

777

The newsletter of the Bhopal Medical Appeal, Autumn 2004



PHOTO: CHRISTIAN SALTAS

'Don't ask what these eyes have seen'

twenty years since **THAT NIGHT**

Bhopal, 1984 - 2004

777

Editor: 777@bbopal.org, Website: <http://www.bbopal.org>

The newsletter of the Bhopal Medical Appeal, Autumn 2004

Special 20th anniversary edition

For more than 120,000 Bhopalis,



DEATH CAME OUT OF A CLEAR SKY. Midnight, a cold wind blowing – the city's poets remember the cold of THAT NIGHT – the stars brilliant as they are in central India, even through the thin pall of cooking-fire smoke that hung above the city. Here and there, braziers were burning to warm those who were obliged to be out late. From the factory which so many had learned to fear, a thin plume of white vapour began streaming from a high structure. Caught by the wind, it became a haze and blew downward to mix with smokes coming from somewhere nearer to the ground. A dense fog formed. Nudged by the wind, it rolled across the road and into the alleys on the other side. Here the houses were packed close, ill-built, with badly-fitting doors and windows. As those within woke, coughing, their eyes burning, countless women's voices were saying, 'Hush darling, it's only someone burning chillies. Go back to sleep.'

'When I saw the leaves on the trees curl and turn black and birds fall dead out of the sky, I knew that this was Death, come among us as foretold. My regret is that I survived.'

'Our eyes were crying, noses were watering, we had froth in our mouths. The coughing was so bad that people were writhing in pain. Some people just got up and ran in whatever clothes they were wearing or even in none at all. Somebody was running this way and somebody was running that way. People were only concerned as to how they would save their lives so they just ran. Those who fell were not picked up by anybody, they just kept falling. In the crowd of people even cows were running and trying to save their lives and crushing people as they ran.' CHAMPA DEVI SHUKLA

Shortly after midnight on 3rd December 1984, a pesticide factory owned by Union Carbide spewed poison gas out across the sleeping city of Bhopal. At least 8,000 people died in the most hideous ways, choking, eyes and lungs on fire, drowned in their own fluids, or crushed in stampedes through narrow alleys in which lamps burned a dim brown in the thick cloud of gas. When dawn broke over the city, bodies lay in heaps in the streets.

Yet when the *Independent* speaks of 'rape', the *Guardian* of 'disgrace' and Jon Snow of 'a crime against humanity', they are not talking about THAT NIGHT – but of what has happened since to those who survived it.

Today, 20 years after the disaster, more than 120,000 people in Bhopal are still ill. One a day die from gas-related causes. Their breathless bodies no longer able to push handcarts and lift heavy loads, thousands have fallen into destitution and their families have learned the lessons of the abyss, binding cloths round their middles to give an illusion of fullness, giving children unable to sleep from hunger water to fill their empty bellies.

The city has experienced epidemics of cancers, menstrual disorders and what one doctor described as 'monstrous births', yet the company refuses to share information it holds on the health effects of MIC – the

Saat saat saat in Hindi means *together together together*, but can also mean 777. The Bhopal Medical Appeal began in 1994, when a man from Bhopal came to Britain to tell people about the continuing plight of the Union Carbide gas victims. The survivors realised they must help themselves and wanted to open their own free clinic. They were joined in the UK by a few individuals who were in turn joined by you and others. *Together together together* – survivors, clinic staff and those in this country, together we are the Bhopal Medical Appeal.

7 *Saat* साथ together
7 *Saat* साथ together
7 *Saat* साथ together

THAT NIGHT *has never ended*

main gas that leaked. Union Carbide and its new owner Dow Chemical claim the data is a 'trade secret'. The company continues to ignore the summons of a Bhopal court to answer charges of 'culpable homicide' for a death-toll which, according to official figures, already exceeds 20,000. Toxic chemicals simply abandoned by the company at its now-derelict factory have leaked into drinking wells and the breast milk of women living nearby contains lead, mercury and birth defect-causing organochlorines, but the company refuses to clean up the factory.

The Bhopal Medical Appeal was started and continues to be run by ordinary people in this country. We launched the Appeal ten years ago, on the 10th anniversary, in response to a request from Bhopal survivors who wanted to start their own free clinic. The Sambhavna Clinic is now in its 9th year of magnificent work, offering a combination of modern medicine and herbal treatments, yoga and massage. It has treated more than 12,000 people, pioneered new effective and safe treatments, carried out original and ground-breaking research and published the results in the *Lancet* and the *Journal of the American Medical Association* [JAMA]. Our clinic is highly respected and its work has won numerous awards, achievements that all of us reading this can be justly proud of, as they are also our own.

All of us – donors, volunteers, clinic staff, and survivors – form a single community of people committed to doing this work. The Bhopal Medical Appeal is all of us, all together.

Says Rayeesa Bee, one of our community volunteers, a woman from a poor neighbourhood near the factory, 'Working with Sambhavna taught me the joy of selfless service. The happiness of selfless service is greater than all happiness. I find many people with similar ideas joining the efforts of Sambhavna and I feel I am on the same plane.'

Thank you for being one of those people.



Bodies burning on a mass pyre



Injured children lying in hospital



A father carries his dead child

CREDIT CARD HOTLINE FREEFONE 0800 316 5577

A project of the Pesticide Action Network UK, Registered Charity No. 327215.

Donations may be made direct to: PAN-UK / Bhopal,
Account No. 61752312, NatWest Bank, Brixton Branch (Sort Code 60 03 36),
504 Brixton Road, London SW2 8EB

Bhopal Medical Appeal



Remembering THAT NIGHT

Aziza's story

I WAS LIVING WITH MY HUSBAND'S FAMILY at that time. My daughter Ruby was 3 years old and my son Mohsin was about 8 months old. That night my husband was away from Bhopal on work. Our family consisted of my parents-in-law, two sisters-in-law and their husbands and their four children. Our house had four rooms - two brick and mortar rooms and two side rooms made of wooden slats. I, my husband and our children had one of the side rooms. It was a Sunday. Television had just come to Bhopal and our whole family watched a Hindi movie *Damaad* till 9 p.m. then ate together and went to bed at about 10 p.m. My children had gone to sleep long before the movie ended.

At about 12.30 am I woke to the sound of Ruby coughing badly. The room was not dark, there was a street light nearby. In the half light I saw that the room was filled with a white cloud. I heard a great noise of people shouting. They were yelling 'bhaago, bhaago' (run, run). Mohsin started coughing too and then I started coughing with each breath seeming as if we were breathing in fire.

Our eyes were burning. My mother-in-law who was also coughing badly came in to the room. She was in a panic and bade us come out. I came out with my children, carrying Mohsin on my lap and holding Ruby's hand and went in to the kitchen.

The family were coughing and groaning. We tried closing all the doors and windows to stop more gas from coming in, but the room was already full of white clouds. A hindu family in our neighbourhood (Mr and Mrs Verma and their three children) knocked on our door, my father-in-law opened the door and they came inside in a rush and collapsed on the sofa, which broke under the weight. All of us were feeling worse and worse.

My son Mohsin stopped groaning, he fell unconscious. My mother-in-law suggested that all of us should go to the



Aziza Sultan is a Community Health Worker at the Sambhavna Trust Clinic in Bhopal

Hamidia hospital. We left the house. Me carrying Mohsin and Ruby holding my hand. My sister-in-law was also holding two children and my father-in-law was carrying his favourite grandson who was five years old.

It was very cold outside but we were not feeling cold at all. We went out in our night clothes with nothing else to cover ourselves. Not even our *dupattas* or *burkhas* were with us. It was around 1.30 a.m. by then. We left without shutting or locking the house, nothing mattered but to run.

Outside in the lane, it appeared that a large number of people had passed that way. Lots of shoes and shawls and other clothes were strewn about. White clouds enveloped everything. Streetlights looked like points of light. Our family got split up. One of my sisters-in-law ran one way and the rest of us towards the main street. I saw lots and lots of people running, screaming for help, vomiting, falling down, unconscious.

We had gone about five hundred metres when my father in law thought it would be easier to escape using his two-wheeler moped. He asked us to stay where we were and went back for the vehicle. He brought the moped but it would not start, there was no petrol. He left the two-

wheeler by the side of the road. Then he spotted a moving truck and told us to climb on to it. We could not climb on to it but he was tall and strong so he got in, but in all the confusion instead of lifting up five-year-old Mansoor, his grandson, onto the truck he grabbed another little boy who was running around on his own.

Mohsin and my sister-in-law's daughter were still unconscious. Ruby was holding on to my *kurta*, she did not leave it once. We walked for another 500 metres and came to the *Bhopal Talkies* crossing. Mohsin was vomiting on my body. Ruby was also vomiting. I was not able to control my bowels. Faeces were running down my legs. My mother-in-law was vomiting. She was a heart patient and Hamidia hospital was still two kilometres away, much of it uphill. We had just one thought and that was to reach Hamidia.

At *Bhopal Talkies* crossing we all fell on the ground and just lay there. I was two months pregnant at the time. I had a miscarriage right there in the middle of the street, my body was covered with blood. There was blood all over. I was unable to control my bowels and the faeces ran down my legs, mixing with the blood.

We couldn't talk to each other or even see because our eyes were inflamed. We were wondering what had gone wrong, who had done this. We had no idea that there was a gas leak from Union Carbide. We thought

that if we stayed on at *Bhopal Talkies* crossing we would surely all die because we could see so many people lying on the ground who appeared to be dead.

Trucks overflowing with people were passing on the main road. We took the Saifia College road and walked about half a kilometre. There we managed to jump onto a moving vehicle, a large three-wheeler, going slowly because



Blinded by the gas, women wait for treatment as dawn breaks over the devastated city.

PHOTO: PABLO BARTHOLOMEW

it was uphill. It was already crowded, full of people. By then I was covered with my own blood and faeces and vomit from my children. I fell on to some man's lap inside the vehicle. The vehicle gave away at the top of the hill. The engine collapsed because there were too many people.

We started walking again towards Hamidia hospital. We reached the hospital at round 2 or 2.30 am but there appeared to be nobody around so we went on towards Kamla Park in the new city, because everyone seemed to be running that way. Mohsin was still unconscious Ruby still holding onto my *kurta*.

We reached the lake and found the park separating the upper and lower lakes covered with people lying on the ground. People from nearby areas were bringing out their quilts and bedcovers and covering people up so that they could be protected from the gas cloud. All of us from our family, my sister-in-law, mother-in-law and four children, fell onto a pile of dried leaves near a garbage dump and all of us fell unconscious. I remember faintly that two men came and lifted me and my children. They carried us to the side of the road and covered me up with a quilt. We lay there for a while and then we heard an announcement from a public address system on a jeep. They were saying

'We are in control of the gas leak from Union Carbide. Go back to your houses.'

By then it was almost dawn. One man about 35 years old from that locality took us to his home. Our eyes were closed and were very swollen. We were still feeling as if someone was trying to strangle us, breathing was very difficult. This man gave me clothes to wear and some hot water to wash myself. He made us some tea but we could not drink because our throats were on fire. Soon it was morning, but we were helpless because of our eyes. We could not see. The man and his 18 year old son led us home. They also gave us a bottle of drinking water.

When we reached our house we saw that the trees had shed all their leaves, which looked as if they had been burnt. Milk had turned light green and we threw it away. All food left in the house was also thrown away. At about 8 a.m. we heard that people were running away from Bhopal. My husband arrived home fearing that we had all died. He was away in Jaipur and had got the news of the disaster on the radio on the 3rd evening. He had gone to Jaipur as a chauffeur for a businessman and his family. He drove all the way back from Jaipur in a rush.

By the 4th evening volunteer doctors were going from house to house giving medicines and we got some treatment from them.

Remembering THAT NIGHT

‘Carbide’s gases killed my wife, but they’d already taken her life’

SOUNDS LIKE A CLEVER-CLEVER ADVERTISING LINE, doesn’t it, but the man who said it wasn’t being clever or ironic. His Hindi words have precisely the same meaning these English ones, and contain the same word-play, but he meant them literally. He meant that from the moment his wife, Maya Bai, breathed Carbide’s gases, her life was effectively over.

Maya Bai lived with her husband Balaram, her son Dinesh and daughter Munni near Bhairon Baba Temple, about half a kilometer from the Union Carbide factory. Balaram is a porter who carries loads on his back for a transport company. This is what he had to say.

BALARAM’S STATEMENT

On THAT NIGHT my wife was woken up by a commotion outside. She opened the door of our *jbuggi* [a wretched hut] and immediately she started coughing, her eyes began crying. She went out worrying about the safety of our nephew in the next neighbourhood [which was also in the line of the gas plume] and calling out the names of other children. She did not come back.

I ran away taking our daughter with me and when we got back to our *jbuggi* in the morning Maya wasn’t there. I was in a bad state myself and was admitted to a hospital. Our relatives looked for Maya and finally found her after 15 days at the Hamidia hospital. We brought her home. She had a lot of pain, but her worst problem was breathlessness, she couldn’t breathe after walking just a few steps and she coughed a lot.

Her illness worsened from ’86, she started blacking out. She took treatment from the government’s hospital for gas victims near DIG Bangla crossing. She gave birth to two boys and two girls after the disaster but they were all weak, none of the babies survived beyond three months.

In 1988 she found to have pulmonary tuberculosis and admitted to the TB hospital for 77 days. Later on she had to be admitted to the DIG Bangla hospital and other government hospitals several times. By then it was 1990. I spent quite a bit of money, all I could find, on treatment at the hospitals but nothing helped.



From the moment she breathed the gas Union Carbide said was ‘harmless’, Maya never knew another day free of pain. The poisons took 16 terrifying years to kill her.

By 1997 her condition had grown much worse. She started taking treatment from Sambhavna. At first she was doing well but after two years her condition took a bad turn. She began coughing blood and next started having problems urinating.

We had to admit her again to hospital. Sambhavna people helped us get her a bed in the Hamidia hospital. Her body had swollen all over, her chest was hard as stone. On her last day our son Dinesh was in the hospital with her. He came home and told me, ‘Papa, mama died in her sleep.’ From THAT NIGHT Maya lived sixteen years in pain. She died on 10th June, 2000. She was 55 years old.

Remembering
THAT NIGHT

The Bhopal Saga

*Causes & Consequences of the World’s
Largest Industrial Disaster*

by Ingrid Eckerman M.D.

AN IMPORTANT NEW BOOK by Ingrid Eckerman, a Swedish physician who served on the *International Medical Commission on Bhopal*, a group of doctors from twelve countries who in 1994 travelled to Bhopal at their own expense to study the condition and needs of the gas-survivors. She has been back to Bhopal every year since and has followed the development of our Sambhavna clinic from the start, helping structure its documentation, medical records, patient-owned health books and computer program as a result of which Sambhavna quite possibly has the most modern and efficient records in all India.

At the 1999 World Congress of Asthma in Buenos Aires, Ingrid presented Sambhavna’s study *Effects of Yoga Practices on Respiratory Disorders Related to the Union Carbide Gas Disaster of 1984*.

She also serves as an International Medical Advisor to Sambhavna. The following excerpts from THE BHOPAL SAGA describe that awful night of 20 years ago.

THE GAS LEAKAGE FROM UNION CARBIDE’S PLANT in Bhopal, India, in 1984 is the largest industrial hazard in history. Over 500,000 persons were exposed to toxic gases, between 3,000 and 10,000 died within the first weeks, and between 100,000 and 200,000 people may have permanent injuries.

At the time of the leak, the residents of Bhopal were generally asleep, on the streets or in the station, in *kuccha* houses without door or windows, in *pucca* (permanent) houses with windows and doors, or on the second or third floor in the Old Town. They woke up because they were coughing and suffocating. Then they felt something like ‘burned chilli’, their eyes started to burn as well as their

respiratory passages, they started to vomit. Some stayed in bed under a blanket, but most people went out, scared and angry, and tried to get away from the cloud. They ran, or used vehicles if possible, and moved away from the factory, following the direction of the cloud. As they ran, they inhaled larger amounts of the gases.

Hospital doctors and staff were completely taken by surprise as thousands and thousands of survivors entered the gates. When they got hold of the medical officer of the Union Carbide factory, he told them, ‘It is only like tear gas’. Meanwhile the doctor’s own mother died of the gases. At the hospitals, all kind of medicines were tried to give relief, but not even the plant’s own medical officer had proper information about the properties of the gases. He continued to insist that MIC was only an irritant and not life-threatening. In reply to telegrams sent to both UCC’s US headquarters, doctors in Bhopal were told that the gas was ‘harmless’. In fact Union Carbide was well aware of the lethal effects of MIC.

According to reports seized from the R&D centre of the plant at Bhopal as well as documents traced from other Carbide offices, the corporation had conducted a number of experiments on animals and plants. It very likely had information not only on short-term-, but also medium- and long-term effects. Union Carbide has never made these studies public, nor released any other information they have available, but UC’s own manuals from 1976 describe methyl isocyanate and its effects on health thus:

‘MIC is a colourless liquid with an odour like tear-gas, slightly soluble, highly reactive when in contact with water, and lighter than water. The vapour is heavier than air. MIC is reactive, toxic, volatile and flammable. The flash-point of MIC is -18 oC, and a concentration of only 6% in air is explosive. MIC boils at 39.1 oC. Its reactivity is inhibited by phosgene and increased by metals.

‘MIC may cause severe or permanent injury in contact with eyes or skin. If inhaled or swallowed in sufficient quantities, death may result. MIC acts like tear-gas, but is (many times) more lethal. MIC is a poison by inhalation ... and is intensely irritating to breathe. It causes severe bronchospasm and asthma-like breathing ... It should be regarded as an oral and contact poison. Skin contact can cause severe burns. The liquid will seriously injure the eyes, even when it is diluted with a non-toxic liquid to a one percent concentration.’

The exact contents of the lethal cloud are still not known – partly because Union Carbide refuses to release any kind of information on its likely composition.

THE BHOPAL SAGA will be published on 3rd December 2004 by Universities Press (India) Private Ltd/Orient Longman, Hyderabad, India. Royalties to Sambhavna. Thank you Ingrid.

Opening our hearts and veins

In Bhopal, people in need of blood must arrange their own donors, and often must even deliver the blood to the hospital themselves. The poor can afford neither blood or transport, so Sambhavna staff have organised their own service REPORT BY TERRY ALLAN

SAMBHAVNA STAFF always try to provide additional help to people in need, including giving their blood when needed. All Sambhavna staff members know their blood types. 'I'm O+,' says Biju. 'I'll donate any time someone needs it.'

THE STORY OF DHARMENDRA

Diwakar, one of our Community Health Workers, recently made a donation. 'At a staff meeting Dr. Qaiser told us of a 14-year-old boy from Garib Nagar ('poor town') who needed a donor. His blood type is O+, I volunteered as I am also O +.'

Dharmendra is affected by contaminated water. Sambhavna's community health workers noticed his condition and persuaded his family to bring him into the clinic. Says Dr Qaiser, 'I observed that the boy was weak and lethargic, with stunted growth. He looks like a 10 year old. His belly was distended and he was pale. His haemoglobin count registered just 2-3% (14-16% is considered normal). I diagnosed severe anaemia, and recommended that he get a transfusion at JLN Hospital. I suggested they obtain the 3 units of blood required from their own family. But the family members were also in a weak, malnourished condition, and could not donate blood. The boy's family is very poor, and could not manage to buy blood, so I asked the clinic staff to seek volunteer blood donors.'

Three staff members volunteered. Diwakar was selected. On June 21st, he went with the boy's father to Hamidia Hospital blood bank to make his donation. 'We waited while the blood was tested for Hepatitis B, venereal diseases, HIV and compatibility,' says Diwakar, 'then we took my one unit of blood to DIG Bungalow Hospital where the transfusion was completed.'

'The family didn't come back for follow-up so one of the Community Health Workers went to visit the family,' said Dr. Qaiser. 'We saw Dharmendra the other day and found his immediate condition improved, with his hemoglobin count at 6%. His belly is no longer distended, and he has more energy. His body has been stimulated to produce haemoglobin on its own after the transfusion, so the chances are good that he'll continue to improve. We will keep checking his condition.'

THE STORY OF KAMLA BAI

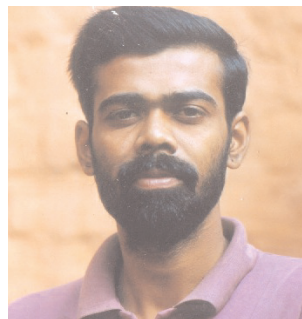
Kamla Bai is 60 years old and widowed. She lives in Annu Nagar, one of the communities with contaminated water. She is also gas-affected. She is very poor and lives by the railway line in a squatter shack made of plastic sheets and gunny-sacks. Kamla Bai registered at Sambhavna 20 months ago and was diagnosed with cervical cancer, severe anaemia and thyroid problems. We began treating her anaemia and thyroid with allopathic medicines. Recently she had three months of radiation therapy at Sultania Hospital. The doctor said she could not have surgery because she was so anaemic.

In April this year Kamla Bai went to her village for three months. When she returned to Bhopal and Sambhavna for a check up she was found to be in a serious condition. The cancer had relapsed. We sent her to Sultania Hospital, where gynaecological surgeon Dr. Sudha Chourasia called for three units of blood for a transfusion, and referred her on to Kamla Nehru Hospital for an X-ray, ECG, ultrasonography and consultation with their cancer specialist Dr. Singh.

Kamla's husband died many years ago so she is all alone. She has a son and daughter-in-law, but they do not look after her and did nothing when Aziza told them Kamla was in a serious condition and needed help. So Aziza took it on herself to help and follow up.

Kamla Bai has blood type B+. Coincidentally Aziza has the same type. So Aziza donated one unit of blood herself, and found two other donors. Aziza also arranged for a small donation from Sambhavna's Koshish group (a voluntary support group inside Sambhavna) to cover Kamla Bai's transportation costs between Sultania and Kamla Nehru Hospitals, as well as a little money for chai (Bhopali tea). Since the transfusion, Kamla Bai's condition has improved and the doctors have decided to continue with radiation therapy.

Aziza says, 'Kamla Bai was ready to die, she felt so alone and sick, with no money at all. But the help and care from Sambhavna have given her some hope.'



Biju



Diwakar



Aziza

Dharmendra was seriously ill, but after a transfusion of blood donated by Sambhavna's Diwakar, his condition is much improved.



Taming wayward moons

'I WRITHE IN AGONY LIKE A FISH OUT OF WATER, from the pain all over my body. I get my periods once in four months. I am told I must not mention my problems.'

'I get terrible pain in my back and abdomen for five days during my periods. I get them every 15 days.'

'In last one month I have had periods thrice. Some times they come after 3 or even 6-7 months. My periods last for 15 days. My sister has similar problems.'

'I started my periods when I was ten. I get them once in 3 or 6 months. Once started they go on for 20 to 25 days, in which for 10 days bleeding is very heavy. I get giddiness, weakness, loss of appetite, irritability, numbness and tingling in the limbs when I have my periods. I also have breathing problems.'

These statements were made by young women who came to Sambhavna seeking help with the awful problems they had until then been suffering in silence.

Menstrual chaos is one of the least-known aspects of what is happening in Bhopal. In a city where many muslim and hindu women still wear the veil, intimate matters are not easy to discuss with strangers.

Our community health workers and volunteers talk to women about 'moon problems' and encourage them to come to the clinic, where as well as offering them modern allopathic treatment (thanks to the generosity of French writer Dominique Lapierre, Sambhavna has its own gynaecology clinic) we are pioneering new, drug-free therapies like yoga.

Nivritta Durgavanshi, Sambhavna's Yoga Therapist, explains, 'According to the principles of modern medicine, menstrual problems such as Amenorrhoea could be due to systemic problems, hormonal imbalance and genital passage abnormalities. Irregular cycles could be caused by an underlying disease, specific problems of organs or by hormonal imbalance – pain during menstruation is caused due to contraction of the uterus and secretion of prostaglandin, so anti-spasmodics and anti-prostaglandins are used to relieve pain. Yoga can do this without drugs.'

Nivritta recently carried out a study of how yoga affected the menstrual problems of gas-affected women. The sample was 30 women, aged between 18 and 38, divided into a test group and a control group. Before the test started the test group received a month's training in specified yoga asanas. After this, for the test period of six months, they took no medicines for menstrual problems

and did only yoga, practising at home, while the control group took medicines and did no yoga. All women came to the clinic at least once a month with their menstrual charts, the test group women also using their visit to check their practice of the asanas with Nivritta. The menstrual charts were designed so non-literate women could easily use them, simple graphic symbols replaced words. Women were trained to maintain the charts themselves, recording their cycle lengths, duration and amount of bleeding, intensity of menstrual pain and other associated symptoms, like weakness, lack of appetite, giddiness, pain in body, irritability and depression. Women using IUDs, oral contraceptives, breastfeeding women and women with diabetes and high blood pressure were not eligible for the study.

All women in the test group practiced a special set of asanas, demonstrated opposite by Nivritta, photographed by the indomitable Maud Dorr. *Surya Namaskara* (not shown but well known) improves transmission of *prana vayu* or 'vital air' in the body. It helps balance the nervous system and the endocrine. *Bhujangasana*, *Shalabha Asana*, *Dhanurasana* & *Ushtrasana* mainly effect the ligaments and muscles of the pelvic region. *Suptavajrasana* and *Naukasana* affect the ovaries and uterus.

Mild alternating pressure changes in these internal organs stimulates the autonomic nervous system as the walls of these organs undergo a mild stretching and relaxation. Muscle tone is regulated and equilibrium is maintained in the system.

Women brought their menstrual charts to the clinic hidden in the folds of their dresses and shared them with Nivritta in complete privacy.

The results were striking. Women in the control group showed no particular improvement in the regularity of their cycles, amount of bleeding or feelings of pain. In the test group more than half the women with abnormal cycles reported that they now had normal cycle lengths, 8 of the 10 women who had begun the study with abnormal bleeding reported that it was back to normal and 8 women reported relief from pain.

We are now teaching yoga systematically to women with menstrual problems. Any therapy that brings relief without putting more chemicals into the already overburdened bodies of Bhopalis can only be a good thing. The study in full is available from www.bhopal.net/yogastudy.html



Vajrasana



Suptavajrasana



Marjari Asana



Paschimottasana



Ushtrasana



Shashankasana



Bhujangasana



Shalabha Asana



Dhanurasana



Naukasana



Uddyan bandh



Nadishodhana Pranayama



Ardhamatsyendra



Chakrasana



Bhramari Pranayama



The walls are up and work begins on the roof

THE FIRST MATTOCK BIT INTO THE EARTH on February 20, 2004, to begin the foundations for the new building, which was designed by architects House of Consultants, a firm chosen for its proven commitment to

admirable and exciting buildings throughout India, and describes its work as architecture for an eco-sensitive future.

So, to the construction. The soil at the site was tested by the local college of technology, after which foundations

The foundations covered a total area of 12,000 sq feet, and include the provision of six underground tanks with a combined capacity of 65,000 litres for the rain water that will be harvested from the roof of the building. In a city where municipal water is supplied for only a few hours a day, this is not only ecologically sound but a practical necessity. The tanks will also act as heat sinks, helping cool the clinic during the hot weather. Bhopal suffers each year from the Nautapa, nine days of heat so extreme that the very earth seems to shiver. The water from the bore-well in the garden is used for irrigation.

We strongly believe in using local building materials, in this case locally made bricks and stone from a nearby quarry. For those interested in construction details, a 4" bed of compacted sand was laid in the foundation trenches to allow for expansion and contraction of the subsoil. The foundations used boulders and dressed stone brought straight from the quarry, their sturdy ramparts rise to two feet above ground and are between two-and-a-half and three feet wide.

By mid-March we were ready for the plinth, which was made of dressed stone infilled with earth. Again this was not any old earth, but the familiar red soil known locally as *kopra*, of which 92 truckloads were used.

We made our own plinth beams using 8 mm steel rod



The entrance pillars

thirsty work, so we bought water tanks and indeed water, since the water from our bore well was all needed for the medicinal herb garden.

The total construction cost is just under US\$ 400,000. \$230,000 was committed by *Fondation Pro Victimis*, Geneva in January 2004 on the condition that the balance of \$166,000 was available from other sources and that there were sufficient funds to cover at least 75% of the first two years' running costs. In response, Dominique Lapierre's *City of Joy Foundation* immediately agreed to provide \$105,000, and in February Greenpeace, Holland

From out of the earth rises a house of healing

working with respect for land and nature. Inspired by the work and philosophy of Laurie Baker, the firm was started in 1987 by a group of architects, engineers, artists and craftspersons in a studio on the banks of the Kaniampuzha river in Ernakulum, Kerala. It has created many ecologically

were dug down seven-and-a-half feet and in places eleven feet. We soon went through the yard of black 'cotton soil' that lies on top (ideal for the medicinal garden) and hit a layer of thick yellow clay (ideal for building on). The water table in this area of Bhopal lies too deep to affect the soil.

encased in a cement sand stone chip mix at a ratio of 1:2:4. The next job was to make columns 8 3/4 feet high, which was done the same way and kept 8 bar benders, 15 masons and other workers busy for 184 hours.

The construction used a great deal of water, and it was

committed to give 50,000 euros, which were raised from individuals via an appeal. We of the Bhopal Medical Appeal, UK have committed to provide the funds needed to run the clinic in the new building for the first two years and thereafter.

The new clinic will enable us to treat three times as many people and will cost £3,000 a month to run



Terry's garden diary

AFTER A COUPLE OF FALSE STARTS, the monsoons have finally come to Bhopal. All of the rain and humidity has brought a big spurt of growth, especially of weeds! However, as most of us know, almost every plant has a valuable use, even weeds.

Our primary weed this season, known locally as *pattar chatab*, is very useful for treating kidney stones. But, while a few people have come to harvest this rampant ground cover for this purpose, we find ourselves weeding it out of the growing beds on a daily basis. Kidney stone sufferers need not worry, there is always plenty, despite our best attempts to keep it in check.

In spring Mr Mukesh Kushwah joined us as gardener. Along with Ms. Ratna Soni he is responsible for carrying out most of the work of the garden. Mukesh has his own small farm on the outskirts of Bhopal and brings a lot of local farming knowledge to Sambhavna.

Around our garden borders the tiny trees we started last year from seed have now grown more than two metres! They are literally getting bigger right before our eyes! It is so exciting to see our small medicinal forest take shape.

This season we have expanded our plantings with two



Asbwagandha

new groves along the west wall and near the *nullab*. Sunil, Ratna, Mukesh and others have planted dozens of trees and shrubs including *neem*, *amla*, *amaltas*, *gulmobar*, *palaash* and *Sita ashok*. The way things are growing around here we won't have to wait long to sit in the shade.

Speaking of volunteers, Sam Tilley, a medical student from the UK, braved the summer heat and designed and built some stackable drying racks for our freshly harvested herbs, among other projects for the clinic.

Nicolas Cadot, an engineering student from France, endured the rain and mud to plant trees, weed (of course!), and build a couple of trellises.

In our main growing area, we have planted white musali, a general tonic sometimes referred to as the ginseng of India. We also have *asbwagandha*, *sarpgandha*, *tumeric*, *tulsi*, passion flower, cumin, black cumin, fennel, caraway, dill, climbing asparagus (*shatavari*), peppermint, lemon balm, catnip, yarrow, clover, and alfalfa.

There is more, I'm sure, but my brain is a bit too damp to recall it all.

In July, Mukesh assisted community health workers Massarat and Aziza in supporting an herb gardening project in the *bustees* [slums]. Residents of Nawab Colony, a neighbourhood with contaminated soil and water from the abandoned Carbide factory, have decided to grow some of their own medicinal plants in containers at their homes. Sambhavna provided growing advice, clean soil and plant seedlings from our nursery, while community members provided well-rotted manure for fertilizer, the containers and the interest.

Mukesh said, 'The people from the *bustees* are very eager, and we all had a great time together talking about plants and learning from each other.'

Meanwhile three products from this year's harvest are already being dispensed at the clinic.

Metthi [fenugreek seeds] is being used for treatment of joint pain and elevated Blood sugar levels, *chandrasur* for weakness, low back ache and excessive vaginal secretions, and *isabgol* husk is being used for treatment of constipation which is a common problem among the survivors visiting the clinic. Different mixtures for teas meant to cure colds, coughs and loss of appetite are currently being packaged for distribution.

Nowadays, there is the constant noise of construction as the new clinic buildings rise above us at the top of the hill. As the new facility takes shape we are starting to envision the landscaping for the courtyards, roof terraces and outdoor spaces around the buildings. We will get lots of plants started in our nursery so they will be a nice size for transplanting when the construction is finished. All will

be medicinal of course, and if you doubt that we can create a beautiful landscape with entirely medicinal plants let me just say that even the grass is medicinal!

Here's to your good health!

Much love from Terry



Nicolas and Mukesh make a trellis



Sunil, Mukesh, Nic and Ratna prick out asbwagandha



Mukesh, Nic and Ratna plant a neem seedling

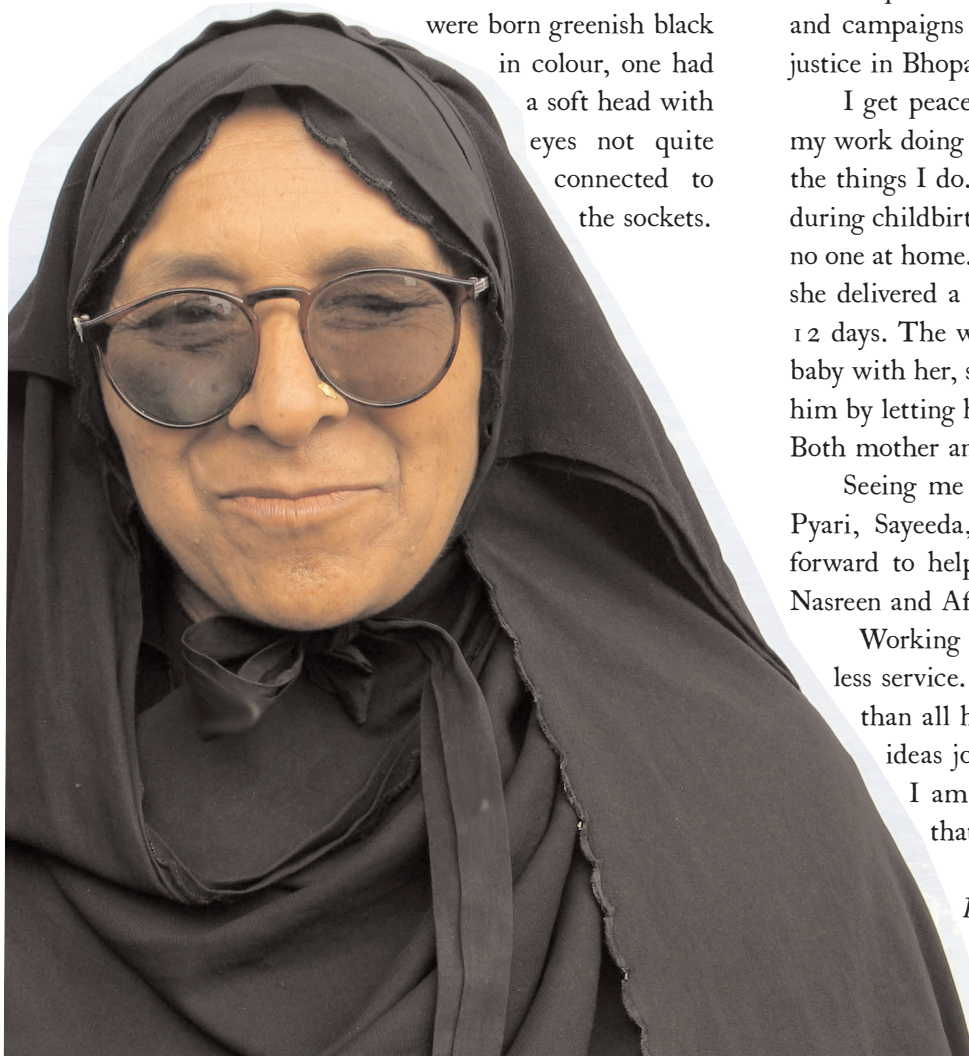
‘Greater than all happiness.’ The joy of selfless service.

Voluntary health workers are vital to our community health effort. They are the links between the people and the Clinic. We always keep an eye open for potential volunteers. They are unusual and selfless people and their example is inspiring. Four of our community health volunteers tell their stories.

RAYEESA BEE [55] RAJGARH COLONY

ON THAT NIGHT I was with my uncle's family. My aunt (40), niece (22) and niece's son (2) were killed. My uncle lost much of his vision and died a year later. We lost all of our seven goats which were a source of income.

My husband and 6 year old son had boils all over full of pus that left black spots. My husband's lungs were severely damaged. He suffered badly from breathlessness and died in May 2003. I have given birth to two still-born children since THAT NIGHT. Both were born greenish black in colour, one had a soft head with eyes not quite connected to the sockets.



As well breathlessness and vision, loss of appetite and other things common among exposed people, I suffer from dizziness, tremors and loss of balance. After THAT NIGHT my periods became chaotic and painful

I respond to any one with a health problem. I identify people who may have TB and send them to the government centre for tests. Earlier, many people used to feel ashamed to go. I also follow-up to make sure they are taking their medicines. I don't mind paying for an auto-rickshaw to carry people to Sambhavna or other hospitals. Often I'm called in the middle of the night to help women give birth.

I tell my neighbours about the benefits of yoga and train them in the *asanas* I myself learn at Sambhavna. I also teach the alphabet to a bunch of children, I do it for nothing, because I want to. People come to me to have their disputes settled. I'm also active in the demonstrations and campaigns of the survivors' organisations fighting for justice in Bhopal. (See article on the *Justice Campaign*)

I get peace and happiness and satisfaction when I see my work doing some good to my neighbours. It's why I do the things I do. Just the other day a woman had problems during childbirth and had to be rushed to hospital. She had no one at home. Pyari Bee and I took her to hospital where she delivered a boy. Pyari and I stayed there with her for 12 days. The woman was very sick and couldn't keep the baby with her, so my daughters brought him home and fed him by letting him suckle on cotton dipped in goats' milk. Both mother and son are alive and healthy now.

Seeing me do these things, several other women like Pyari, Sayeeda, Hameeda, Haleem, Maseeti have come forward to help. And now young women like Masarrat, Nasreen and Afsana are also taking a lot of interest.

Working with Sambhavna taught me the joy of selfless service. The happiness of selfless service is greater than all happiness. I find many people with similar ideas joining the efforts of Sambhavna and I feel

I am on the same plane. I am one of the links that join Sambhavna to the community.

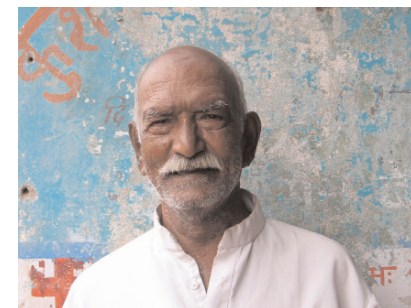
Rayeesa was identified as a potential volunteer by Ramesh-bhai when he was teaching her community how to control tuberculosis. She began her voluntary service in early 2000.

SITARA BEE [40] ARIF NAGAR

I was living in Chandbad near the railway station at the time of THAT NIGHT. I was badly exposed and so were my husband Anwar Khan and sons who are now 21 and 23. My husband has chronic breathlessness, problems with his vision, weakness and has been ill ever since. I have been diagnosed with chronic cervicitis and remain weak. Both sons have retarded growth are underweight and can not do hard work. My younger son sometimes coughs blood but has not been diagnosed with TB. My husband and sons work as daily wage labour but often they can't find work. I work as an assistant at a day care centre at a salary of Rs. 500/- (£6) per month, but people treat me as an employee of Sambhavna.

Sambhavna is different from other hospitals. I think our humanity must be part of our identity because we know how painful it is to bear the pains of the gas. I don't help people out of pity because I know I am in a similar situation myself. I do not want money for work like this. Will never want it. When I tell women about Sambhavna, lots of them want to join me. I talk about the problem of anaemia, how to prevent and cure it. Women with vaginal discharge or other problems, I take to the clinic. I hand out Sambhavna pamphlets like *Towards Better Health for Women*. I join in all Sambhavna's community events.

I was diagnosed with cervical cancer and remember when the doctor told me that I could die. I cried that day and decided to make it my mission that other women should not have to hear such words at such a young age. I learned how one could be a strong woman like the women at Sambhavna. It didn't matter that you were not literate, you could still be a strong woman. Aziza inspires me a lot, I am proud to be a woman.



RAMLAL PATEL [80]
KAINCHI CHHOLA

I joined Sambhavna's Community Health workers in '98 when Diwakar, Ramesh & Aziza were doing a health survey in my community. I am a retired employee of the railways and have been living in Kainchi Chhola since 1942.

There were only 27 houses in Kainchi Chhola when I settled here. Along with ten members of my family I was



badly exposed on THAT NIGHT. We stayed home, did not run away like most people.

I help community health workers in collecting info, monitoring the health of my community and encouraging people who are sick to take treatment. I send people to Sambhavna for care. I can fully understand the pain that a gas-damaged person goes through. When I saw the health workers from Sambhavna the first time I asked them how I could be of help. Because I am a retired person I joined them. I enjoy doing this work, it makes me feel useful. No other hospitals or clinics work in the community in the way as Sambhavna people do. There are many people in the community who show an interest in volunteering but few find the time.

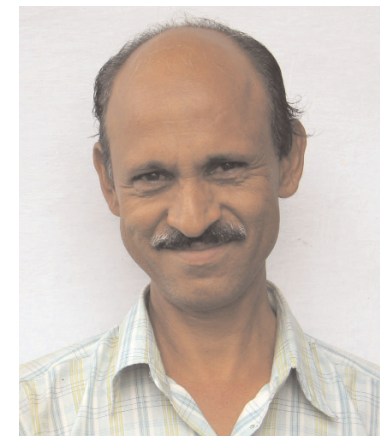
SALEEM KHAN [45]
JAI PRAKASH NAGAR

I am an auto-rickshaw driver. I have been living in Jai Prakash Nagar for the last 23 years. I and all 6 people in my family were badly exposed to Carbide's gases. I still suffer from breathlessness and pain in the abdomen but I have to earn a living to support my family so I can't stop working even it means pushing myself.

I first met the Sambhavna community health workers Diwakar and Aziza way back in late 1996 when they were doing a health survey. When I learned that Sambhavna offers treatment through herbs, massage and yoga I got very interested in the clinic. Also I had never seen a clinic or hospital that sent its staff to the community to find out how the people who took treatment were doing. I was rather impressed and that's how I came close to the health workers. I began telling people in my neighbourhood about Sambhavna and the different therapies it offers.

I help by identifying people in the community who need medical help and I monitor the condition of people who are taking treatment at Sambhavna. Also I do health monitoring work in my community. I do not think it is proper to ask for money for such service.

I try to enlist other people from my neighbourhood as volunteers. It's a question of explaining things to them. When people understand the value of the work we do, they offer to volunteer. I have not kept count of all the people I have helped in the seven years that I've been volunteering as a health worker in the community with Sambhavna.



The irresistible power of nothing

FOR THE LAST TWENTY YEARS, some of the poorest people on earth, sick, living on the edge of starvation, illiterate, without funds, powerful friends or political influence, have found themselves fighting one of the world's biggest and richest corporations, backed by the government, military, and, it often seems, the judiciary of the world's most powerful nation.

The corporation and its allies have it all – wealth, power, political influence, lawyers, PR companies, the ear of presidents and prime ministers, the power to dictate policy or bend it to their will, and to manipulate the courts and laws of two countries to avoid justice in either.

The *nothing people* have literally nothing. If 35,000 of them clubbed together they could not afford one American attorney. Their efforts to obtain justice have been thwarted in every way possible by the corporation that killed their families and ruined their lives. Naively trusting that the Indian government would come to their rescue, they were instead abandoned, sold down the river by politicians and judges, obstructed and swindled by corrupt bureaucrats, cheated by heartless quacks and not infrequently beaten by their own police for daring to protest. (*If you doubt this, turn to the next spread.*) It's David against an army of Goliaths.

The survivors' campaign for justice itself has been conducted on the most unequal terms. On one side, multi-million dollar budgets and the best professional brains money can buy – armies of corporate lawyers, political lobbyists, spindoctors and media manipulators (including Burson Marsteller the world's biggest PR company) – on the other a handful of volunteers often without money for stamps, photocopying, telephone bills, or travel. At any one time over the last two decades, there cannot have been more than about half a dozen people involved in the core team in the west, and there are no more than handful of people in the world who can unravel the whole 20-year saga of the struggle in all its details and in all its forms, medical, technical, legal, environmental, social, political.

Despite these odds, for twenty years the survivors have conducted a courageous and dignified struggle. From this poorest of communities (representatives of the two-thirds of humanity that lives on the edge of the abyss) has come a flowering of science, art and political intelligence.

During the 1990s, the survivors' organisations began

to seek campaigning allies abroad and out of this came *The International Campaign for Justice in Bhopal*, an alliance led by the survivors' groups and including *Greenpeace* and the *Pesticides Action Network*, UK & North America.

The ICJB's objectives fall into two categories.

Vis a vis the 1984 toxic gas release the ICJB seeks to bring Union Carbide (or its 100% owner Dow Chemical) to court to answer the criminal charges from which it has been absconding since 1992, to seek just recompense for the victims, who have struggled against injury and illness for 18 years on 'compensation' that barely provides one cup of tea a day, to compel the company to release medical information on the leaked gases currently being withheld as a 'trade secret'.

Vis a vis the ongoing pollution of soil and water, the ICJB seeks to hold Dow Chemical liable for Union Carbide's undischarged responsibilities in Bhopal, to force Dow to pay for the clean-up, to the highest international standards, of the polluted Carbide factory site in Bhopal, to pay just compensation and provide adequate medical care to all those affected by the land- and water-poisoning.

The ICJB has achieved a string of important victories. It persuaded the Indian government finally to seek the extradition of Union Carbide CEO Warren Anderson to face the outstanding criminal charges against him. At its request the Supreme Court of India has ordered clean water to be supplied to the neighbourhoods whose supplies are polluted. More recently the Supreme Court has ordered that funds held by the Reserve Bank of India for the gas-victims but withheld without reason for 15 years, should now be paid in full and with interest. (It will still not cover many families' medical bills.)

Much remains to be done, but the survivors believe that however long it takes, in the end they will win.

Says survivor Sunil Kumar, 'We will win against the company and all its power for the very reason that we have nothing – and nothing to lose. With all its money and influence the world does not believe Carbide's lies. We will continue to speak simply, tell the truth and ask for justice. There are a lot of good people in the world. When enough have heard our story, they will join us and together we will be irresistible.'

www.bhopal.net/oldsite/icjb.html



One of those good people, Texan shrimp-boat captain Diane Wilson has been a tireless friend to the people of Bhopal.

*‘We people said if no one else will
then by God we’ll do it ourselves.’*

*clean this place that’s poisoning us,
Here’s what happened.*

PHOTOSTRIP BY SARVADARSHI GUPTA
INCLUDES VIDEO RECORDED AT SCENE



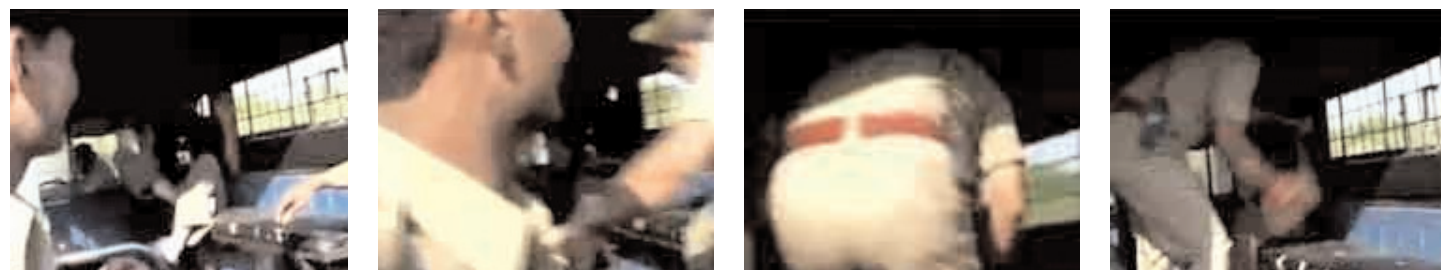
1. In Union Carbide's factory in Bhopal, derelict since THAT NIGHT when it killed thousands, toxic chemicals lie abandoned.



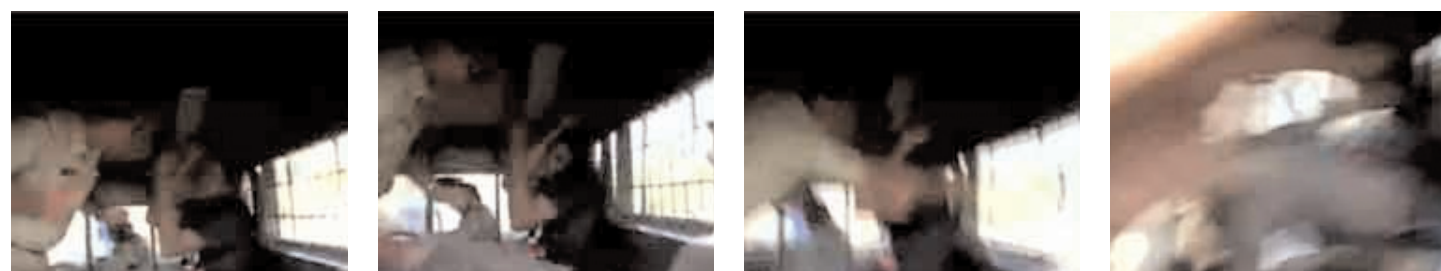
3. Union Carbide (Dow Chemical) disclaims responsibility. Nothing whatever is being done to protect the local people.



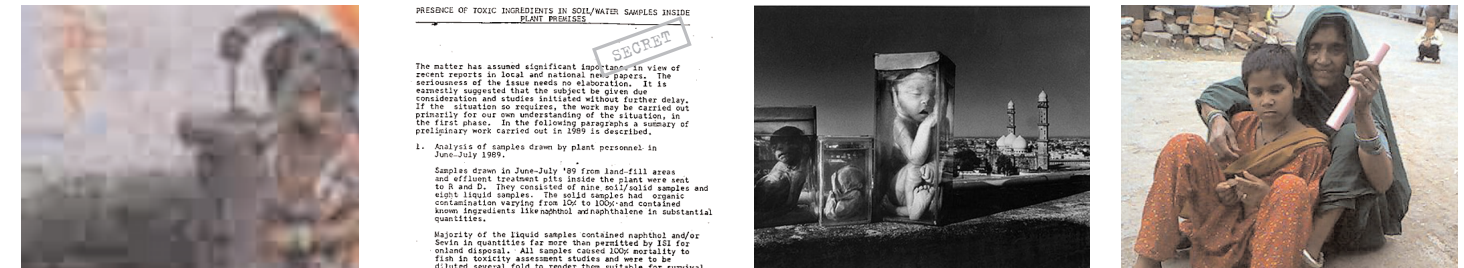
5. But cops arrive with rifles and batons. Champa Devi is defiant, ‘Jhadoo Maro Dow Ko!’ (Whack Dow with a broom!)



7. The young man is flung into the truck. Now Chouhan climbs in. Ouf, ugh, grunt . . . yes he’s in. ‘Now then, bastard . . .’



9. Back comes the fist. Our friend tries to shield his face. Third punch lands. At this point the police spot our video camera.



2. They’re leaking into drinking wells. Lead, mercury and organochlorines are found in breast milk of women living nearby.



4. The people decide to protect themselves and enter the factory with friends and experts who know how to handle poisons.



6. Uh oh, here comes Reserve Inspector Chouhan. ‘You people are always whining. I’ll show you the meaning of toxic!’



8. ‘Who gave you permission?’ He throws the first punch. Hauls back for the next. ‘I asked you, Where’s your permission?’



10. This happened on the 18th anniversary. Now it’s the 20th. The poisons sleep in peace, the killer plant goes on killing.

VIDEO: GREENPEACE, ADDITIONAL PHOTOS: RAGHU RAI, PABLO BARTHOLOMEW, CHANNEL 4 NEWS, MAUD DORR, DAN SINHA, ANDY MOXON

Glastonbury litter-pickers, thank you all for your help,

BIG THANK YOUS TO: the team of 'Bhopal Litter-pickers' who gave their time and effort on behalf of the Appeal at Glastonbury Festival this year, raising £3,120 - enough to run the current clinic for a whole month! Amy Clifton, Tess Lanning, Stuart Frank, Gemma Brace, Jane Stirk, Thomas Murray, Katie Fenton-Morris, Mark Hamberry, Camilla West, Paige Powell, Sheila Hamilton, Ursula Brown, Phil Stubbs, Madeline Moore, Mathew Russell, Daniel Upton, Daniel Jones, Hazel Rowson, Rachel Pearce, Josef Selway Kirsten Ferguson, Helen Poulou, Crispin Dowler, Gel Goldsby, Anna Creasey, Marie Gallagher - heroes all. Some of them even volunteered to help out on bin-tipping shifts, raising even more money than anticipated.

Dolina Grant who donated her well-earned retirement time and calm presence to the office this year. She gave valuable admin support and we were sorry to say goodbye at the end of May.

Volunteer Judy Daniels for her excellent database entries and Mark Hamberry for stuffing many envelopes with good humour!

Friends and colleagues of Jeremy Rees, founder of the Arnolfini Centre for the Contemporary Arts in Bristol who made generous donations in his memory.

Angela Wormald who raised £230 on the London-Brighton bike-ride despite terrible weather conditions!

Fiona Case who has tirelessly supported the appeal. She and friends recently raised enough money to provide a new computer and printer for the pathology lab. Fiona held a

coffee evening/bring and buy sale.

First Nature whose lovely concert in May raised £230 for the clinic.

The Brighthelm Centre, Brighton.

Oldham Unitarian Chapel and One World Centre.

Nali Dinshaw for her generous support.

The Church of the Holy angels, Hales Barns third World Group for keeping Bhopal in their thoughts and raising a further donation of £300.

Mrs N. Jordan and friends.

Jasmine Thomas and classmates at Comrie School in Perthshire. Jasmine personally organised an appeal that raised £115.76

Francine Hills and Bonnie Parker.

Jacqueline James for raising £100 by a plant sale.

The Niniski Trust.

The Paget Trust with special thanks to Joanna Herbert-Stepney.

Priory School Sixth Form Business Studies Group who raised £140 running a tuck shop & holding a raffle.

Usha Shah for her donations and kind support.

A donor in Bristol who gave £2,000 to treat children affected by the disaster.

Mr New for his generous donations in memory of his aunt and uncle.

Everyone who has written in with messages of support and offers of help and anyone else we've forgotten to thank.

Thank you, friends. (Please send your pics in!)

Brighton bike-riders, friends, here's where the money goes

AN INVITATION TO VISIT BHOPAL

If you are thinking of visiting India, please come to Bhopal

so you can see for yourself the good your donations do. You can meet and talk with clinic staff and survivors and fully experience what we mean about all of us being like one family, all together.

VOLUNTEER

Many of our volunteers have medical backgrounds, but it's not essential and all are welcome. The main thing to bring to Bhopal is yourself and plenty of enthusiasm. Of course the scope of work expands tremendously if you can speak Hindi.

Volunteers come for a minimum of two weeks, often fitting in a stay at Sambhavna during a longer tour of India.

Some of the things you may find yourself doing: working as a physician, gynaecologist, cytologist, herbalist or massage therapist, making videos/audios, cataloguing,

making drawings for health education material, operating a computer, updating web site, writing pamphlets, press

releases, devising posters for public education, working in the medicinal garden, going accompanying community workers on their rounds.

ONLINE MEDICAL ADVISOR

People with medical skills can help via the internet with research studies and medical contacts

HELP US FUNDRAISE

You can help by organising fundraising events, forming support groups, giving talks, holding exhibitions. There are always people willing to give you more information and facts about the Bhopal disaster and its aftermath.

The Bhopal Medical Appeal

is a community of people doing something unique and valuable and we are always glad to welcome new people and groups who will enjoy being part of it.

SAMBHAVNA COSTS ABOUT £2,600 PER MONTH TO RUN which includes medicines, salaries, medical investigations, publications and other costs. Here are typical examples:

- £1 - An inhaler for people with breathlessness.
- £10 - Weighing machine for registration
- £20 - Bicycle for health worker
- £40 - Provides a neighbourhood training camp
- £50 - Incubator for culture/sensitivity for pathology lab.
- £66 - Staff training seminar or workshop, per person
- £100 - 7 days of panchakarma treatment for 100 people
- £130 - Monthly salary of full time Panchakarma doctor
- £150 - Two week staff training course, per person
- £260 - Runs our herbal demo/production unit for a month
- £400 - One community education seminar/workshop
- £460 - Computer for data entry or community research
- £500 - One year's community health education materials
- £1,500 - 5,000 copies of survivors' manual for preventing, treating and managing common exposure-related diseases
- £10,000 - Research study into cancer incidence in gas-and water-related communities



360° GLASTONBURY PANORAMA COURTESY OF BBC

The mother of all appeals



None of what you have read about in this newsletter could happen without you.

These are your achievements. Please keep them going.

‘The happiness of selfless service is greater than all happiness. I find many people with similar ideas joining the efforts of Sambhavna and I feel I am on the same plane. I am one of the links that join Sambhavna to the community.’ Rayeesa Bee