized, normative framework to identify the responsibilities of companies for the human rights impact of their actions.

Amnesty International also maintains that there is no substitute for taking steps to regulate the activities of corporations in both host and home countries. Laws in host countries must be developed and enforced to allow national governments and local communities to control the activities of companies operating in their territory. Transnational corporations should avoid double standards in safety

and adopt the best practices in all aspects of safety in all their operations.

The Bhopal disaster and its aftermath demonstrate clearly the need for an international human rights framework that can be applied to companies directly, that could also act as a catalyst for national legal reform, and serve as a benchmark for national law and regulations. Ensuring public participation and transparency in decisions relating to the location, operational safety and waste disposal of industries using hazardous materials and technology is an essential step to heighten risk awareness and responsible behaviour as well as to ensure better preparedness to prevent and deal with disasters like Bhopal.

The concerned Governments and the international community must ensure that victims of human rights violations have effective access to justice and effective redress for the harm suffered, without discrimination, and regardless of whether those responsible for the violations are governments or corporations.

### **Recommendations**

Having noted the steps taken by governments in India to assist the victims of the Bhopal tragedy:

#### **Amnesty International calls on the governments of India and Madhya Pradesh to:**

- ensure the effective and prompt decontamination and clean up of the Bhopal site by Union Carbide Corporation (UCC)/Dow Chemical Company, or to undertake the job if UCC/Dow is either unwilling or unable to do so;
- conduct a detailed assessment of the nature and extent of damage to health and environment from improper waste disposal and contaminants from the abandoned factory site and make public the findings;
- ensure Dow/UCC provide full reparations, restitution, compensation and rehabilitation for the continuing damage done to health and the environment by the ongoing contamination of the site;
- ensure regular supply of adequate safe water for the domestic use of the affected communities in line with the order issued by the Supreme Court
- ensure adequate and accessible healthcare for all survivors, in particular by making sure the offer of free health care is extended without discrimination

to all those affected by the disaster, including to children born of parents affected by the gas leak;

- work with survivors' organizations to establish a mechanism for the distribution of all outstanding compensation in a way that guarantees the victims access to justice and due process, ensures transparency and guards against corruption;

- reassess the compensation received by victims, following the 1989 settlement, and make up any shortfall in line with the Supreme Court's 1991 order;

- ensure that UCC makes available all information about the reaction products released on the day of the leak and full information regarding their toxicity and impact on people and the environment, and make sure that such information is passed on to the survivors in languages they can understand;

- ensure that all studies carried out by the Indian Council of Medical Research and any other relevant research on the health impact of the gas leak are made public;

- conduct a thorough and transparent review of the rehabilitation programs in consultation with survivors' groups;

- address the particular needs of women who face social stigma and those who were orphaned as a result of the disaster.

**Amnesty International further calls on the Indian Government to:**

- invite relevant Special Procedures of the UN Commission on Human Rights to visit India and examine the effect of UCIL/UCC activities and the Bhopal disaster on contamination of the ground water and the environment, and consequently on the human rights of affected communities. Key procedures [mechanism] would include the Special Rapporteur on adverse effects on the illicit movement and dumping of toxic and dangerous products and wastes on the enjoyment of human rights, the Special Rapporteur on the right of everyone to the enjoyment of the highest attainable standard of physical and mental health; the Special Rapporteur on adequate housing as a component of the right of adequate standard of living; and the special rapporteur on the Right to Food.

**Amnesty International calls on the US government to:**

- do everything within its legal authority to ensure that Bhopal survivors are able to obtain redress;

- cooperate with the government of India to ensure that UCC and/or Dow Chemical appear before Chief Magistrate's Court in Bhopal to face trial on the criminal charges.

**Amnesty International calls on Dow Chemical Company to ensure that UCC:**

- effectively and promptly decontaminates the Bhopal factory site, cleans up the groundwater and removes the stockpiles of toxic and hazardous substances left by the company when they abandoned the site;

- cooperates fully with those who are assessing the long-term health consequences of the gas leak and of the hazardous and toxic substances left on site since 1984;

- promptly makes public all information it has on all reaction products released on the day of the gas leak and full information regarding their toxicity and impact on people and the environment;

- appears before the Chief Magistrate's Court in Bhopal in the criminal case.

**Amnesty International calls on Dow Chemical Company to:**

- provide promptly full reparations, restitution, compensation and rehabilitation for the continuing damage done to people's health and the environment by the ongoing contamination of the site.

**Amnesty International calls on the UN Commission on Human Rights to:**

- work towards the adoption of an international, universally recognized normative framework for business, including minimum human rights standards for corporations to be incorporated into domestic law.

**Amnesty International calls on the UN High Commissioner for Human Rights to:**

- take a leading role in multilateral efforts to clarify the human rights responsibilities of transnational corporations and other business enterprises;

- offer the technical assistance of her office to ensure that mechanisms of reparation for survivors of the Bhopal tragedy accord with international human rights standards.

A complete version of the Amnesty International report on Bhopal "*Clouds of Injustice: Bhopal Disaster- 20 years on*", ASA 20/015/2004, is available in Hindi, English and Arabic at <<http://web.amnesty.org/pages/ec-bhopal-eng>>.

## **There are no parties with a difference**

*Similar advice given to Union Carbide by two leading lights of Congress and BJP. We reproduce below page 1 and last 2 pages of their advice procured through an RTI by some friends. Also printed in full is Dow's letter to Government of India. The full 'advice' of these luminaries will be uploaded at the mfc website. -Editor, mfc bulletin*

**Arun Jaitley**  
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### **OPINION –EX PARTE**

**Querist : The Dow Chemicals Company (TDCC)**

**Through: Dua Associates**

The Querist is one of the largest chemical companies in the world incorporated in the United States of America and has annual sales turnover of about US\$ 46 billion and about 42,000 employees in 175 countries.

The Union Carbide Corporation ("UCC"), a company also incorporated in the United States of America had established a company in India known as Union Carbide India Ltd. ("UCIL") to manufacture pesticides in India. UCC held 50.99% shares in UCIL. UCIL had a plant in Bhopal on the land leased to UCIL by the State of Madhya Pradesh. The plant was using Methyl Isocyanate (MIC) for manufacturing pesticides and due to leakage of MIC from the said plant in December, 1984 about 4000 people died in Bhopal and about 1,86,000 people suffered injuries in

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of Appeals for the Second Circuit held that the dismissal of Bi's claim for property damage was proper

Therefore it can be inferred that the Querist in any event cannot be held liable in any manner for the plant site remediation. The issue of UCC's liability in this respect is not conclusive by the US Courts.

In 1995 W.P.No.657/1995 was filed under Article 32 of the Indian Constitution in the Apex court against the import of toxic waste and or the existence of toxic sites in India allegedly constituting hazard to life and environment. In these PILs the Apex Court constituted a high-powered committee to examine all the matters relating to hazardous waste all around India. Subsequently the Supreme Court Monitoring Committee (SCMC) has given a large number of directions that they have fully seized of the matter. The Bhopal sites have also been covered under the ambit of these matters. Various periodic reports have been given to this effect, particularly the third quarterly report of the SCMC shows that the SCMC and hence Apex court are fully seized of the matter of the plant site remediation in respect to Bhopal.

**Arun Jaitley**  
Senior Advocate

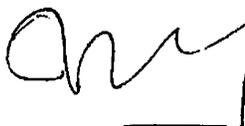
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Hence the Querist is entitled to content that unless the Supreme Court gives a categorical direction on the plant site remediation at Bhopal in respect to the Querist, the Querist cannot be made liable in any manner.

However it can be concluded in the light of the above factual matrix, the Querist cannot be treated as responsible or liable directly or indirectly or under civil or criminal proceedings for the Bhopal Gas Tragedy 1984.

I have nothing further to add.

New Delhi  
December 13<sup>th</sup> 2006



(ARUN JAITLEY)  
Senior Advocate

### DR. ABHISHEK MANU SINGHVI

National Spokesperson, Indian National Congress  
BA (Hons), M.A. (CANTAB), Ph.D. (CANTAB), PIL (HARVARD)  
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Supreme Court, Bhagwandas Ro  
New Delhi - 110 001

Delhi High Court :  
14, Lawyers' Chambers  
Delhi High Court, New Delhi - 110  
.... Querist

Ex-parte: Dow Chemical Company

#### OPINION

A Company incorporated in the United States called the Union Carbide Corporation ("UCC") established a Company in India known as Union Carbide India Limited ("UCIL") to manufacture pesticides. UCC held over 50% of the shares in UCIL and the factory was established on land leased to UCIL by the State of Madhya Pradesh.

In December 1984, there was a disastrous leak of poisonous gas from the UCIL plant causing an enormous loss of life and public outcry.

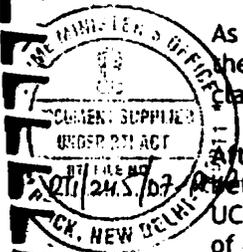
A litigation was commenced on behalf of the victims in the Courts in the United States which, after hearing the parties, held that the matter should be proceeded with in India.

The Government of India enacted a special law called the Bhopal Gas Leak Disaster (Processing Claims) Act, 1985, the broad effect of which was to enable the Government of India as *parens patriae* to conduct litigation on behalf of the victims.

As a consequence of the law, the Government of India filed a Suit in the appropriate Civil Court in Bhopal against both UCC and UCIL claiming 3.3 billions U.S. Dollars as compensation.

After negotiations between the parties, a settlement was arrived at between them as a result of which it was agreed that UCC and/or UCIL would pay in full and final settlement of the said claim a sum of 470 million US Dollars.

*[Handwritten notes and signatures on the left margin]*  
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Prl. Secy to PM  
Dy. No. 610/2106  
Date..... 2/6

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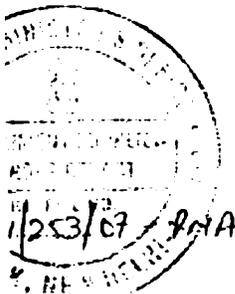
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environment. In these public interest proceedings, the Apex Court, as far back in October 1997, constituted a High Powered Committee ("HPC") to examine all matters relating to hazardous waste on an all India basis. Subsequently, the Supreme Court Monitoring Committee ("SCMC") has given a large number of directions showing that they are fully seized of this matter. What is significant to note is that the Bhopal Site is also listed in these Apex Court proceedings and as late as in March 2004, Dr. Claude Alvares, member of the SCMC, visited the Bhopal plant site and made various recommendations in respect of Plant Site Remediation. Secondly, several monthly and quarterly reports were made by the SCMC on this issue. In particular, the third quarterly report of the SCMC of July 2004 shows that SCMC and hence the Apex Court are fully seized of the matter of Plant Site Remediation in respect of Bhopal also.

In light of the foregoing facts and circumstances, it would be impermissible, as an interim or adhoc measure, either to impose responsibility or liability upon the Querist as regards Plant Site Remediation and/or consequently deposit all monies for that purpose. Without adjudication of its liability or finding any connection of the Querist with the Bhopal disaster and in view of the above mentioned pending proceedings, the fastening of such liability upon the Querist, would be completely arbitrary, adhoc, casual and cavalier. For the same reason, the Querist cannot be treated as responsible or liable, directly or indirectly, civilly or criminally, for the Bhopal disaster. Consequently, to treat the Querist either as a commercial pariah and/or de-facto blacklisting it for other commercial activities in India would be equally untenable or unsustainable, since the Querist has admittedly not violated any Indian law or regulation.

Accordingly, in light of the foregoing discussion, I would answer the second query put to me also in the negative.



## **DR. ABHISHEK MANU SINGH'**

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**Addl. Chambers :**

**Supreme Court :**

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Supreme Court, Bhagwandas Road  
New Delhi - 110 001

**Delhi High Court :**

14, Lawyers' Chambers  
Delhi High Court, New Delhi - 110 004

### VI

In the light of the foregoing discussion, I would answer the two queries put to me as follows:-

- (i) Query No. 1 : "NO"  
(ii) Query No. 2 : "NO"

I have nothing further to add at this stage.

Dated: June 22, 2006

(Dr. Abhishek Manu Singhvi)  
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Ph.D. (CANTAB), PIL (HARVARD)  
Former Additional Solicitor General of India,  
Senior Advocate, Supreme Court of India





Andrew N. Liveris  
Chairman and Chief Executive Officer

The Dow Chemical Company  
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989 • 636-4147  
FAX 989 • 638-9468

October 1, 2008

Mr. Chidambaram  
Finance Minister  
Government of India  
R.No.134, North block  
Fax - 011 23093289  
Email - fm@finance.nic.in

Dear Honorable Minister:

Subject: Dow's growth initiatives and challenges in India

As a follow-up to discussions with the Prime Minister in New York, I am writing to you to seek your urgent action in support of a positive investment climate for Dow India's stated projects as well as to highlight to you my company's commitment to growth as a local investor in India.

As you know, Dow Chemical International Pvt. Ltd. (DCIPL / Dow India) has recently announced initiatives to double its investment in India to approximately Rs. 1000 crores (\$250 million) within the next year. These investments are primarily focused on bringing new and innovative technologies to market in India, which will in-turn grow downstream industries and jobs to further diversify the Indian economy. Dow India already has nearly 1000 high-skilled employees and operations in seven locations across the country.

Dow India has also substantially increased our presence in Indian society through multiple Corporate Social Responsibility (CSR) activities, including funding the Jaipur foot initiative, providing water systems in Gujarat, and contributing to the Bihar relief effort and infrastructure development (schools, etc.) in Pune. We will continue to partner with communities to further enhance the quality of life around Dow India's areas of operations. Unfortunately, even with such success, we are facing barriers for our two largest investments to date: the Dow India research center in Pune and Dow Europe's joint venture with GACL in Dahej.

These are two investments that the government publicly endorsed, but that now face barriers due to lack of consistent application of government support:

**The Research and Development Centre in Pune** was formally announced by the Honorable Chief Minister, Shri Vilasrao Deshmukh in October 2007, and has been under construction on 100 acres of industrial land allotted by the MIDC in Pune. This global research and innovation center will conduct fundamental, high-skilled research as well as application development in renewable and conservation of energy, water and allied areas. We have already hired over 180 scientists, and anticipate 400 additional hires once construction is completed. This project has faced many delays over the past six months and has been vandalized on multiple occasions. This week the state Government again stopped the construction, announcing a second committee to evaluate the project. We are cooperating with the Government of Maharashtra, but urge that this review be completed within the 30-day timeline, and that construction be allowed to continue at the site simultaneously. The potential implications of continued costly disruptions and government bureaucratic barriers – when companies have complied with local laws and regulations and committed to be an active community contributor – are potentially devastating examples of lack of support for foreign investors.

Attested

25/10

SECRETARY  
GOVERNMENT OF MAHARASHTRA  
PUNE

Page Two  
October 1, 2008

**GACL/Dow Europe joint venture in Dahej.** In April 2008, an MOU was signed between the two parties to set up Chloromethane production facility in Gujarat. The proposed investment was announced by Honorable Chief Minister of Gujarat, Shri Narendra Modi, and would rely on the use of Dow's advanced chloromethane manufacturing technology. The innovative technologies from Dow Europe that will be used in this project will enable improved industrial competitiveness and compliance with the Montreal Protocol for environmental emissions. The downstream markets that will benefit from these technologies are the rapidly growing pharmaceutical intermediates and the electronics segments. However, the Chemical Ministry has reportedly sent a communication to the FIPB confirming the value of the technology, but recommending a delay in the project. That message contradicts earlier discussions, before signing the MOU, when Dow India had met with the Ministry of Chemicals and Fertilizers, and was advised that the Government would welcome this investment. The business has chosen to pull its application and will work with GAGL and then approach the FIPB with a revised proposal. Again, clarity from the government, and specifically the Ministry of Chemicals and Fertilizers, is needed in support of Dow India's investment plans. Specifically, we also need confidence that this application will be approved based on the merits of the application.

Ultimately, it is critical that the Government of India speaks with one voice on issues of foreign direct investment and sustained domestic economic growth. We value your direct assistance in ensuring that all Ministries operate on the basis of the messages we have received from the Prime Minister himself that welcome the opportunities for cooperation, partnership and contribution to India's domestic economy with high-skilled job creation as well as commitment of problem-solving technologies and funding for social needs of local communities.

As said at the beginning of my letter – we remain committed to exploring further investment in India but need your support and actions to resolve these issues. We look for tangible evidence of government action in the next 30 days. I look forward to meeting you at the upcoming CEO Forum in New York, NY, to discuss next steps in support of an open, transparent and welcoming investment climate in India.

Sincerely yours,



Andrew Liveris  
Chairman and Chief Executive Officer  
The Dow Chemical Company

CC: Dr. Montek Singh Ahluwalia, Vice Chairman, Planning Commission  
Dr. Ramesh Ramachandran, President, Dow India

*Attended*  
*Dr*  
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## Addictive Policies of the Maharashtra Government

### *Alcohol at the Expense of Food Grain Availability*

- Sagar Atre<sup>1</sup>

After a disastrous term rife with farmers' suicides and inflation when the farmers of Maharashtra suffered the worst, the Maharashtra Government has come up with another policy to accelerate the farmers' and the state's journey to ruin. The Vilasrao Deshmukh Government in its regime had decided to give licenses to 36 new factories which would produce alcohol from food grains like bajra and jowar and other food grains being produced in the state. In all 36 new factories with a total annual capacity of 110 crore liters of alcohol would be given out to applicants to run, to produce consumable alcohol from these food grains. The vision statement of the gazette stated that the alcohol was being manufactured for 'meeting the increasing demands of grain based liquor of superior quality' from European countries, however, the Government of Maharashtra has ironically stated that the alcohol being produced from these factories would have to be consumed in the state of Maharashtra itself.

#### **Salient Features of the Scheme**

- 1) 36 new factories to be set up all over Maharashtra, which have the capacity to produce 100 crore litres of *potable and marketable alcohol* per annum.
- 2) The Government states that the alcohol is to be produced from spoilt food grains, however, the Government food supply departments do not have a record of the amount of spoilt food grains in the state.
- 3) The Government and other allied organisations have stated that the food grains used will be only the slightly blackened grains which are not consumed by the people
- 4) All of the alcohol produced will be consumable. More than 95% of the alcohol produced would be of drinking quality and not industrial alcohol, as is done from sugarcane molasses.
- 5) The plants will receive a subsidy of Rs 10 for each liter of potable quality alcohol produced from food grains, provided the alcohol is sold in the state, for alcohol not sold in the state,

no subsidies will be given.

- 6) License holders under this scheme include Amit Deshmukh, elder son of former CM Vilasrao Deshmukh (the first issued license, which has also already received a subsidy), Past health minister Vimal Mundada, Dhaval Pratapsinh Mohite-Patil, Shweta Palwe (daughter of BJP Leader Gopinath Munde), and many other political leaders and their affiliates from the state.
- 7) The normal price of the bajra grains is Rs 10 per kilogram. The amount of food grains required for producing one liter of alcohol is 2.8 kgs of grains. After dilution into its retail forms, the price of this alcohol exceeds Rs 1000, hence the 'fair' price 'ensured' for the farmers will mean almost a 40 times profit for the producers of alcohol.

#### **Some Food Facts Regarding this Problem**

- 1) The total availability of grains (includes wheat, rice, maize, jowar and bajra) in Maharashtra for year 2006-07 is 101 lakh tonnes.
- 2) Total food grain quantity required for one year for all the distilleries when run at their full capacity is 14 lakh tonnes.
- 3) Clearly 14% total food grains will be diverted for Alcohol production creating scarcity of food grains in the rural markets.
- 4) Jowar bajra and maize constitute around 58 lakh tonnes of the total food grain produced and are traditionally part of rural diet. In that case 24 % of these grains will be diverted creating a food crunch in these areas.
- 5) Clearly farmers can't produce this much of black jowar every year. Hence the issue is not just about the bad or uneatable food grains.
- 6) These projects are going to need our share of food. Now the question is, do we have enough food to eat and to produce alcohol?
- 7) Per head food grain availability in Maharashtra: 98 kg (total cereal prod average for 95-05, population of 2001 )
- 8) Per head food grain availability in India: 154 kg (10 year average 1996-2006)

<sup>1</sup>Email: <sratre@gmail.com>. NIRMAN fellow, SEARCH, Gadchiroli, Maharashtra.

- 9) Thus we do not produce enough food grains for our need and the difference is not small. We actually take 33% of our food grains from other states.

#### Some facts about Maharashtra's PDS

##### Total Amount of Grains in Maharashtra (PDS)

(000' tonnes)	05-06	06-07	07-08	08-09
Wheat	1563	1381	1274	1518
Rice	947	1124	425	439

- 1) The above table shows the figures for the last three years for Maharashtra of wheat and rice. We buy these grains from other states.
- 2) Considering that these two are not the traditional food items in many parts of India, the Central Government allows states to procure local coarse grains for distribution and compensates the difference to the state.
- 3) Maharashtra Government does not distribute jowar and bajra under PDS, whereas 18 other states are using their local coarse grains along with wheat and rice.
- 4) Even if Government reduces the imports of wheat only by 50% PDS can take more than 7.5 lakh tonnes of jowar and bajra. Even India is not self reliant in terms of food grains.

#### Unsound Arguments, Unsound Policy

Since April 2006 India is importing wheat: 55 lakh tonnes in 2006-07 and 17.69 lakh tonnes in 2007-08. While the social sector and intelligentsia of the state has immediately raised severe objections over this issue, little has been done to respond, let alone revoke this policy. Since all parties and their leaders have a stake in this issue, no party has been actively or vociferously criticizing the decision of the government. The Chief Minister of Maharashtra Ashok Chavan has stated, "We agree that this decision is maybe not completely a sound policy. Hence, the Government will not provide any licenses hence forward to any applicant. However, for the licenses already given, our hands are unfortunately tied. We cannot risk the economic loss of so many license holders who have already gone through the process of getting the license and setting up these factories. After analyzing the scenario, we have found out that the economic losses which would be incurred by all of them would be too big, and hence, this decision

will have to stand because of this scenario." While Chavan has said that he is not entirely in support of the decision, he has stated that the situation is what is binding him to the verdict given by him.

The capacity of all these factories is touted to be around 110 crore liters of alcohol per annum, which amounts to 10 liters of alcohol per person in the state, taking into account the 10 crore population of the state.

The decision has drawn even more flak mainly due to its disastrous facets of the subsidy and the clause which states that the liquor will have to be sold in Maharashtra, a state whose rural areas are already grappling with the problem of alcohol related problems. In an extremely daring statement, the Government and the supporters of the scheme have stated, "This scheme will increase the sale of food grains like bajra, which are not being consumed by the people of the state due to better alternatives. Our try is to give these farmers some respite through this policy." The BJP and its leaders, who are usually at loggerheads with the Congress, have supported this policy, with its leader Gopinath Munde stating in Aurangabad, "This policy is aimed at promoting the cultivation and sale of bajra and other local food grains, which are fast being replaced by the other grains like wheat. We wish to ensure a clientele for these food grains."

The social sector, in the meanwhile is puzzled with the fact why the Government has chosen a way like alcohol to solve this problem. Social leaders like Anna Hazare, retired judge Chandrashekhar Dharmadhikari, doctor couples Dr Abhay and Rani Bang and Dr Prakash and Manda Amte have stated that replacing wheat with bajra from the PDS is in itself a good solution. These social crusaders, in a statement have said, "Why do we perform the foolish act of getting wheat from Punjab when the people of Maharashtra are happy to eat bajra and other local grains? We are wasting resources on wheat, depriving income to our own farmers by bringing in wheat, and now selling them alcohol made out of their own food grains, which will be the final blow to an already impoverished and miserable farming class. The best option will be to include the food grains into the staple diet of the people through PDS, and not through alcohol."

### Breach of Constitution

Apart from these moral arguments, this policy is also an outright breach of the constitutional principles set out in its directives. The directive principle in Article 47 of the Constitution of India states, "The state shall regard the raising the level of nutrition and the standard of living of its people and the improvement of its public health as among the primary duties and in particular, the state shall bring about prohibition of the consumption except for medicinal purposes of intoxicating drinks and of drugs which are injurious to health." This policy hence is a direct breach of this principle of the constitution.

The PIL filed against the Government has been rejected since the case was not presented in a manner good enough to stand against the arguments of the government. There is however, another problem which makes this issue more complicated. Most agricultural organisations are in support of this policy, who are so driven to desperation that they are ready to accept this policy with the hope that their food grains will be wanted in the market, since they are not part of the people's diet today due to the bright PDS policy of the government. Most agricultural organisations and their leaders argue that jowar, bajra and such food grains will be finally consumed through this policy, giving farmers a fair price. This however, is quite a foolish argument, since it is a business principle that once the marketing and buying prowess of these industries increases, these industries, being run by the powerful politicians are sure to resort to arm-twisting tactics with the farmers, bringing them back to the same place where they are today; in a market with unfair prices where their voices of protest are drowned out by the market and the middlemen who run the commercial aspect of farming. The only 'solace' is that there will be ample alcohol to drown their sorrows and fears, and more intoxication to take that final step of suicide.

### Some Core Messages

The saddest part of this is that most of the middle

class in Maharashtra views this as a problem which is not related to them. What they do not realize is that this alcohol will ultimately make it to their doorstep bringing with it hundreds of its social consequences in tow. From the existing international scientific evidence, a number of core messages can be pondered, some of them are as follows:

The social costs of alcohol consumption amount to between 1% and 3% of gross domestic product.

About 20% of the total costs are direct costs, representing the amount actually spent on medical, social and judicial services.

About 10% of the total costs are spent on material damage.

About 70% of the total costs represent lost earnings of individuals who die prematurely or are unable to perform their productive tasks in the way they would have if they had not been consuming alcohol.

This data comes from a research paper by the WHO in 2001, which studied the consequences of alcohol in many countries across the world. However, in places like India, where accurate data is so tough to obtain, the socio-economic damage alcohol is doing might be much greater.

The threat looms large upon the state of Maharashtra, and this time, it is not only the farmers who will suffer. This time, it is going to be the entire state of Maharashtra, who is unawares or is feigning to be unaware of this policy which threatens to destroy their future in a slow yet sure way. This time, it will not be farmers' suicides which will make the headlines, but the urban populations who will face the full brunt of this poison, which the Government wants to inject in their veins, and that too, by throwing in a subsidy for those who are going to do it.

*Data collection done by the Nirman team, led by Sachin Tiwale, Nirman Fellow, Maharashtra and Knowledge Corporation Limited, Pune. For more facts about the policy, the protests and the political facets of this issue, log on to <[www.foodtoalcohol.wordpress.com](http://www.foodtoalcohol.wordpress.com)>.*

## Plight of the ASHA in NRHM

Shri T K A Nair, Principal Secretary,  
Prime Minister's Office  
Raisina Hill, South Block, New Delhi 110011

November 16, 2009

Respected Sir,

I am writing this letter to you about NRHM in general, but ASHA in particular. NRHM has enrolled the help of 7.3 lakh ASHAs in the country and they are the face of the NRHM in the country. NRHM is a valiant GOI effort to revamp the health system of our county, yet I have strong reservations about NRHM which I have written about in EPW<sup>1</sup>. In the early days of NRHM I have helped develop some of the learning material for ASHA and am also member of GOI's the ASHA mentoring group (AMG) and also for Maharashtra. As such I have visited and met ASHAs in UP, Assam, J&K and Maharashtra. I am also member of CRM 2 & 3. I feel that the ASHA programme is developing huge gaps in intentions and realities. Many ASHAs have requested me to communicate their feelings to someone higher in GOI. It is my duty to bring this to your kind notice lest something can be done even at this mid-course stage.

Good training, system support, supply- logistics, and respectable remuneration need to be the four pillars or wheels of any health worker programme. ASHAs are also answerable to local people. None of these four can be compromised. I see that all four pillars are weak. If the situation continues as it is, I am sure ASHA programme will lose its pivotal role in whatever little we have achieved in NRHM--mainly the JSY led rise in institutional births. More than that, I feel that we are exploiting these poor women of their labour. I am sure many have left the programme and there is no count.

In the recent J&K visit, I could get some statistics of work done by 89 ASHAs in CHC Ramgadh. Some facts to note: average monthly income Rs 327/- (min 150 max 643) over a period of 7 months from April 2009, of which Rs 150 comes as honorarium for mobilizing children for immunization. In fact they are doing just JSY and immunization and a bit of FP by way of Laparoscopy cases. When the nation is giving doctors salaries ranging from half to one lakh a month, 327/- is a pittance and often ASHAs slog at some personal cost, time and money. The village size and the potential cases for JSY will not permit any betterment in this situation. In Maharashtra I met ASHAs who tell similar stories and so also in UP and Assam. We need to do a rapid appraisal of ASHA earnings both at desk and on the ground.

Why cannot we improve training, logistics, medicine supply and income side? The health ministry has nobody to look after this important HR scheme and mentoring is 'outsourced' to NHSRC, which is also unable change the situation significantly.

As for income we need to try a mix of monthly honorarium from the VHSC/PHC and some incentives. I shall hasten to say that they need more support for more tasks and more utility for the village people. Even states can take this issue from their budgets. Unfortunately, the last A of ASHA (Activist) has become a euphemism for not paying her. I wish I could present the photos and stories of ASHAs to communicate the emotive

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<sup>1</sup> I feel that despite the great intentions and some achievements of NRHM, there are serious design problems in NRHM- a) ignoring state primacy in health planning and strategy making b) unhealthy and perhaps improper funding strategy through handpicked state society--bypassing assemblies and usual accountability measures c) pseudo-decentralization and bypassing even Zilla parishads d) emphasis on symptomatic interventions such as institutional births thru JSY rather than system reforms e) Ignoring the need to build village level systems in favor of facile institutionalization of services f) ignoring the rural private sector completely despite promise in NHP 2002 g) splitting the health system into two parts - directorate and the NRHM i) trivializing the concept of community health worker (ASHA?) into mere case-mobilisers i) Focusing on MDGs rather than comprehensive health services. In my opinion NRHM has created serious problems that the system will repent tomorrow.

side of this injustice and management gaps of the ASHA programme.

I feel that someone needs to attend to this issue, and hence this letter. Thanks.

Yours truly,  
Dr Shyam Ashtekar MD (P&SM)  
Director, School of Health Sciences,  
Yashwantrao Chavan Maharashtra Open  
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Ph 0253-2230718  
email: shyamashtekar@yahoo.com

## **Civil Society Groups in India and Across the World Protest against EU-India FTA**

New Delhi, India and Rio de Janeiro, Brazil, 20 April 2010.

Civil society and public health groups from India, Brazil and several other countries today vehemently objected to the proposed India-European Union Free Trade Agreement (FTA).

A petition created by the Working Group of Intellectual Property (GTPI) of the Brazilian Network for the Integration of People (REBRIP) entitled "Civil Society Against the EU-India Free Trade Agreement" was supported by 651 persons from several places of the world. This petition manifests concern about the negative consequences of the proposed India-EU FTA for the procurement of cheaper generic Indian medicines, which are important for the sustainability of policies for guaranteed access to medicines in Brazil and other Latin American countries. The petition is going to be sent to the European Commission, European Parliament and the Indian Embassy in Brazil.

In another move, Indian civil society and public health groups today submitted a joint letter signed by several organisations and individuals to the Government of India protesting against the FTA and demanding that it hold public consultations on FTAs it is negotiating, including the India-EU FTA.

India is currently negotiating several FTAs, most importantly with the EU, Japan, and the European Free Trade Association, that are likely to drastically reduce access to newer medicines for people living with HIV, cancer and other diseases, both in India and other developing countries.

Limited access to leaked draft documents make clear that India's trading partners in the North would like India to dramatically expand intellectual property protection, well beyond those required under India's current international obligations, including the Trade Related Aspects of Intellectual Property Rights (TRIPS) Agreement. For instance, the European Union is attempting to restrict use of TRIPS-flexibilities and pushing for TRIPS-plus provisions - such as patent term extensions, data exclusivity, patent linkages and additional border measures that may block the free transit of medicines - which will delay entry of generics medicines into the market. India's present patent law was crafted specifically to ensure both access to medicines and TRIPS-compliance. If India agrees to any of the demands of the developed countries, it will have an impact on access to medicines - not only for patients in India, but in developing countries as far

as Brazil. Indian generic pharmaceutical companies provide low-cost, high quality generic drugs to large parts of the developing world and numerous international drug dispensing programmes.

On 12 March 2010, after a protest outside the Ministry of Commerce, Indian civil society actors met with Indian government officials from the Ministry of Commerce who promised to hold a civil society consultation on all IP issues in FTA currently under negotiation.

Loon Gangte, Delhi Network of Positive People, said, "Governments should not enter into any agreements that will increase intellectual property standards, and decrease access to essential medicines. TRIPS already has a negative impact on access to medicines. FTAs will further erode accessibility and put these life-saving medicines beyond the grasp of millions, not only in India, but the entire developing world. Patients in other developing countries have already told me about the painful impact they are facing because of such FTAs."

According to Veriano Terto Jr., executive coordinator of the Brazilian GTPI, "Indian generic medicines are largely used by Brazilian AIDS patients. The continuous production and supply of these medicines without additional patent barriers in India are vital to the sustainability of the Brazilian access to medicines. We recognise that Indian generic versions play an important role in the price negotiations in the world. They are also key to promote price competition and broader access to treatment in the developing countries. The EU intellectual property policies through the FTA in negotiation with India represents additional obstacles for universal access to medicines in a global perspective. Furthermore, the Brazilian civil society is following with special interest the EU negotiations with India, because there FTA negotiations are also ongoing between EU and MERCOSUL, which could impose restrictions to the access to medicines in the region."

Pointing out that India's constitutional and international human rights obligations would be compromised by such agreements, Prathibha S, Lawyers Collective HIV/AIDS Unit, India, said, "These FTAs push TRIPS-plus provisions, such as data exclusivity, patent linkages, and patent-term extensions and also restrict TRIPS flexibilities. They infringe upon national sovereignty by effectively legislating India public health policy from abroad without taking into account India's obligations under

its Constitution and international human rights instruments."

The most troubling aspect of these negotiations is the complete lack of transparency on the part of both the Indian and partnering governments. Negotiators on both sides have consistently met in secret. While civil society and public health groups have not been invited to these meetings, industry groups have been allowed a seat at the table effectively making guaranteeing an outcome that will turn back a decade's worth of hard fought gains in access to medicines.

Mani Kandan, Programme Officer, Centre for Education and Communication and a member of Forum Against FTA, "No consultations with civil society, trade unions, farmers, and other stakeholders have been held. There has been great secrecy surrounding the FTA text. The right of millions of people to access low cost, high quality medicines is being bargained away without even the smallest amount of input from the most affected persons. Democratic accountability requires that these negotiations take place in the open, with draft documents available to the public, so that non-

industry groups may contribute to these laws which will greatly affect them."

Civil society and patient's groups from India, Brazil and across the world demand that the European Union and others to withdraw their expansionist intellectual property demands. It is their obligation under the Doha Declaration and international human rights law to refrain from promoting policies that will deny millions of suffering people access to medicines they require. At the same time, it is hoped that the Government of India which, in 2005, heeded calls from patients in developing countries and introduced historic public health safeguards in its patent law, will do so again and demonstrate its commitment to patients over profit. A first step towards this would be holding public consultations with civil society stakeholders and opening up the negotiations to public scrutiny.

For more information, contact

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## Valganciclovir Patent Rejected

The Madras office of the Patents Controller rejected, during May 2010, product patent it had previously granted to pharmaceutical company Roche for the drug valganciclovir. Valganciclovir is primarily used as treatment and prevention of an infection caused by cytomegalovirus (CMV) in organ transplant patients, a highly lucrative market which Roche has sought to defend by patenting the medicine. But CMV also affects people living with HIV, and if left untreated, can cause blindness and death.

If anything, this shows that Section 3(d) of India's Patents Act, which prevents companies from filing unjustified patents, is working. Equally importantly, the Patent Office also found separately that the patent claims were obvious and therefore not patentable. Through this decision, the Indian Patent Office has also confirmed the right of patients groups to oppose a patent after it has been granted, a matter on which Roche claimed there was ambiguity. This follows a similar recognition in 2002 in Thailand of patients as 'persons interested' in the outcome of a patent application.

The decision will provide much needed relief as it secures the way for generic competition, which is the most effective and sustainable way of bringing drug prices down. To date, the price of valganciclovir is prohibitively expensive - Roche markets the drugs for up to US\$8,500 for a four-month treatment course in high-income countries. In India, the Roche price for a standard protocol is approximately \$5,950. In December 2006, many NGOs approached Roche for a discount, but even the 'discounted' price was so high that some AIDS projects opted out of providing this treatment for CMV.

### Background to the Case

In June 2007, Roche was granted a patent for valganciclovir in India, but the Chennai Patent Office (one of four offices that make up the Indian Patent Office) took this decision without hearing the arguments of public interest groups, including the Indian Network for People Living with HIV/AIDS (INP+) and the Tamil Nadu Networking People with HIV/AIDS (TNNP+), that opposed the granting of the patent. In December 2008, the Madras High Court in Chennai therefore decided to set aside Roche's patent until these arguments could be heard. The Chennai Patent Office, during the course of this hearing, refused to hear all the arguments made by the oppositionists and rejected the pre-grant opposition, after which the public interest groups approached India's Supreme Court. The Supreme Court directed the groups to join the post-grant opposition proceedings that were already taking place through oppositions filed by generic companies and the Delhi Network of Positive People (DNP+). At this stage Roche challenged the legal standing of DNP+ to oppose the patent after it had been granted, claiming an ambiguity in India's patent law.

Having heard the arguments of all the public interest groups and the generic companies, the Indian Patent Office has now determined that Roche's claims for a product patent on valganciclovir were invalid and recognised only the validity of one of the process claims made by Roche. It has also held that patients groups can file post-grant oppositions.

The legal battle may continue however if Roche decides to approach IPAB (the Intellectual Property Appellate Board), the High court and, if need be, finally the Supreme Court.

## Adivasi Samrakshana Sangham & Plachimada Struggle Solidarity Committee

[Address: Velloor Swaminathan and Mariappan, Convenors, Adivasi Samrakshana Sangham Velloor House, Kannimari, Kannimari P.O, Palakkad District, Kerala 678 534 & R.Ajayan, Convenor, Plachimada Struggle Solidarity Committee, Neerajam, Kudappankunnu, Thiruvananthapuram - 43, Kerala]

01 July 2010

### PRESS RELEASE

We salute the eight year long struggle of the people of Plachimada and its supporters everywhere, particularly of Kerala, for ensuring that the Kerala Government takes a firm decision to constitute a Plachimada Claims Tribunal based on the recommendations of 22 March 2010 of its High Power Committee. Attempts of Coca Cola to delay, subvert and derail the decisions have clearly been defeated for the time being. The Government and the legislative assembly should now take the next bold step to constitute not only the Plachimada tribunal but also establish a strong legal and institutional mechanism to make sure that Plachimadas are not repeated elsewhere. Justice to Plachimada is awaited and the struggle for justice will continue.

The Plachimada Claims Tribunal to be constituted under Article 323 B of the Constitution of India by the Kerala Assembly is to adjudicate disputes relating to compensation due to water and air pollution, loss of agricultural crops, loss on income from animal husbandry, diseases affecting human beings in the surrounding area, loss of employment, the psychological impact, ecological and other damages due to the excess drawal and pollution of groundwater and surface water by the Company in the past, present and future.

The recent Bhopal case judgment opened up to reveal in great detail how the governments and the courts were shamefully compromised to ensure failure in providing justice to the Bhopalis while protecting the criminal Union Carbide in the world's worst industrial disaster.

The Kerala Government's integrity and decisiveness can be demonstrated only when it follows up on the other recommendations of the High Power Committee which unequivocally stated that: "The compensation is not to be viewed as a quid pro quo for not initiating criminal charges. Therefore, Government may proceed against HCBPL in accordance with various laws" as "the Company has violated a number of provisions

in the various laws is irrefutable. Some of the major Acts which have been violated by HCBPL are as below:

- (1) Water (Prevention and Control of Pollution) Act, 1974
- (2) The Environment (Protection) Act, 1986
- (3) The Factories Act, 1948
- (4) Hazardous Waste (Management and Handling) Rules, 1989
- (5) The SC-ST (Prevention of Atrocities) Act 1989
- (6) Indian Penal Code

- (7) Land Utilization Order, 1967
- (8) The Kerala Ground Water (Control & Regulation) Act, 2002
- (9) Indian Easement Act, 1882."

We demand immediate filing of cases by the Government on behalf of the people of Kerala against Coca Cola for its criminal liabilities[1] as this alone will ensure that Coca Cola is not let off the hook for its crimes and compensates for the loss, current, past and future.

Sincerely yours

**Velloor Swaminathan**  
Adivasi Samrakshana Sangham

**R.Ajayan**  
Plachimada Struggle Solidarity  
Committee

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[1] Extract from Report of the High Power Committee, Government of Kerala, 22 March 2010, p.83-4.

#### 7.4. CRIMINAL LIABILITIES

Apart from the liability to pay compensation as discussed above, the Coca Cola Company has violated other provisions of law for which the Company has to be made answerable. The compensation for damages suffered in tort as well as remediation does not in any way affect the criminal liability of the Company under various laws. The compensation is not to be viewed as a quid pro quo for not initiating criminal charges. Therefore, Government may proceed against HCBPL in accordance with various laws, some of which are discussed below.

The land in possession of the HCBPL was in possession of different cultivators from whom it was got registered for the Coca Cola Company. This transfer is a clear violation of the Kerala Land Utilization Order 1967. HCBPL had obtained a license from Perumatty Grama Panchayat for installing 2600 hp electric motor for running Coca Cola bottling plant for manufacturing, storing and sale of aerated water and cool drink. However, no licenses have been obtained from the Panchayat for installing motor for drawing water. The Company started extracting water from the bore well and the open wells by using electric pumps without any license obtained from the Panchayat. In such activities, the Company has violated the provisions of the Kerala Land Utilization Order 1967. In unlawfully depleting ground water and polluting the water resources, the Company has violated the provisions of the Water (Prevention and Control of Pollution) Act of 1972, The Environment (Protection) Act, 1986 and The Kerala Ground Water (Control & Regulation) Act, 2002. In having dumped hazardous sludge in an irresponsible fashion and in giving it away to farmers as beneficial manure the Company is liable under the Indian Penal code, The Factories Act, 1948 and Hazardous Waste (Management and Handling) Rules, 1989. These acts of the Company have affected the economic and social well being of SC and ST people and thus the Company is liable to be proceeded under the SC/ST (Prevention of Atrocities Act) 1989. Further the Company has been blatantly violating the order of Supreme Court dated 14/10/2003.

## Concerned Health Professionals for Biosafety in Food

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March 15, 2010

**Sub: Genetically Modified Seeds/Crops in India - discussions in the Parliamentary Standing Committee**

Dear Sir,

We would like to congratulate the Standing Committee and its respected members for taking up this issue which has been of deep concern to all of us as the decision regarding GM crop will have far reaching consequences to the health of our nation.

We would like to place our concerns against GMOs in our food in the light of the available scientific literature. The following are our deep concerns with regard to impact of GM food on our health.

### Introduction

Even though the phenomenon of GM technology is relatively new, considerable authentic scientific literature regarding bio-safety and health issues related to GMOs has now become available. The scientific reports suggest potential serious harm to human health with consumption of GMOs. What is even more scary and dangerous is what is 'yet unknown' and would reveal itself in foreseeable and distant future as some effects have been observed to manifest themselves after 3rd or 4th generation among experimental animals fed GM foods like GM corn/ soya etc.

It is a scientific fact that existing GM process is at best unpredictable. The resultant new species created CANNOT BE RECALLED, even if detected to be harmful subsequently, unlike some agrochemicals recalled (eg DDT, Endosulphan) when found toxic after release for use by farmers.

The American Academy of Environmental Medicine, an organization of professional doctors, has noted that GM foods have not been properly tested for human consumption, and because there is ample evidence of probable harm, it recommends the public to avoid GM foods when possible. It has also asked for a moratorium on GM food and implementation of immediate long term independent safety testing and labelling of GM foods, which is necessary for the health and safety of consumers.

Based on existing knowledge and clinical experience, the Adverse Health Effects of Bt Toxin &/or Genetic Engineering process can be grouped in the following categories:-

1. Damage to fertility and reproductive health. Serious reduction in size of litter, growth and age of offspring, inability to conceive by offspring, manifesting itself after 2-3

generations.

2. Causation/ initiation of Cancers.
3. Unpredictable Mutations/ distortion of Cellular structure.
4. Immune reactions and allergies. Dose-response relationship clearly demonstrable.
5. Horizontal Gene Transfer from ingested food to human gut bacteria and eventual detection of foreign DNA in blood, and soil, which portends grave implications. Evidence of trans-gene material found in foetuses of pregnant animals fed GM food.
6. Multi-organ damage, notably to Liver, Kidneys (organs related to detoxification of food/poisons).
7. Distortions in Lipid and Carbohydrate metabolism.
8. Accelerated ageing. Possible accumulation of reactive Oxygen species(ROS).
9. Detection of Antibiotic Resistant Marker genes (used in the Genetic Engineering process) in human/ animal gut bacteria, portending disastrous consequences e.g. Kanamycin resistant gene detected in gut bacteria in GM feeding trials can seriously jeopardize National Tuberculosis Control Programme due to grave pre-existing problem of Multi-Drug-Resistant(MDR) and Extreme-Drug-Resistant(XDR) Tuberculosis in India as well as other parts of the world.
10. Catastrophic consequences on Ayurveda (and Sidha)-the most precious heritage of India, e.g. Bt Brinjal (*Solanum melongena*) trans-gene material likely to escape in open field cultivation, can distort medicinal properties of medicinal plants of "Solanum" species/ even some varieties of Brinjal itself used in Ayurvedic medicines. Same applies to accidental/ unintended contamination of non-target species of plants having medicinal properties, thereby loss of genetic heritage of precious plants of India.
11. Large scale deaths of cattle/ goats/ sheep grazing on Bt Cotton fields in Andhra Pradesh. Post-mortem examinations revealed multi-organ damage.

A brief analysis of concerns in and about current

scientific literature regarding biosafety of genetically modified crops is attached here for your reference.

There have also been other serious concerns regarding bio-safety of Bt brinjal:

1. Several international experts have pointed out serious inadequacies with the methodology and study design in the toxicological study for BT Brinjal conducted by Mahyco. Experts have observed that "the interpretation of results sponsored by Mahyco is not scientifically acceptable" and hence consumption of BT Brinjal can not be considered safe.
2. How can one rely the about the safety of BT Brinjal based on the data supplied by the company making the product? This kind of practice in the pharmaceutical sector has been questioned for the last 10 years. There are examples of establishing the safety of the product based on malpractices by the companies including manipulation and hiding the data.
3. People have found conflict of interest at various level while clearing BT Brinjal for commercial cultivation by GEAC.

Based on the above facts and issues, we demand that:

1. Long-term, multi generational studies should be done to prove safety of any GM food/ product for human use especially reproductive effects

on mothers and teratogenic effects on children.

2. In view of the toxicological effects reported by certain studies, the protocols for bio safety of GM products need to be updated. The safety studies should include not only chemical analysis of macro/micronutrients and known toxins, but more sophisticated analytical methods like mRNA fingerprinting, proteomics, secondary metabolite profiling and other profiling techniques may be required. Detailed Allergic testing also needs to be done. A neutral scientific committee should be formed to frame the protocol.
3. Review of toxicological studies done by Mahyco by an independent expert panel.
4. Immediate moratorium on GM food till the new detailed bio-safety protocols is prepared and facilities are made accessible for all required analytical methods.
5. Ban on all GM crop trials till point no. 4 is achieved.
6. All the bio-safety data of studies done by any agency and regulatory procedures should be kept transparent and made accessible in public domain, even in future.

Sincerely yours, etc.

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## Brief Summary of Concerns in and about Current Scientific Literature Regarding Biosafety of Genetically Modified Crops

### A. Adverse Effects of Transgenic Bt foods

There have been a series of scientific reports indicating side effects of transgenic Bt corn or potatoes on the animals. To quote a few:

1. In July 2008, Austrian researchers found that feeding rats a diet containing the transgenic corn NK603 x MON810 affected the reproduction of mice that was detected in 3rd and 4th generation in the reproductive assessment by continuous breeding (RACB) study design. Some effects on the kidneys were also observed.<sup>1</sup>
2. In November, 2008, Italian researchers concluded that "the consumption of Bt MON810 maize ... induced alteration in intestinal and peripheral immune response of weaning and old mice."<sup>2</sup>
3. In December 2009, Joël Spiroux de Vendômois et al., studied the rats with feeds of three main commercialized genetically modified (GM) maize (NK 603, MON 810, MON 863), which are present in food and feed in the world. They

observed that it causes hepatorenal toxicity. Other effects were also noticed in the heart, adrenal glands, spleen and haematopoietic system.<sup>3</sup>

4. Mice fed potatoes engineered to produce the Bt toxin developed abnormal and damaged cells, as well as proliferative cell growth in the lower part of their small intestines (ileum).<sup>4</sup>

How can transgenic Bt food be considered "safe" when there are so many studies showing adverse effects of Bt foods? Some studies have shown adverse effects on 3rd generation at the earliest and that too by Reproductive Assessment by Continuous Breeding (RACB) study design. The toxicological studies done by Mahyco do not include studies beyond 90 days of exposure. How can we consider Bt brinjal "safe" without proper, multigeneration studies?

### B. Variety of Adverse Effects Due to GM Food in General

Certain studies have shown that the GM food can

change the cell structure itself! Two of them:

1. Researchers studied effect of feeding GM soybean on mice and found out that it caused significant modifications in the nuclei (irregularly shaped nuclei) in the hepatocytes of GM fed mice.<sup>5</sup>
2. Scientists studied pancreatic acinar cell nuclei on the mice fed on genetically Modified soybean. The modifications observed in pancreatic acinar cell nuclei of GM-fed mice could be related to the reduction in digestive enzyme synthesis and secretion and can influence the pancreatic metabolism in mouse.<sup>6</sup>

Several animal studies indicate serious health risks associated with GM food consumption including infertility, immune dysregulation, accelerated aging, dysregulation of genes associated with cholesterol synthesis, insulin regulation, cell signalling, and protein formation, and changes in the liver, kidney, spleen and gastrointestinal system. There is more than a casual association between GM foods and adverse health effects. Animal studies also show altered structure and function of the liver, including altered lipid and carbohydrate metabolism as well as cellular changes that could lead to accelerated aging and possibly lead to the accumulation of reactive oxygen species (ROS). One study, done by Kroghsbo et al., has shown that rats fed transgenic Bt rice trended to a dose related response for Bt specific IgA. Also, because of the mounting data, it is biologically plausible for Genetically Modified Foods to cause adverse health effects in humans.<sup>23</sup>

### C. Increase in Allergic reactions

Allergic reactions occur when the immune system interprets something as foreign, different, and offensive, and reacts accordingly. All GM foods, by definition, have something foreign and different. And several studies show that they provoke reactions. To quote a few:

1. Rats fed Monsanto's GM corn had a significant increase in blood cells related to the immune system.<sup>7</sup>
2. GM potatoes caused the immune system of rats to respond more slowly.<sup>8</sup>
3. GM peas provoked an inflammatory response in mice, suggesting that it might cause deadly allergic reactions in people.<sup>9</sup>
4. Scientists have demonstrated high immunogenicity of Cry1A proteins administered by intragastric route and cautioned the use of transgenic plants for human consumption.<sup>10</sup>

5. There have been reports of allergic reactions to Bt spray. The reaction was severe enough to cause hospitalisation in some of the cases.<sup>11,12,13</sup>
6. Bt toxin might also trigger reactions by skin contact. In 2005, a medical team reported that hundreds of agricultural workers in India are developing allergic symptoms when exposed to Bt cotton, but not when exposed to natural varieties.<sup>14</sup>

Although, there may be many causes, it might be difficult to identify whether GM foods were triggering allergic responses in the population. Since our country does not conduct regular studies or keep careful records, we need to do allergic studies in great detail before GM food is permitted for human consumption.

### D. GMOs are inherently unpredictable

It has been scientifically proved beyond doubt that genes are not carriers of a single trait. The effect of every gene is determined by the total situation in the cell. Therefore, the transfer of a single gene can not yield intended results and is inevitably unpredictable.

Insertion of transgene can lead to mutation, deletion and alterations of the genomic structure. All this can change RNA, protein, enzymes and other countless natural products in the organism. To cite an example,

The gene of soybean glycinin was transferred into potatoes with the aim to increase their protein content. However, the improvements in protein content or amino acid profile were minimal. In fact, the total protein content of the GM potatoes after the gene transfer became significantly less than that of the control line. Even more unfortunately, the contents of some vitamins were reduced while the amounts of both solanine and chaconine increased in the GM lines. In this light the claimed substantial equivalence of the GM and parent lines was not supported by the published results.<sup>15</sup>

As some of the changes are unpredictable and it is only possible to compare the known properties and constituents of GM and conventional plants. Unknown components are not looked for and in that case how can we analyse them?

Scientists have opined that just chemical analysis of macro/micronutrients and known toxins is at best inadequate and, at worst, dangerous. More sophisticated analytical methods need to be devised, such as mRNA fingerprinting, proteomics, secondary metabolite profiling and other profiling techniques.

Do we have facilities for this kind of studies? Are they mandatory at present? How are we going to label it

safe without detailed investigations?

### **E. Horizontal Gene Transfer**

The issue of Horizontal Gene Transfer (HGT) should not be taken lightly.

There is evidence that relatively long fragments of DNA survive for extended periods after ingestion. DNA may be detected in the faeces, the intestinal wall, peripheral white blood cells, liver, spleen and kidney, and the foreign DNA may be found integrated in the recipient genome. When pregnant animals were fed foreign DNA, fragments may be traced to small cell clusters in fetuses and newborns.<sup>16</sup>

In pigs fed GM and non-GM corn, transgene and gene fragments were detected in the lower gastrointestinal tract (rectal and cecal).<sup>17</sup> In chicks fed GM corn, antibiotic resistance marker gene was found in their stomach.<sup>18</sup> The transgene for a Bt corn line (the full length of the coding portion for Cry1AB) was found in-tact in sheep rumen (the first compartment of a ruminant animal's stomach). The authors concluded, "DNA in maize grains persists for a significant time and may, therefore, provide a source of transforming DNA (i.e. Horizontal gene transfer) in the rumen."<sup>19</sup>

The transfer of marker gene can lead to many undesirable consequences not even thought of. There is a possibility of resistance to antibiotic Kanamycin due to HGT. Kanamycin is currently used in many infectious diseases and is a second line treatment for tuberculosis (TB). Drug resistant TB is a major public health problem in India. What will happen if we lose an important second line drug?

### **F. Studying Effects of GM Food on par with Pharmaceuticals, Monitoring and Regulation Issues**

In view of the above unpredictability of GM foods we contend that GM Foods, including Bt Brinjals need to be treated on par with medicines - for approval and regulatory purposes. At a genetic level there is no difference between a genetically modified food and medicine. Therefore the same level of precautions which are taken for pharmaceuticals need to be taken for GM Foods and Bt Brinjal in this instance.

Trials on three mammalian species - the norm for GM foods - need to be done before human trials first to establish safety of the food followed by Phase 1, 2, 3 and 4 (post-marketing surveillance studies) trials on human beings.

Postmarketing trials - or monitoring for adverse effects - is going to be really difficult, if not impossible. India's record of adverse drug reaction monitoring of drugs

is next to nothing. Pharmacovigilance exists in name only. Indeed, that puts in doubt any viability and effectiveness of any regulatory mechanism for Bt Brinjals and GM foods in general, considering also the impossibility of labelling in a diverse market in a country that exists at several levels of poverty and illiteracy at the same time.

With possibility of lateral contamination of Bt genes within and across species, damage across populations and markets is going to be practically irreversible - a fact complicated by absence of gene and seed banks of varieties of non-GM foods. Lateral contamination also effectively destroys choice for the consumer who does not want to consume Bt Brinjal.

Pharmaceuticals are consumed mostly at times of disease by affected sections of populations. It has been difficult to ensure sale only on prescription across the 400,000 retail pharmacy outlets in India leading possibly to all kinds of drug resistance problems and adverse drug reactions. Bt Brinjals and GM vegetables would be consumed by entire populations across the country, especially in the absence of clear choice. Our governance, adverse drug reaction monitoring and regulatory problems in pharma have barely been solved, if at all - how do we expect to solve the same for an item of daily consumption like brinjals across populations, in the event of monitoring adverse effects of Bt Brinjal.

### **G. Methodological Inadequacies in the Study Design**

Several international experts have pointed out serious inadequacies with the methodology and study design in the toxicological study for BT Brinjal conducted by Mahyco.

Experts have observed that "the interpretation of results sponsored by Mahyco is not scientifically acceptable" and hence consumption of BT Brinjal can not be considered safe.<sup>20,21</sup>

The first independent, critical analysis of the data generated by the company had been done by Prof Eric-Gilles Seralini who is the President of the Scientific Council of the Committee for Independent Research and Information on Genetic Engineering (CRIIGEN) and who had been in the French GMO Regulatory Commission. He has concluded, "the two main organs of detoxification, liver and kidney, have been disturbed in this study"<sup>22</sup>

**How can we consider Bt Brinjal as "safe for human consumption" when there are serious inadequacies in the study design itself and all the studies claiming safety of the product are either done or sponsored**

**by the same company?****H. On Acceptance of Mahyco Data Submitted by M/s Mahyco**

The response of the EC 2 is that this is in line with the "practices for data generation are in line with the national and international norms followed in case of other products such as pharmaceuticals."

These so-called practices in the pharmaceutical sector have been questioned for the last 10 years. The experience of Merck's hiding unfavourable data with respect to Rofecoxib (subsequently withdrawn by the company and/or banned in several countries), the selective publication of data including an entire fake journal by, again, Merck, the almost complete absence of published data on unsuccessful clinical trials, etc.- these and several others have been routinely questioned.

[See for instance: 1) Hopewell S, Loudon K, Clarke MJ, Oxman AD, Dickersin K. Publication bias in clinical trials due to statistical significance or direction of trial results. *Cochrane Database of Systematic Reviews* 2009, Issue 1. Art. No.: MR000006. DOI: 10.1002/14651858.MR000006.pub3. 2) See for instance: Erick H Turner, Annette M Matthews, Eftihia Linardatos, Robert A Tell, Robert Rosenthal. "Selective Publication of Antidepressant Trials and Its Influence on Apparent Efficacy." *The New England Journal of Medicine*. Boston: Jan 17, 2008. Vol. 358, Iss. 3; pg. 252.]

The GEAC therefore needs to do better than that in terms of blindly relying on company produced data for large scale policy decisions. One may add here that the ethical record of parent company Monsanto does not inspire confidence in their neutrality. Most of the GLP procedures are not capable of detecting fraud or wilful manipulation or even ensure the absence of the same.

**I. Conflict of Interest - at Several Levels**

According to the website <http://www.indiagminfo.org/>, the following are the new facts emerging on the Expert Committee which recommended Bt Brinjal for clearance (EC2 or Expert Committee II):

- The Chairperson, Prof Arjula Reddy, confesses to coming under pressure from "Agriculture Minister, GEAC and the industry" to approve Bt Brinjal (Attached report has Dr Pushpa Bhargava's statement on a telephonic conversation that Prof Reddy had to this effect with Dr Bhargava, the Supreme Court observer

to GEAC, the apex regulatory body in India)

- The Member-Secretary, Review Committee on Genetic Manipulation (RCGM in the DBT), Dr K K Tripathi has a Central Vigilance Commission complaint pending against him for exercising undue discretionary powers to promote interests of companies of his choice (Mahyco, in this instance) and harm others. He sat in the Expert Committee which was considering Mahyco's application, while the CVC complaint was still being examined!
- At least two Bt Brinjal developers in the Expert Committee bring in conflicting interests. One of them is part of the Consortium project that is developing Bt Brinjal in India with American aid!
- At least two members sat in the Expert Committee, reviewing their institutions' own findings on Bt Brinjal biosafety!
- At least two members who were expressly representing the Union Health Ministry sat as observers in the Expert Committee without providing any inputs into the EC2 process.
- Further, the GEAC deviated from the agreed mandate for the Expert Committee, as minuted in its January meeting minutes, to set up a new mandate that allowed the EC2 to recommend Bt Brinjal for cultivation. The Expert Committee was also privy to some data that was never put out in the public domain for independent scrutiny and analysis but which was used for decision-making.

This represents a huge conflict of interest and compromises the recommendations of the report. Also in the interests of transparency, the Government needs to come clean on the data accessed by the Committee and that was not put out in the public domain.

**J. Recommendation by American Academy of Environmental Medicine**

The American Academy of Environmental Medicine after reviewing the literature, has noted that GM foods have not been properly tested for human consumption, and because there is ample evidence of probable harm, it recommends the public to avoid GM foods when possible and asks the members to provide educational materials concerning GM foods and health risks. It has also asks for a moratorium on GM food and implementation of immediate long term independent safety testing and labelling of GM foods, which is necessary for the health and safety of consumers.<sup>23</sup>

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## **Introduction of Biotechnology Regulatory Authority of India Bill in the Coming Session - Serious Objections**

As you are aware, there are many scientific and other concerns with regard to Genetically Modified Organisms in our food and farming systems. The nation-wide debate on Bt Brinjal has brought to the fore the fact that even the scientific world is quite divided on this issue and there are quite a few socio-political, ethical, cultural and economic concerns too centred around this technology. We have for a long time now been asking for a statute which will have its mandate as protecting Indians' health and environment from the risks of such technologies as Genetic Engineering. Rather than set up a NATIONAL BIOSAFETY PROTECTION AUTHORITY with such a mandate, the Department of Biotechnology, which seeks to promote GM crops, is proposing to set up a Biotechnology Regulatory Authority of India through a Bill to be introduced in the Parliament in the upcoming session. It is in this context that we seek your urgent attention and we request you to ensure that this Bill does not get passed through the Parliament. The following are the important and serious objections around this Bill.

1. **WRONG BILL FOR REASONS:** The Bill wants to set up a single-window clearing house for GM commercial applications and makes the processing of such applications as the main purpose of the Regulatory Authority. However, this very mandate is wrong and assumes that an inherently unsafe technology can be made safe by making the regulation effective and efficient! The main purpose of Biotechnology Regulation should be to protect the health (human and animal) and environment of India from the risk posed by modern biotechnology and its applications. Therefore, we need a National Biosafety Protection Authority.
2. **OBJECTIONABLE CONFLICTING INTEREST, BEING UNDER MINISTRY OF SCIENCE & TECHNOLOGY:** This so-called autonomous regulatory authority should NOT be housed under the Ministry of Scientific & Technology or more specifically within the Department of Biotechnology (the draft Bill emerged from the DBT). This will be a major conflict of interest in itself and if it housed under this Ministry, the mandate itself becomes questionable; it is not in any doubt that every legislation draws its
- mandate from the Ministry it is housed under and housing this under MoST is objectionable and does not fulfill the mandate of protecting the health and environment of Indians. This Authority should be under the Ministry of Environment & Forests or under the Ministry of Health & Family Welfare.
3. **OBJECTIONABLE OVER-RIDING POWER TO BE CONTAINED IN THIS BILL:** This statute proposes to take away from the Constitutional authority that state governments have over their Agriculture and Health in the Indian federal structure. The proposed Bill envisages only an advisory role for the state governments in the form of State Biotechnology Regulatory Advisory Committees with no decision-making powers. This is simply not acceptable on at least two counts: this ignores the constitutional powers that the state governments have over their Agriculture & Health; it also ignores and could impinge on or override the somewhat progressive legislations like Biotechnological Diversity Act, with a mandate also to conserve and sustainably use biological diversity with some decentralized authority.
4. **SETS IN PLACE OPAQUE AND COMMERCE-FRIENDLY FUNCTIONING RATHER THAN TRANSPARENT, PRO-PEOPLE FUNCTIONING:** The legislation, instead of expressly having clauses on information disclosure, that too before decision-making for independent or public scrutiny, has brought in clauses on retaining Confidential Commercial Information. This is only to protect business interests at the expense of the best interests of common citizens.
5. **DECISION-MAKING TO BE VESTED IN THE HANDS OF A FEW TECHNICAL EXPERTS WHEREAS THE ISSUE REQUIRES BROAD-BASED DECISION-MAKING:** Final decision-making, especially in the case of environmental release cannot be left to technical experts alone the current Bill proposes a 3-member decision-making body of technical experts. It is proposed that decision making on a subject like this should be vested in the hands of a broad-based inter-ministerial body which also has representatives of consumers and farmers

- organizations.
6. **NARROW RISK ASSESSMENT PROCEDURES NOT ACCEPTABLE & NO INDEPENDENT TESTING BEING ASKED FOR IN THE BILL:** Risk assessment in the proposed Bill has been left narrowly to science based evaluation of the applicant's data. This is completely inadequate and risk assessment should consist of independent testing too for cross-verification of biosafety data. Therefore, having independent testing and analysis capabilities in the form of required laboratories etc., need to be set up and decision-making cannot be based on crop developer's data alone.
  7. **NO RISK MANAGEMENT PLANS:** Risk management aspects like reviewing approvals and permissions, time-bound permissions, clauses for revoking and cancellations of approvals etc., do not figure in the current proposals, unfortunately and this makes the Bill inadequate.
  8. No environmental releases should be allowed before biosafety is conclusively proven. The Bill remains silent on a crucial aspect like this, incorporated in legislations elsewhere.
  9. **REGULATION AND DECISION-MAKING MADE ONLY INTO A TECHNICAL ISSUE:** The proposed legislation also makes modern biotechnology regulation into only a technical risk assessment and risk management. It ignores the bottom line set out in the Task Force report on Agri-Biotechnology and operationalising the same. That is the reason why a broad-based decision-making body is essential.
  10. **NO MECHANISMS FOR PUBLIC PARTICIPATION:** The proposed legislation has no clauses on public participation. The Cartagena Protocol on Biosafety (under the Convention on Biological Diversity) Article 23.2 says that Parties shall consult the public in decision-making process regarding living modified organisms and India is a signatory to this.
  11. **CLAUSES MEANT TO HARASS CIVIL SOCIETY:** Section (63) is completely objectionable and is meant to harass civil society groups concerned about the application of this hazardous technology. This clause says: whoever, without any evidence or scientific record misleads the public about safety of GMOs and products thereof shall be punished with imprisonment and fine!
  12. **LACK OF PROPER LIABILITY REGIME:** The liability clauses in this proposed legislation are very weak. To begin with, there need not be any distinction made between companies, universities, society, trust, government departments etc. the penal clauses should apply uniformly. Two, the legislation should have express clauses on Redressal or Compensation and Remediation or Cleaning up. The legislation should also have a clause that makes the crop developer solely liable for any leakage, contamination and so on throughout every stage of the product development cycle. Further, the penalty of one year imprisonment and two lakh rupees fine is no deterrent and this should be made more rigorous.
  13. **SHORTCOMINGS IN THE APPELLATE TRIBUNAL PROVISIONS:** Provisions related to Biotech Regulatory Appellate Tribunal: The Tribunal should be constituted in a more broad based fashion. Further, no time bar for appeals should be imposed. There should also be no bar on who can appeal and it need not be just applicants.

#### **WHAT WE DEMAND INSTEAD IS A NATIONAL BIOSAFETY PROTECTION AUTHORITY**

Any regulatory regime around GMOs should have the primary mandate of protecting health of people and the environment from the risks of modern biotechnology. It should necessarily have the following components as cornerstones of the legislation:

- Precautionary Principle as the central guiding principle.
- Going in for the GM option only in case other alternatives are missing.
- Separating out very clearly the phases of contained research and deliberate release and distinct regulatory mechanism for both, in a sequential fashion.
- No conflicting interests to be allowed anywhere in the regulation and decision-making.
- Transparent functioning: information disclosure and public/independent scrutiny.

- Democratic functioning including public participation - even here, data to be put out in the public domain and public participation included before the decision-making process and not just informing after a decision is made.
- Risk assessment- (a) prescribing rigorous, scientific protocols and asking the crop developer to take up studies and then do independent analysis of the dossier supplied by the crop developer and evaluate/review of the same; (b) to also take up independent testing by having all facilities and institutional structures in place for the same and evaluating the results.
- Risk management- including monitoring, reviewing, revoking of approvals.
- Liability - including penal clauses, redressal and remediation.
- Labeling regime for informed choices this covers traceability an identity preservation requirements.
- Oversight and appellate mechanisms.
- In the case of India, given that it is a federal structure and given that Agriculture is a state subject, special clauses which allow the state governments to form their own regulatory systems and mechanisms.
- On-going Post Market monitoring of every GM crop.

Further, the law should be governed by principles like Popular Pays, Inter-generational equity (a key principle in environmental jurisprudence now which

covers conservation of options, conservation of quality and conservation of access, for present and future generations) etc.

In countries like Norway, the law also has provisions to answer questions like "Is this ethically and socially justifiable?" before a GMO is cleared. That would automatically include socio-economic and ethical concerns within the regulatory regime.

It is worthwhile to remember here that the need for an independent credible regulatory regime was articulated by the 2004 Task Force Report on Agricultural Biotechnology and this report clearly pointed out that the following should be the bottom line for any biotechnology regulatory policy: the safety of the environment, the well being of farming families, the ecological and economic sustainability of farming systems, the health and nutrition security of consumers, safeguarding of home and external trade and the biosecurity of the nation. These important aspects or cornerstones do not find place in the proposed Bill sought to be introduced.

We therefore urge you to reject the BIOTECHNOLOGY REGULATORY AUTHORITY OF INDIA Bill being proposed by the Department of Biotechnology/ Ministry of Science & Technology, it is a wrong Bill drafted by the wrong people for the wrong reasons. Instead, we urge you to collectively enact a NATIONAL BIOSAFETY PROTECTION AUTHORITY Act in India, under the Ministry of Environment & Forests or Ministry of Health & Family Welfare, keeping in mind the sustainable development interests of all Indians.

*(Text of letter to Parliamentary Standing Committee)*

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