



ANUMUKTI

A Journal Devoted To Non-nuclear India

Volume 4 Number 1

August/September 1990

Nucleocrats are a hard lot to please. First, they say, the nuclear issue is too complicated for the comprehension of the general mass of the people — the nominal masters in this "world's largest democracy". In fact, their claim is that the subject is too difficult for anyone, howsoever intelligent, who is not a "trained nuclear scientist," to understand. The only exceptions to this universal rule of general ignorance, are their political masters in the act of sanctioning vast hordes of money - larger than any king's ransom - required for the continuation of nuclear activities. Of course, these worthies only begin to understand nuclear complexities the very moment they enter the government and singularly fail to do so while in the opposition: but that is another story. The fact remains according to nucleocrats' often stated view: nuclear power is a subject meant only for experts and only they should be allowed to express any opinions on it.

Well, here we have a professor of engineering, (see box) a person who has, moreover, specialized in nuclear engineering from IIT Kanpur (no less!), who says that nuclear energy is irrelevant in the Indian context. It cannot meet the real energy needs of the people. The country ought to develop non-conventional alternative sources of energy and not waste time and resources running after the nuclear mirage. There is nothing very radical or 'subversive' in this opinion. Innumerable people all over the world have, of late, been saying similar things. It is, but for nuclear and bureaucratic circles, almost the accepted paradigm. The only mild surprise is that it is an 'expert' who is saying it. But then experts are people tool And people with courage of their convictions, though rare are not yet extinct.

Now one would naturally expect that the nuclear establishment would welcome this rare chance of being able to debate with someone knowledgeable rather than with ignoramuses like the rest of us. Moreover, this is in the context of setting up of a nuclear power station in Kerala — and it could be an excellent opportunity for a "learned" debate for educating public opinion. So, what does the nuclear establishment do. It acts true to form: like a terrorist it strikes at the person rather than the idea.

Once, during my earlier incarnation as a physicist, I was attending a seminar organised by the Department of Atomic Energy. One of their big-shots was giving a talk. He made, what I felt was an erroneous statement (in straight words his physics was wrong). I questioned him about it. As soon as the talk ended, he started making enquiries (from others) regarding where and with whom did I work. I enlightened him on these points myself. Later on, others from the 'department' came and said to me: "Why did you do that? He was obviously displeased by your questioning. He is a powerful person and he will try to harm your career." It was at that moment, that I decided that an establishment which consisted of such petty, vindictive and moreover ignorant characters needed to be exposed through full-time active opposition.

For the safe operation of nuclear installations in the country, even for its safe dismantling, it is absolutely necessary that persons manning the nuclear installations do not have the "nuclear mindset". The commission which investigated the Three Mile Island disaster of 1979 made the following observation:

"To prevent nuclear accidents as serious as Three Mile Island, fundamental changes will be necessary in the organization, procedures, practices and above all in the attitudes of the nuclear industry. The belief that nuclear power plants are sufficiently safe has grown into a conviction. One must recognize this to understand why many key steps that could have prevented the accident were not taken. The Commission is convinced that this attitude must be changed to one that says nuclear power is by its very nature potentially dangerous, and, therefore one must continually question whether the safeguards already in place are sufficient to prevent major accidents."

Therefore, the need for independent critical expertise is fairly obvious. People who could and would question ideas, designs, operational procedures and sometimes maybe even the relevance of the nuclear enterprise. An organisation interested in the proper running of its plants would try to promote the emergence of such expertise within the system. But, instead what we have in India is an establishment organised somewhat like the army. Obedience to 'superiors' is the keyword. All recruitment of officers is done through the BARC training school. The trainees know that those who are their seniors shall remain their superiors all throughout their careers since the only avenue open for employment are the various establishments run by the DAE.

Not satisfied with keeping its own 'soldiers' well in line, the nuclear establishment tries its utmost to ruthlessly stamp out dissent anywhere in the scientific community. The action against Prof. Menon is not an isolated instance. DAE has systematically tried to undermine the credibility of the only nuclear engineering programme (at NT Kanpur) outside its own control. Of the 47 M.Tech. graduates till 1987, only one had been absorbed by any DAE run unit.

It is a great pity that nucleocrats have to a large extent succeeded in their design of keeping the Indian scientific community in a state of docility. It is in vain that one looks for any sign of outrage or protest from scientific bodies like the academies at DAE's arbitrary high-handedness.

It is not only the right but in fact the duty of the scientists to inform and educate the public on life and death issues raised by the application of science for the 'service of man'. No bureaucrat should ever be allowed to use the pretext of 'service rules' to bludgeon an independent minded scientist into silence. Freedom needs zealous guarding.

Surendra Gadekar

Scientist Sacked for Criticising Nuclear Plants

Prof.R.V.G.Menon has been relieved of his charge as director of the Agency for Non-conventional Energy and Rural Technology, for 'embarrassing' the Government by openly airing his views against nuclear power plants in the State. He had published his opinion in a local Malayalam daily and magazine as a sort of rejoinder to Atomic Energy Commission chairman Dr.P.K. Iyengar's statement at a news conference in Tiruvanthapuram early this year. The Government sought Mr.Menon's explanation for violating the Government servants conduct rules and going to the press without getting its prior sanction. The Government order said that Mr.Menon's statements have landed it in an embarrassing situation. Mr.Menon, who had been given a two year extension at the end of the first term in March this year, has been reverted as professor in the mechanical engineering department of the College of Engineering, Thiruvanthapuram. When contacted, Mr.Menon said: "I still feel what I have done is correct. I will continue to express my opinions fearlessly in the future also". He said that it was out of conviction and experience after obtaining an M.Tech. in nuclear engineering from I.I.T. Kanpur, that he had been advocating the cause of non- conventional energy in the past 20 years. He could not fail in his basic duty towards the public, who will be the ultimate victims or beneficiaries of nuclear energy. AEC chairman, Dr P. K. Iyengar, during his press conference had asked people like Justice V.R.Krishna Iyer not to sit In judgement on a subject that should be decided by scientists and experts. Dr Iyengar had also predicted that the proposed thermal plant at Kayamkulam would be more dangerous than a nuclear installation. It was in these circumstances, especially when a public debate was on, that he wanted to present the other viewpoint, Mr.Menon said. Referring to the Governments action, Mr Menon said his understanding of the rules was that Government servants can express their opinions in public on issues of a purely literary and scientific nature. "And I have not overstepped that limit", he said.

Indian Express August 1, 1990

Economic Miracle: Ecologic Disaster

By conventional economic measures, Taiwan's success is undeniable: at \$7,000, Taiwan's per capita income has overtaken that of some members of the European Community. The economic growth rate has averaged close to 9% per year over the last 30 years, outpacing everything but the speed of environmental destruction. Today, most Taiwanese are wondering if material benefits of high speed growth are not, in fact, outweighed by its costs. The people are increasingly refusing to tolerate two of the basic ingredients in the recipe for high speed growth: low wages and environmental degradation. There has been a rapid increase in labour disputes during the last three years and the influence of neighbourhood environmental activists has been on the ascendent among all sectors of the Taiwanese society and now poses a potent challenge to the technocrats' ideology of the primacy of growth.

Taiwan's landscape is as enchantingly green now as it appeared to the Portuguese seamen who christened it Formosa', or "Beautiful Island". But beneath the greenery is poisoned soil. Besides the greenery flows polluted water. And, increasingly, the green itself is toxic grain.

Undoubtedly the greatest potential threat to the environment in Taiwan is nuclear power. Taiwan now has three nuclear plants; if the technocrats had had their way, the island would have been inflicted with a plan to build 20 by the year 2000. Rising public opposition, however, has stymied government plans to build a fourth plant, and the growing space for democratic discussion has pushed the public into taking a more critical view of the whole nuclear power programme.

The nuclear power programme may not serve the interests of the Taiwanese people, but it does serve several powerful domestic and foreign interests:

The Foreign Vendors

Taiwan proved to be a lifesaver for a US nuclear industry that was threatened with extinction as a result of the loss of its domestic market in the late 1970s and 1980s. With tight repression by the KMT(Kuomintang) government curbing anti-nuclear sentiment, the nuclear monopolies were able to carve up the Taiwanese energy market. This 'gentlemen's agreement' is clear from the pattern of contracts: General Electric supplied the reactors for plants Nos. 1 and 2—the Shihmin Hsiang and Kuosheng sites outside Taipei—and generators for plant No.3 at Maanshan. Com-

petitor Westinghouse, meanwhile, provided the reactor for plant No.3 and the generators for Nos.1 and 2. San Fransisco based Betchel corporation provided the architectural and engineering services for plants Nos.2 and 3.

The KMT-Business Elite

Realpolitik entered Taiwan's nuclear equation in the fallout of the US decision to cut off diplomatic relations with Taiwan and recognize the People's Republic of China. Seeking to replace severed diplomatic ties with tighter economic ones, the KMT- business elite saw nuclear energy development as a way to induce prestigious US corporations to increase their economic interests in Taiwan. With the nuclear vendors and other US firms securely anchored on the island, the KMT correctly reasoned, the US government would hesitate to cut off all military and political ties.

The Technocrats

Nuclear power plants provide an opportunity for centralized bureaucratic control unmatched by any other energy technology: already, just three nuclear plants supply over 53% of the electricity generated on the island. Thus Taiwan's technocrats are a natural constituency for nuclear power. Centralization of Taiwan's energy supply is conducive to the technocrats' visions of state-guided high-speed growth. And centralized power production concentrates more economic and political power in their hands.

The Military

The opportunity to reprocess spent fuel from reactors to make weapons grade plutonium has made Taiwan's military a natural ally of the nuclear energy programme. The military's active pursuit of the nuclear weapons option is one of the more dangerous elements of the hostility between the KMT government and the communist government on the mainland. Two controversial incidents have highlighted the link between the 'peaceful' nuclear power programme and nuclear weapons. The most recent was the defection to the United States in 1988 of a Taiwanese colonel, Chang Hsien- Yi who served as a deputy director of the Nuclear Energy Research Institute (NERI) of the Chungshan Institute of Science & Technology, the top military research centre and part of the Defense Ministry. Identified as a CIA informant, Chang is said to have divulged information that led to US pressure to demand the demolition of a secret nuclear research facility in 1987. A similar incident occurred ten years earlier, when

NERI was forced to destroy its nuclear-waste programme after a researcher provided documents to the US.

Towards a Taiwanese Chernobyl?

Safety issues are a special concern to Taiwan which is one of the most densely populated countries in the world. Taiwanese nuclear power experts argue that the greatest threat to nuclear safety in Taiwan is not human error — the cause of both Three Mile Island and Chernobyl disasters — but external events such as earthquakes and typhoons. Even if one were to accept this assessment at face value, there are strong grounds for questioning the soundness of the nuclear energy programme, since Taiwan is regularly battered by typhoons and lies along the so-called 'Pacific Fire Belt', a ring of intense tectonic and volcanic activity. Indeed, the Shihmin Hsiang and Kuosheng power plants, just 12 miles from Taipei, are said to be situated at the edge of the active Ta-Tun volcano group and amid a maze of earthquake fault lines.

But typhoons and earthquakes are not the only problems. The arrogant insistence by Taipower, the state energy monopoly, that no problems ever have or ever will exist at any of its plants, contrasts sharply with widely published accounts of radiation leakages, accidents and cover-ups. In July 1985, a fire at nuclear power plant No.3 forced the suspension of operations for 15 months and caused damages valued at \$300 million. So alarmed were the local residents that they organized meetings and rallies to demand safer emergency and evacuation plans and compensation for the surrounding communities. Another fire broke out at the same plant in August 1987. According to one report, Taipower tried to cover-up a major radiation leak at plant No.1 in January 1986, apparently the second accident at the plant within a year. J.Sprague in the July 1988 issue of *Bang* caustically noted:

"Over 1985 and 1986, Taipower's No.1 nuclear plant set a world record for continuous operation, 418 days without a shutdown... In March 1988, local newspapers accused plant No. 1 of having set up another world record, 56 days of continuous radiation leakage outside the plant — from September 3 to October 28, 1985. Taipower denied the charge but Taipower's credibility is at a low ebb right now."

In February 1988, a generator at the No.1 plant shut down automatically for unknown reasons, later discovered to be computer error. Two fuel pellets were stolen from No.3 plant, then found a few days later. Plant repair logs are sometimes incomplete or missing altogether. Perhaps not unrelated to these mishaps is the inadequate training of plant personnel. While many of the best trained nuclear operators are creamed off by US firms and transferred to the US, 40% of the skilled

workers in Taipower's nuclear plants are under-qualified for the tasks they perform. Most reports of plant safety violations are reported by nuclear plant workers who are upset by their dangerous working conditions. In May 1988, 200 maintenance workers at plant No.1 walked through a puddle of radioactive water the plant manager knew was there. One Taipower engineer filed a lawsuit charging that the exposure to radiation made him ill, but lost the case because pertinent records were found to be missing.

Mismanaging Waste Disposal

There is a surreal quality to Taipower's record and plans in the area of radioactive waste disposal. Children in Taoyuan, near Taipei, had been playing for weeks on a pile of scrap metal near their elementary school before it was discovered to be radioactive. Old parts of nuclear plants exposed to intense radiation were said to have been sold as scrap metal, then recycled into metal for new buildings. An underground low level depository which Taipower built on Lan Yu (Orchid Island), 40 miles from Taiwan's southeast tip, lies on an earthquake fault line. Despite protests by the Yami aborigines who inhabit Lan Yu, Taipower plans to build a second low-level waste dump on the lush nine square mile island — plus a 247 acre park above the dump, including a hall with exhibits extolling the virtues of nuclear energy.

Spent fuel is currently stored at reactor sites. But this is only temporary: a location must be found which can hold the material for the hundreds of thousands of years that they are radioactive. No viable solution, except perhaps shipping the waste out of Taiwan, may ever be found.

"Taiwan is an extremely densely populated island. It is virtually impossible to find a site which would be remote enough that a long-lived radionuclide can be isolated from the human environment. In addition, because Taiwan is a small island, marine life is a vital component of food. Therefore, the ocean surrounding Taiwan and all the nearby small islands are virtually an integral part of the human environment. In other words, small islands outside of Taiwan, no matter how small their present population, cannot be considered 'remote'... Due to its extremely active tectonics, Taiwan has a very complex geology. It is difficult to find a basaltic or shale formation that is continuous, homogeneous stable and big enough to accommodate high level wastes. Last, but not least, Taiwan's subtropical weather conditions call for special attention on studying hydrological (both surface and underground) problems."

The Growth of the Environmental Movement

Taiwan's technocrats' stubborn efforts to ram through the building of more nuclear power plants despite Three Mile Island and Chernobyl has

spawned a strong antinuclear movement. A key event was a well-publicized seminar sponsored by the Consumers' Foundation in April 1985, which brought together a number of scholars and intellectuals opposed to the building of the fourth nuclear power plant. The fledgling antinuclear sentiment sparked by this meeting was boosted shortly thereafter by the July 1985 fire at plant No.3 and the Chernobyl disaster in April 1986. The grassroots antinuclear movement has evolved along the decentralized pattern obtaining elsewhere. This network of 'antinuclear self-help associations' has so far successfully stymied the construction of plant No.4, leading a frustrated Taipower to hire the British public relations firm Ogilvy and Mather to promote nuclear power to an increasingly sceptical public.

The antinuclear movement, however, is just one prong of a broader environmental movement. Aside from forcing the suspension of the fourth nuclear power plant, this decentralized but increasingly powerful movement has stopped Dupont Corporation constructing a \$160 million titanium oxide plant and forced the closure of a major petrochemical plant owned by the British transnational ICI which fishermen had accused of dumping acid waste in their fishing grounds. Averaging one anti-pollution demonstration a day during 1987-88, the movement represents the rejection on part of increasing number of Taiwanese of the KMT's reckless pursuit of growth.

Through its militant mass actions, the environmental movement is bringing home the message that a radical transformation of Taiwan's priorities is in order. Such token measures as the establishment of a 900-person Environmental Protection Agency are no longer sufficient, say the

critics. The growth rate must be radically lowered. The controversial *Taiwan 2000* report asserts that even if the annual rate of Taiwan's GNP growth were cut to 6.5 per cent, the stress on Taiwan's already fragile ecosystem would double by the year 2000.

Will this perilous prospect prove ultimately persuasive to KMT technocrats? Some Taiwanese environmentalists are sceptical, for they feel that there is more to the conflict than the clash of contrasting visions of Taiwan's future between the largely Taiwanese environmentalists and the Mainlander dominated KMT elite. According to Hsu Shen-Shu, founder of the New Housewives Association, which has forged links between the emerging feminist and environmental movements:

"Current policy makers do not love this place as their home since they still operate under the myth of returning to the Mainland and have not changed their basic opinion of Taiwan as a temporary stop, a hotel of sorts. After benefitting from the exploitation of the island, they send their children to the States because it is too polluted here in Taiwan."

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The feelings expressed by Hsu are widespread, and they indicate that the day may not be far off when the KMT, with its policy of export-oriented growth at any cost, is finally evicted by the people of Taiwan.

Walden Bello and Stephanie Rosenfeld
This article is taken from the authors' *Dragons in Distress: Crisis and Conflict in Asia's Miracle Economies*. We have excerpted this bit from *The Ecologist* Vol.20 No.4, July/August 1990

Glasnost Mark n at Tarapur

The Bombay Sarvodaya Mandal along with 12 other organisations had organised a protest rally at Tarapur and Boisar on 6th of August, 1990. About 150 people participated in the rally. Of these around 50, mainly young men and women, had come from Bombay while others were representatives of local activist organisations and

trade unions. Four of us had journeyed from Vedchhi as representatives of Sampoorna Kranti Vidyalaya and *Anumukti*

I was part of a delegation from amongst the protesters who went to give a memorandum to senior nuclear plant officials. The memorandum addressed itself to four main themes:

- The absence of any coherence in the nuclear power generation policy. Earlier, DAE used to shout the virtues of self reliance, but nowadays it is busy signing deals for the import of outmoded foreign technology.
- Environmental radiological pollution.

- Misdirection of scarce resources better spent on development of alternative energy sources
- The veil of secrecy surrounding atomic energy activities.

The memorandum demanded from the Government that:

- They appoint an independent commission to investigate radiological pollution around nuclear power plants and conduct a health audit of the surrounding villages.
- Section 18, 19 and 20 of the Atomic Energy Act of 1962 be amended forthwith.
- A moratorium be declared on further plant construction.

On our way to the administrative building, we saw a group of employees sitting outside. We wanted to give them some antinuclear literature but were prevented from doing so. When I protested, I was told it was for 'security reasons' and due to the need to maintain discipline. "You see, we do not allow anybody to distribute any pamphlets inside the plant. That will just encourage unionism."

We were led into an air-conditioned conference room. There were more than ten people already seated at the back of the room. We were met by three plant officials. Our names were noted down. On my asking them for their names, only these three introduced themselves. "What about the others?" "Oh, they are just security men", was the answer. I wondered if the security men were there to secure the officials from us or from themselves, but I did not say this aloud.

Shri Kumar Prashant on our behalf said that we had not come to indulge in a debate on the merits or otherwise of nuclear energy with them. We deplored the secrecy surrounding the nuclear activities in the country and merely desired to exercise our right to information regarding them. The reply to this was that they were indeed a very open organisation. There was no question of secrecy at all. As proof of this bizarre statement, they pointed to the fact that they had allowed us in and had indeed made all the arrangements (including refreshments!) to welcome us.

Thanking them for their generous hospitality, I asked for a copy of the latest performance report. "Performance report! What is that?" "You know as well as I do what a performance report means! The document which contains

reports on performance since the start of commercial operation, a detailed analysis of shutdowns and accidents, radiation levels and activity discharges, financial performance, etc."

"No, I cannot give you that since that is a policy matter."

"Could you show me the health records of your regular employees and their families?"

"No, I cannot give you that since that is a policy matter."

"What about the health records of the daily wage earners and their families who were made to do 'dirty' jobs involving high doses of radiation and then discharged after getting 'burnt-out'."

"We don't keep records of the health of workers after they leave our employment. So, the question of our keeping health records of their families just doesn't arise."

"Have you conducted health surveys of the people living in the vicinity of the plant?"

"No health surveys have been carried out.

Anyway, it is none of our business or concern."

"You can at least give us a copy of the emergency preparedness plan. It after all affects the public in the most vital and direct way."

"No, that is the DM's duty. We have conducted three day camps for training civil servants and taught them the procedure to be followed in an emergency. We have also printed copies of the emergency preparedness plan. But I cannot give you a copy since that is a policy matter."

So their much vaunted openness extended only up to tea and refreshments. But we could not partake of those since that was a policy matter with us.

On our return to Boisar — the railhead near Tarapur — we found that all our colleagues had been arrested for defying prohibitory orders but they were conducting a very lively public meeting from the compound of the police station and about two to three hundred people were listening to the speeches standing outside the boundary of the station.

Sanghamitra Desai Gadekar

Sampoorna Kranti Vidyalaya, Vedchhi

Hiroshima Day at Udaipur

Gandhi Peace Foundation had organised a function in the Seva Mandir compound to mark Hiroshima day on 6th of August, 1990. There was a small gathering of intellectuals who discussed both nuclear weapons and the nuclear energy issues. Many speakers emphasised the fact that both these issues were in fact only a single issue, since the 'peaceful atom could not be separated from the 'military atom'. The highlight of the day was a slide-show where both slides of people from Hiroshima as well as those of people living near the Rajasthan Atomic Power Plant at Rawatbhata were shown. There was a very lively discussion on the need for nuclear power in India.

Skeletons from Soviet Nuclear Cupboard

According to Russian nuclear engineer, Grigori Medvedev, the catastrophe at Chernobyl-4 in April 1986 had been preceded by more than ten serious accidents at other nuclear plants in the USSR, but information about them was hidden from all but very senior energy sector officials. In an article published in the US weekly *Nucleonics Week*, Medvedev suggests that this refusal to acknowledge major problems with Russian built reactors resulted in a belief on part of the Chernobyl-4 operators that a serious accident at their unit was simply not possible. In fact senior plant officials present at the control room on the night of 26th April stubbornly refused to believe that the reactor had exploded and sent operating staff repeatedly to inspect the ravaged core, thus condemning them to horrible suffering and death.

Further, says Medvedev, there were no dosimeters available that night to measure radiation levels above 1,000 millieröntgens (1 rad), leading plant officials to assure Moscow there was no radiological danger at Chernobyl, despite

obvious radiation poisoning of operating staff returning from the central part of the plant. Medvedev reveals this in a new book about Chernobyl entitled "*The Chernobyl Chronicle*", published by the Soviet writers' journal "*Noviy Mir*", last year. An English translation entitled "*The Chernobyl Notebook*," will soon be available from Basic Books in New York.

Medvedev worked for seven years at Chernobyl (on construction of unit 5) in the 1970s after having been transferred from the operational sector because of radiation exposure of 180 rad. Most recently, he was deputy in the central office for nuclear plant construction in the Ministry of Energy and Electrification which oversaw nuclear plant construction and operation before the Chernobyl accident. His book also contains a section about Hospital No. 6, the radiation illness facility in Moscow where he himself was treated following his exposure and where initially the survivors of Chernobyl were taken to for treatment.

Following is a list of 11 of the nuclear accidents Medvedev refers to, as published by "*Nucleonics Week* (31 May 1990):

September 1957. The now well known explosion of a liquid high level waste tank at Kyshtym defense reprocessing complex near Chelyabinsk. (See *Anumukti* Vol 2 Number 5) Large areas of land still remain off limits after decades.

May 7, 1966. Power excursion in the 62 MW prototype Boiling Water reactor at Melekes. A health physicist and a shift supervisor are irradiated. The chain reaction stops when two sacks of boric acid are thrown on the reactor.

1964—1979. Frequent destruction of fuel assemblies at Beloyarsk-1. Operating staff are irradiated during repairs to the core.

January 7, 1974. Explosion of a reinforced concrete tank containing radioactive gasses at Leningrad-1.

February 6 1974, Explosion of the tertiary circuit at Leningrad-1 from hydraulic shocks induced by violent boiling. Three persons died and highly radioactive water containing filter wastes was released into the atmosphere.

October 1975. Local core-melt at Leningrad-1. A day later over 1.5 million curies are released through the stack.

1977. Half of the fuel assemblies melt at Beloyarsk-2. Irradiation of staff during repairs which last over a year.

December 31 SL..13I& Fire at Beloyarsk-2 caused by the collapse of the turbine building roof. The control cable is completely burned and the reactor goes out of control. Eight people are irradiated while trying to inject coolant into the reactor.

September 1982. Partial core-melt at Chernobyl-1 following an incorrect action by operating staff. Release of radioactive material into the industrial zone and the city of Pripjat; irradiation of staff involved in repairing the core.

October 1982 Explosion of the generator of Armenia-1 (VVER- 440), setting fire to the turbine building. The operating staff manages to keep the coolant flowing, and a team from the far-away sister plant at Kola arrives by airplane to help the Armenia operators save the core.

June 27, 1985. Accident at Balakovo-1 (VVER-1000) during initial start-up, when the pressurizer relief valve opens suddenly and steam at 300°C is sprayed into staff work areas. Fourteen people die. The accident is laid to errors on the part of inexperienced, nervous operating staff.

Source:

WISE New's Communique 334, 22 June 1990

Independent Verification

*In our last issue we carried a report entitled "Chernobhata?" by Sanghamitra Desai Gadekar which claimed that people near the Rawatbhata atomic power station were seriously and abnormally ill and asked that a scientific investigation be immediately undertaken to determine the cause of these serious abnormalities. It is indeed gratifying to note that a national newspaper **The Sunday Mail** has taken the trouble to send its reporters to the area to confirm our story. Their report appeared in the July 29th, 1990 issue of the newspaper and contains some excellent though heart-wrenching photographs. We reproduce the report in full along with some of our own photographs.*

Ramesh is a ten year old boy who developed a high fever a year back. Soon his body started developing tumours accompanied by undue loss of weight. His mother, Motian Bai, says that they mortgaged their land for treatment of their son. But it was to no avail. Ramesh's health has continued to deteriorate, and today he is so emaciated that he stands with the support of a stick. A sobbing Motian Bai says: "I don't know what has happened to the village in the last three years. People are constantly falling ill."

A few steps away from Motian Bai's hut, a 35 year old Balu Bhil sits forlorn. He has still not been able to come to terms with the amputation of his right foot. It had first started with an itch and then his toe started swelling. By the time he was taken to the hospital, the situation had come to such a pass that the doctors decided to sacrifice his right foot to save his life. His brother, Lalu, moans: "It is all because of that plant. We were very sturdy people. But all our illnesses must be due to radiation of the plant."

Radiation is indeed the only English word the villagers of Jharjhani know. They can't even con't

prehend its nuances. But they harp on the fact that the Rajasthan Atomic Power Station (RAPS) and Heavy Water Plant (HWP) at Rawatbhata have become the bane of their existence. The villagers appear to imbue supernatural power to the word, radiation. But are the villagers suffering due to radiation from the atomic stations? This is **hard to tell**, though some experts say that the reason probably lies in the pollution caused by the probable dumping of chemical waste than the radiation from the plant *per se*.

Recently, a team led by Dr. Sanghamitra Desai Gadekar, had visited these villages and had opined that such high incidents of tumour in a single village could only be ascribed to radiation. She had further claimed that the incidents of cancer among RAPS workers and their women folk can only be due to radiation, which has to be far more than the official claims.

Indeed the last three to four years has seen the birth of deformed children — a boy without an ear, a child without a hand, another with an overgrown skull and many with twisted legs. Some disconsolate women complain that children were born, did not grow an inch for the next six months and died subsequently. The villagers have stopped being surprised by such facts like a child with toes stuck together.

The elders are shocked by the way the children of the village start losing weight and fall ill. They complain that most of them too contact fever and skin diseases hitherto unknown to them.

It is indeed a village of disease and deformity. But Jharjhani is not the only place to be afflicted by mysterious malaise. For, a few kilometres away from RAPS the villagers of Tamlav have

similar complaints. Chaturbhuj Singh, for instance, says that ailments of various kinds have become a feature of their existence only in the last five years. Said he: "It was never like this before. Now everyone complains of pains and skin problems."

The villagers of Jharjhani also point out that there has been a depletion in the number of live-stock in the village. Kunwar Lal, who has been residing in the village for the last 25 years, said: "Not one of my hundred goats are alive today."



Balu Bhil and his feet

They all died one after the other in a span of three to five years." Chaturbhuj also points out that the number of cows has been dwindling over the last few years. Said he: "Only 500 cows out of 6,000 survive today."

Most villagers in unison blame RAPS and HWP for another new but depressing feature of their existence — weariness, body aches and lack of appetite. In fact, extreme weariness is one universal complaint of the villagers here. Said Madan Lal of Jharjhani: "We feel tired all the time." He and his friends say that even after a good sleep in the night they find it extremely difficult to get up in the morning. Madan says that even though their eyes open up early in the morning they are unable to get up from the cot because of extreme weariness. "We find it bewildering. We are sturdy people who work in the field, but now we find it extremely cumbersome to raise ourselves from the bed," he explains.

Couldn't their complaints of illness and weariness be due to malnutrition? The villagers answer that neither their dietary habits have changed nor have the quantity of food intake. And then they ask: "But why were we not falling ill earlier? Why are our children increasingly being born deformed?"

In fact, the absence or lack of hunger and weariness is even the complaint of people residing in Rawalbhatta town.

According to a top RAPS official, who agreed to speak but did not want his name to be taken as he did not have the permission from the ministry, said that he found it extremely surprising that they should be blamed for the present situation. "We have never conducted any tests on these villagers. But we do monitor our workers who are exposed to ten times more radiation than the villagers."

What does the medical data of RAPS show? It reveals that 30 workers or their children and wives have died of cancer ever since RAPS started operating in 1973. The approximate number of people who have worked in the staff is put around 4,000. What this official failed to mention was that there are another 10 people who have been reported to be suffering from cancer.

The official, however, clarified: "I must add that only one person can be said to have died of radiation. And anyway there is nothing abnormal with the number considering that the figure of cancer deaths at our plant is 1/4th of the national figure." But the fact according to Dr. Dharendra Sharma, a professor at JNU, is that even a single death due to radiation is a matter of concern and provides ground for further investigation.

The official says that the plant cannot be said to have disrupted the life of the villagers as RAPS has increased the radiation in the environment only marginally. Said he: "The natural radiation in the environment was 80 mr and the plant has only increased it to 81 mr. Theoretically, contamination of the environment due to radiation is impossible. The diseases could be due to socio-economic factors." This official also said that RAPS workers,

unlike the villagers, have never complained of weariness and bodyaches.

But this claim is pooh-poohed by the workers themselves. Most of them, however, were not willing to speak on record due to fear of retaliation from the management. But J.C.Gupta, a worker at RAPS, said: "I assure you that every one of us feel the same kind of weariness as complained by villagers. Besides they can hardly claim to examine the workers diligently. I have been medically examined thrice in the 18 years of my service at RAPS. The health of the workers has been deteriorating over the years. Like the villagers, there have been cases of deformed children being born to RAPS staff too."

While the workers allege that safety regulations are not adhered to and that some chemicals were dumped in the lake which supplies water to the village and the town, the official says that they have not violated any safety rules. He further pointed it out that it would probably be good to get the villagers examined and a survey conducted to put the controversy to an end. No one believes us, he complained.

Incidentally, such medical surveys abroad are the combined responsibility of the Ministry of agriculture, environment and health. Shouldn't this be done in India too?

Ajaz Ashraf
Sunday Mail, July 29, 1990

**CHERNOBYL:
A DOCUMENTARY STORY**

Iurii Shcherbak

**Canadian Institute of Ukrainian Studies
University of Alberta, Edmonton 1989**

This little (168 pages) book is the first eyewitness account of the Chernobyl accident and the events succeeding it to reach us. It was first published in the Russian magazine *lunost* in 1987. However, it was only in 1989 that an English translation was published by the Canadian Institute of Ukrainian Studies. The fact that this important bit of evidence has taken more than three years to come to our notice is a sad commentary on the 'global village'.

In some ways this delay has outdated some parts of the book. The writer, Dr Iurii Shcherbak, is a medical doctor and a successful author in Ukrainian with nine books already behind him. His humanism and his sympathy for the common people is apparent throughout the book. Also transparent is the fact that he is a communist and a believer in the inevitability of nuclear energy. Chernobyl to him is "the final warning". Humanity must change itself — (evolve in to a new breed *Homo-Nomistakus* - Editor) — to become fit to live in the nuclear age. As Dr. Shcherbak put it, "Man must learn to co-exist with nuclear energy". In the foreword to the book, it is mentioned that Dr Shcherbak is in the process of writing an expanded version. It would indeed be interesting to find out if the events in Eastern Europe as well as the unending nightmare of Chernobyl have made him change his views over the last three years.

This said, it must be admitted that this is indeed a splendid book, spellbindingly written. Great calamities are like a giant searchlight. They illumine both the good and the bad in human nature. Like Dickens said of the French Revolution — "It was the best of times. It was the worst of times." — It is not often that one gets a book that tries to describe both these aspects. Of course, Dr Shcherbak lays greater emphasis on the heroism and the self sacrifice rather than on the petty minded selfishness but that is as it should be. The words of simple folk -who did their duty without any fuss while staring death in the face, simply because the task had to be done - have an incredible strength and beauty and uplift the spirit.

No price "is" mentioned on the book and it is a great pity that the book is not easily available in India.

Excerpt

"Myshko Holovnenko, the driver, set off without a pause and I set out second. There are two engines in our brigade. I was in one and he in the other. Well, you know, it often happens that when we set out we don't close the doors, and the doors are glass, and often the wind breaks them. So, normally the one who comes out last must close them. Pryshchepa and I closed the garage. I thought to myself: I'll catch up with Myshko. I've got a ZIL-30. So off we went and I chased him around 80 Kilometres an hour. Above my head the walkie-talkie was cracking, he was calling Ivankiv and Poliske out, the traffic controller was calling us out. I could hear that this was a real alarm call. I thought that it was really something serious..."

"Then I caught up with Holovnenko's engine, so that there would be no confusion over the building, so that it would be two engines together at once. We drove up. As soon as we were there, we could see the flames. It was like a cloud with red flames. Pryshchepa said: "Well, grandad Hrysho, there will be lots of work." We arrived here ten or fifteen minutes before two o'clock. We got out — where now, then? We surveyed the area. Graphite was scattered all around. Myshko said: "Graphite, what's all this?" I kicked it away. But a fireman on the other engine picked it up. "It's hot," he said. Graphite. There were various pieces, big and small, pieces you could take in your hands. They had fallen all over the road and we were trampling all over them. Then I saw Pravyk run up, the lieutenant who died. I knew him. I worked two years with him. And my son, Petro Hryhorovych Khmel, is a guard chief, just like Pravyk was. Pravyk was chief of No.3 guard, and Petro of No.1. They finished their education together.. And my second son, Ivan Khmel, is the fire brigade inspection chief for the Chernobyl region."

"Yes, so Pravyk ran up. I asked him: 'What now, Voloda?' And he said: "Lets get the engines on the 'sukhotruby.' Over here." And now the engines from the brigades No.2 and No.6 came up and turned towards us. We had two and they had three tank trucks and a mechanical ladder. Five engines on this side. All together! We moved the engines up to the wall onto the 'sukhotruby'. Do you know what 'sukhotruby' are? No! They are empty hoses to which you have to connect the water and then drag them up there, on to the roof; and we had to take hoses, and join the hoses and put out the flames."

"We set the engine on the 'sukhotruby' really close up, we had a very powerful engine, Petro Pyvovar's from No.6 on the hydrant next to it; there is no longer any room for mine there. Then Borys and Mylola Titenok and I said: "Let's have a hydrant!" Well, they found us one, and that was difficult at night. During training we knew that our hydrant was on that side according to the plan, but it turned out that it was on this side. We found the hydrant drove the engine up close, quickly threw the hose out, and they — Titenok and I think Borys, I can't remember — rushed forward to Myshko's engine. Three hoses twenty metres each, that makes sixty metres."

"We didn't have much idea about radiation. AN the workers didn't have any idea The engines delivered the water, Myshko filled the tank with water, the water went up and then those lads who died went up. They scrambled up there using the step ladder. I helped them set it up, and it was done very quickly, all this was done and I didn't see them again.

THE POWER OF THE POWERLESS

Ordinary people all over the world have suddenly realized that they cannot wait for governments to come up with solutions to the real problems of everyday life. In fact they have found that governments are a major cause of the problems in the first place. Thus, in the East as well as in the West, in the North as well as in the South, people are putting things right on their own. A few inspiring examples....

'Dissidents' in Power

Something quite new is happening in Czechoslovakia these days. It is not the collapse of the communist system to which I am referring, although this phenomena is of undisputed historic importance. It is, rather, what is taking its place. Under the leadership of President Vaclav Havel, playwright and humanist, simple and extraordinary, the "anti-politicians" (as they called themselves, the "dissidents," as we insisted on calling them) are taking over. How does an "anti-politician" function in the world of politics? The answer is stunningly simple: according to principle, the principles of fundamental humanism and individual moral responsibility.

The first acts and pronouncements of Havel and his new cabinet can serve to illustrate. For example: Havel has declared that Czechoslovak internal secret police are to be abolished and dismantled. Not reformed, not renamed, not justified according to any "reason of state," but simply disbanded —not to be replaced. The new Czechoslovakia has no need for a secret police to spy on its citizens. Contrast this simple and straightforward approach with the wrangles in East Germany over the very same issue (when the dreaded "Stasi" were apparently going to be reconstituted as "Nasi"), or in the United States, for the matter, where the surveillance of U.S. citizens by FBI has long been an issue of controversy.

Similarly, Jiri Dienstbier, Czechoslovakia's new Foreign Minister, has announced that Czechoslovakia will no longer be engaged in the production of weapons for export. No studies were commissioned to look into the ..question of lost profits (and they will be considerable: arms sales averaged close to a billion dollars per year for Czechoslovakia during the 1980s). Weapons

manufacture is simply being stopped because it is inimical to the nature of the new state.

Perhaps most revealing of the depth of Havel's humanity and commitment to non-violent solutions was his "controversial" apology to Germans who suffered in the forced deportations of virtually all Germans (about three million people) from Czechoslovakia's Sudetenland at the end of World War II. Havel refuses to repeat the usual and popular justifications and excuses based on German atrocities against the Czechs between 1938 and 1945. His apology, like all his pronouncements is simple and exquisitely humane. In the same vein, Havel appealed to the Romanians to spare the life of toppled dictator Ceausescu and has spoken out in his own country strongly against vengeance on the communists.

How is it that Havel has remained so calm and assured in the midst of his sudden "elevation" from dissident to President? In an appearance on American television his brother, Ivan Havel, answered that Havel has *never* sought political office, and does not regard it as any sort of pinnacle in his life or career — or as fundamental to who he is. In short, being President has not changed him (as we can see from photographs of a familiarly rumpled and jean-clad Havel in his President's Office). The uniqueness of Czechoslovakia, even in the midst of all that is new in East Central Europe, is that rather than challenge the communist political ideology and structure with an alternative political ideology, Havel and Company are challenging politics *itself* (the organisation of power by human beings over each other) as altogether inappropriate for and detrimental to human society.

In his famous and seminal essay written in 1977, "The Power of the Powerless," Havel clearly states the essence of his "anti-political" philosophy. The power of the "powerless" in any society (including the totalitarian or "post-totalitarian" states of Eastern Europe) lies in the refusal to "play the game," the refusal to compete for power. The power every individual has to live one's own life *as if* a free man in a free society. In the living of such a life, one becomes a free man, as Havel was a free man even during his years in prison, even now as President, even as those who imprisoned him were not: they were trapped as we now see so clearly, by their commitment not just to a political ideology, but to the very notion of retaining power.

There has been much discussion in the recent past of the possibility of a "third way" (as an

alternative to the tired dichotomy of capitalism vs. socialism) emerging in Europe. Some saw it in "Socialism with a Human Face," the Czechoslovak experiment of 1967-68; others saw it in the prospect of a "convergence" of the two systems, each adopting the best aspects of its opposite to correct its *own* failings. Today, many believe that the "collapse of communism" signals the victory of capitalism. These people (economists, in particular) tell us there is no "third way."

Meanwhile, back in Czechoslovakia, in the very heart of Europe, Vaclav Havel finds himself President. Talk about a "third way" has ended (there is no time for it *now*), but it *is* being lived. Simply, profoundly, humanly. By living "as if" there is a third way, the Czechoslovaks are creating it.

Anita Shelton

The Accorn

A Gandhi an Review Vol. 5 No. 1 March 1990.

Indigenous Uprising in Ecuador

On 28 May, 1990 about two hundred tribals occupied the church of Santo Domingo in Ecuador's capital Quito. They presented the government a petition of 16 points concerning the rights of the indigenous population of that South American country. The government, however, reacted by sending in the police to surround the church in order to solve the 'crisis'.

The opposite happened: On the evening of 3rd June, tribals in the mountainous Andes region and the jungle areas of Amazonica blocked roads, occupied squares and declared an 'indigenous uprising' (levantamiento indigena) between June 4 and 6. With this expression they placed their action into the tradition of the big indigenous revolts of the eighteenth and the nineteenth centuries. The government was forced to negotiate.

Forty-five percent of Ecuador's population belong to nine indigenous communities which have partly managed to preserve their traditions and social structures. The 1980s saw a revival of the indigenous movements and rapidly the indigenous population became the most highly organized sector of the society.

At the same time, the slow down of agrarian reform, no development of the educational and health situation in rural areas, a total of 72 land disputes with indigenous communities, and the growing encroachment by colonizers and industry (oil, resource exploitation) on indigenous lands in Amazonica have created awareness among the indigenous people. In fact, today only ten percent of the cultivable land actually belongs to the tribals. The main demands of the uprising were: a solution to the land disputes, granting of land rights to the communities and the transforma-

tion of the state into a 'pluri-national' system. The demand to recognise the indigenous medical practices, among others, demonstrates the growing cultural self-awareness of the tribal population.

In 1492, Columbus 'discovered' America. European colonizers benefited from this discovery. The uprising marks the beginning of the commemoration by the tribals of five hundred years of foreign domination. It is remarkable that tribal organisations have demonstrated their political maturity by remaining completely non-violent, by not allowing political parties to use the events for their own ends and by developing concepts for a total transformation of society.

Source: SERPAJ-AL, Guayaquil;

Hoy Daily, June 5—10, 1990

Perestroika in Practice

An unprecedented confrontation between the public and the Navy took place in the Soviet Far East after a local newspaper "Voskhoo" wrote that the military had decided to use a harbour close to the city of Sovetskaya Gavan and the village of Vanino as a "chopping block" for decommissioned nuclear submarines attached to the Pacific fleet.

There was immediate explosion of public indignation. The official reaction too, was quick. At a hastily convened meeting of the Vanino District Communist Party committee, Anatoly Klimov, the first secretary reprimanded the editorial board of the newspaper for what he termed its "inventions". At an emergency meeting of the presidium of Sovetskaya Gavan's Soviet of People's Deputies, Yuri Savkin, member of the naval garrisons political section, shared Klimov's sentiments and tried to placate people's fears. "We haven't received any order to dismantle the subs' heat-emitting elements (nukespeak for nuclear fuel)."

But in contrast to the political instructor, the naval specialists did not try to lie and spoke frankly. "We have orders from the fleet commander to unload nuclear fuel from the reactors. The planned schedule for the dismantling is ready. The work, though it will inevitably increase radiation is in principle, safe."

The deputies however, did not share in this official optimism. Physicians cited the district's already greatly increased cancer rate, especially among children, and one angry housewife, speaking on behalf of other mothers, demanded that the Navy remove all its nuclear subs, and that the Tatar Strait be turned into a nuclear-free zone.

A non-sanctioned meeting was held in Vanino on May 18, 1990. It was the first of a whole series.

The speakers are quoted in local newspapers as having said: "We are tired of living in fear" and "How can we believe the specialists after their many years of covering up about Chernobyl."

In the beginning of June, Mikhail Gorbachev, said in a TV interview in USA that " We have amassed so many weapons that we don't know how to get rid of them."

Over 40 percent of all Soviet nuclear submarines have been in service for more than 20 years and will have to be retired on a mass scale. But nobody in the world knows what to do with nuclear subs, how to disassemble their reactors and where to bury them. (Why what's the problem? Lease them to India, the land of Buddha and Gandhi -Editor). In short, by removing the threat of nuclear war, we have become captives of another threat — global pollution in the form of nuclear waste. It was not inexpensive for us to arm but, judging by everything, it will be even more costly to disarm.

In the meanwhile, the energetic protests of the coast's hundred thousand population forced Vladimir Kuroyedov, chief of Sovetskaya Gavan's naval garrison to stop, at his own risk, the operation ordered by the commander of the fleet. He even allowed public representatives to watch over the subs where the work had been planned. A specially elected strike committee called off its planned general strike this June and so defused an explosive situation. Resolutions of meetings were sent to fleet HQ telling them that they had until July 1 to announce when they would be removing the subs from Sovetskaya Gavan.

Stanislav Glukhov

Moscow News June 24—July 1, 1990.

The American Dream—2

Over the past year massive experiments in non-violent resistance have erupted in two rural counties in upstate New York. The people have mobilized to protect their communities from the threat

of nuclear waste. Both Cortland County in Central New York and Allegany County in the southwest corner of the state are plastered with antinuclear posters, signs and billboards. Thousands of citizens have entered the activist world, many for the first time in their lives. They have written letters, put orange "No Nuclear Dumping" posters in the windows of their homes and cars, demonstrated, and physically blocked state officials from inspecting the proposed sites. The level of excitement and anger has been tremendous as these newly awakened activists have begun to recognize their power and responsibility.

In 1988 Governor Cuomo appointed the Low Level Waste Siting Commission to locate a site for a dump and decide upon the disposal method. The Commission soon settled down on a 'short list' of five specific sites, two in Cortland County and three in Allegany County. Nobody has believed the Commission's claim that they can build a dump that would pose no threat to the host community.

The selection process is currently at an impasse. Massive non-violent resistance has stymied the Commission's efforts to inspect the sites and move forward with the selection process. In their six attempts to perform on-site work, they have been prevented from getting near the sites four times and twice they have been surrounded and stopped after reaching the sites. The Commission has publicly admitted that they are unable to carry out their task and have sought to increase legal penalties for obstruction.

Ultimately the value of the movement will be decided by its long term impact. Will people see and understand the connections between environmental destruction, social oppression and an economic system based on profit? And will these people retain their commitment or will they go back into their pursuit of the American Dream?

Andy Mager and Kath Buffington

NONVIOLENT ACTIVIST Vol.7 No.5

July/August 1990

Lulling One's Own

The atom bomb which was dropped on Nagasaki killed many thousands of Japanese. But it along with other nuclear weapons used for tests during the "cold war" also killed and continues to kill many Americans too. We have previously carried a number of reports in *Anumukti* (see Vol.3 Nos 2, 3 and 4) regarding the health consequences of the radioactive iodine releases at the Hanford facility belonging to the U.S. Department of Energy. These reports have included first person accounts

of the suffering caused to those who were children during the years 1945-56, as well as a review of a book which dealt with just this problem. On July 11th, 1990 the U.S. Department of Energy admitted publicly for the first time that the doses were high enough to have caused illness including cancer in nearby residents. This belated government admission presumably opens the way towards compensation of the victims through lawsuits and legislation.

The Unending Nightmare

British experts and equipment are being sent to Gomel in the Soviet Union as part of an international effort to assess whether another three million people need to be evacuated as a result of the Chernobyl accident four years ago.

The Russian authorities finally agreed to allow access to all the information available about Chernobyl after fears that up to one million children may be suffering severe health effects. The fallout of Chernobyl is now estimated to be 50 times greater than that of the Hiroshima atom bomb.

Five scientists from the International Atomic Energy Agency (IAEA) have been to the Soviet Union to establish what needs to be done to find out the full effects of the disaster.

The most serious problem is that more than three million people live in contaminated areas and have ingested radioactive material but no one yet knows what effect this is having on them. The Soviet Union has little of the specialised equipment required. Boris Goudima, foreign affairs for the Ukraine told the *Guardian*: "We are still only realising the true extent of the tragedy. At first the Russian authorities did not tell us in the republic what was happening and we could not find out the extent of it because we had no equipment to measure it. Now we can see it for ourselves. All the children in the contaminated areas have swollen thyroids. They do not laugh or run or play like children, they sit around in groups like old men."

In the Ukraine five million hectares of farmland and 1.5 million hectares of forest are contaminated. Despite some 90,000 being evacuated, there are still some 1,600 towns and

While going through the account of your cycle yatra I had a strange feeling which I would call healthy jealousy. Every day there are several reminders of the prison that I have created around myself but the cycle yatra also reminded me of the possibilities of fulfilling childhood dreams of adventures with a much greater meaning! I don't know exactly when, but some day I am bound to join you people in your yatra.

Sanghamitra's report on the health of people around Rawatbhata reactors is so shocking that one feels at a loss for words. I have got it xeroxed and given it to some people here. I am also going to send it to all the newspapers.

villages occupied in this area, with a population of 1.5 million. This year another 15,000 people will be resettled but another 150,000 with seriously affected thyroid glands need to be removed. Radioactive hot spots are still being found.

The neighbouring republic of Byelorussia has 20% of its farmland and two million of its population contaminated. Mr.A.N.Sytsjev, a foreign minister, said: "The consequences of the Chernobyl disaster have turned out to be much larger and on a more serious scale than was perceived by many, including prominent scientists and experts."

So far only 173,000 people, including 37,000 children, have had extensive health checks. A further two million need them. Britain is being asked to supply individual dose meters and other equipment as well as medical and nuclear scientists. Hans Meyer, spokesman for the IAEA in Vienna, said: "The Soviet authorities have at last agreed to put all their cards on the table. We shall be establishing the headquarters at Gomel between the two most damaged areas in the two republics to make the first proper assessment of the real scale of the damage, It is a daunting task."

Women in the contaminated areas have no access to uncontaminated baby foods because of lack of relief funds.

Mr Meyer said that the IAEA had to assess the scale of the problem and then make recommendations. Its report is expected to be ready by the autumn.

Paul Brown

The Guardian May 21, 1990

During the last few months I have been trying to gather more information on the Narmada project. It is very distressing to realise that the Gujarati press refuses to see the problem of rehabilitation as it really is, Even if we accept that the 19 villages of Gujarat can be rehabilitated, it is no more than a small fraction of the task. I find the stand taken by the Vahini group at Mangrol also very disappointing. They are perhaps doing a very good job of monitoring the rehabilitation of villages in Gujarat but they say nothing openly of the just demand of the 6 villages of Kevadia and other project affected people. It is said that they have serious differences with the activists in M.P. and Maharashtra, but is it not clear that none of the

state governments have so far identified the land required? And what if even after the land is identified, the villagers refuse to move? One hopes that as time passes the real nature of the project will become clearer to those who believe it is inevitable and that there will be a united front of all activists who will support the villagers who will be refusing to move.

I have recently come in contact with a group of young students who call themselves "Nature Crusaders" and they have shown great interest in the environmental aspects of the Sardar Sarovar Project. One of them, Chandrakant Patel, has done a survey of the waterlogged lands in Kheda district. During our next meeting I intend to suggest that we start a group to discuss issues related to nuclear energy.

Kersi Sabavala
Sigma Equipments
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Baroda 390010

Since the defeat of Dr. Karanth in the last election, CANE (Citizens Against Nuclear Energy) and the rest of the antinuclear movement in Karnataka seemed to have gone into a coma. But recently there have been some attempts to revive the movement. Now there is one immediate issue about which concerted efforts are required. The petition filed by Dr. Karanth and others on Kaiga has come up in the Supreme Court for hearing. We have formed a support group in Bangalore to back up the efforts of the legal team in Delhi. Unfortunately, the lawyers handling the case in Delhi are not knowledgeable about nuclear power in general and Kaiga in particular. V.M.Tarkunde is to present our case in the Supreme Court and has to be thoroughly briefed on the subject. On July 9th, when the court reopened after the summer vacation, it served a notice on AEC, NPC, et.al. to submit their arguments in two to three weeks. After which the case is scheduled for actual arguments on August 28.

We are trying to send as much information and documents to our lawyers in Delhi. In that connection, it would be useful to have detailed reports of radiation effects around Rawatbhata. From a legal point of view radiation effects infringe upon the right to life. So please send as much data as possible in whatever form it exists. Some photographs have been published in *Anumukti*. Congratulations! They might be useful in court.

The April issue of *Anumukti* had a write-up on the fifth BEIR report. There were also references to other reports which implied that the effects of low-level radiation have been grossly underestimated in the past. These too would be useful.

We have been told that social, ethical and financial arguments are not decisive in a court case

like this, but respectable and authenticated studies and arguments based on the law have to be invoked. We will put in our efforts and hope for the best.

San jay Havanoor
61, Central Excise Layout,
Vijaynagar, Bangalore

I am sending a copy of a news item which appeared in *Moscow News*. {See Page 13-Editor}. *Financial Times* has recently published a gist of a report by U.K. Energy Commission which criticises the Department of Energy in that country. The same paper also carries a report on the problems of the power plant manufacturing industry in Czechoslovakia. I think both these reports will be of interest to *Anumukti* readers.

The Bengali version of *Nuclear Free Seas* by Greenpeace is out. This book is dedicated to Narayan Desai, Shyamali Khastagir and Dr. Shivaram Karanth. (All dedicated antinuclear activists -Editor) The introduction is written by the International Campaign Coordinator of Greenpeace. I do not know how much money I will get as royalty from the book. But whatever it is, the royalty will go to *Anumukti*.

Niranjan Haldar
79, R.K. Ghoshal Rd., Calcutta 700042

I am simply feeling sick going through Sanghamitra's report on Rawatbhata in your June/July issue. How long would our scientific community and so called intelligentsia remain spectators? I salute the *Anumukti* team for keeping the feeble flame of protest still burning.

At present I am trying to write a small book along with Dr Subhendu Dasgupta and one of our friends on India's growing military-industrial complex. We plan to write it in Bengali so as to reach a wider section of people.

Dipankar Dey
28, A.V.L. Street, Calcutta

Two days ago, we had a CANE meeting, mainly to discuss how to counter the Nuclear Power Corporation's 1/4 page ads that have started appearing in the press. We shall be meeting shortly again, to finalize the drafts and later I will post it around the country.

However, the main reason for this letter is, can you send me a xerox copy of the letter sent to N.P.C. by Sigma Equipments which appeared in your last issue. What I am visualising is to circulate this letter to members of the Chamber of Commerce in Karwar, Hubli, Dharwad and in Goa.
Hemachandra Bassappa
21, Railway Parallel Rd. Nehru Nagar
Bangalore 560020

The June/July newsletter is an improved issue! Its contents, as dramatic as they are easy for lay readers, should do some great service.

Can I copy from *Anumukti* and send the text as letters to the editor with reference to the newsletter? Do you send *Anumukti* to institutions and ministries in India? To schools, universities and technical centres?

S.Sharma-Hablik
32 Rue Suffren
Pondicherry 605001

Any material which appears in *Anumukti* can be copied with or without reference. One of the purposes of *Anumukti* is to give wide coverage to the information contained in it and we would be only too happy if our readers were to perform this service. We send one complimentary issue to anyone whose name is suggested by any reader. Due to financial constraints and also on ideological grounds we do not give *Anumukti* gratis on a regular basis.

The following is the copy of a letter written to Shri V.P.Singh, the Prime Minister of India.

The 1989-90 annual report of the Department of Atomic Energy (DAE) has a map of India showing the location of all DAE installation and facilities. This map, however, makes no reference to DAE's massive installation — Rare Earths Material Plant at Ratnahalli, near Mysore. Several times in the past, the residents of Ratnahalli and Mysore have alleged and protested that this is a secret installation to produce enriched uranium towards a

Anumukti strongly condemns the testing of a new missile named "Akash" by the India.

We believe that research and production of new weapon systems do not help to reduce tension and the possibility of war in South Asia. Investment into war industries goes hand in hand with reduced efforts in the social and economic sphere and are thus bound to sharpen social conflicts within the country.

Keeping these points in view we suggest the following action: Please write letters to Dr. Raja Ramanna, Minister of State for Defense, asking him to reconsider the whole missile programme and to divert the weapons research budget to socially useful (that excludes nuclear energy) civilian research. Please send copies of the letter to Shri V.P.Singh and to your local news media. We would appreciate if you could keep us informed about any reactions and send us newspaper clippings.

weapon's programme. Are their' fears and suspicion justified?

Secondly, the omission of reference to this installation raises several serious questions with dangerous implications in view of the Treaty with Pakistan on the Prohibition of Attack Against Nuclear installations and Facilities. Article II of this treaty states:

"Each contracting party shall inform the other on 1st of January of each calendar year of the latitude and longitude of its nuclear installations and facilities and whenever there is any change."

Will you please kindly explain to the people of India as to what is going on at Ratnahalli. The people of India have not given you or anyone else the mandate to make a nuclear weapon. In a recent interview you are quoted as having said that in the future you shall deal firmly with situations. May we plead with you to enforce this firmness with the Department of Atomic Energy and the Nuclear Power Corporation and get someone to brief you on their facilities.

Hemachandra Basappa
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Subscription Rates:

Rs.25/-per year South Asia
U.S.\$ 15/-per year air mail overseas
(Rs.200/-per year If paid for in India)
Please add Rs.6 for cheques
Drafts should be drawn on State Bank of India Valod (0531)

Editor: Surendra Gadekar

Subscription, donations, manuscripts, enquiries regarding circulation should all be addressed to :

Editor *Anumukti*
Sampoorna Kranti Vidyalaya
Vedchhi. Dist.Surat. 394641 INDIA

Published by S.Gadekar for Sampoorna Kranti Vidyalaya and printed by him at The Parijat-Printery, Ahmedabad.

PRINTED MATTER

BOOK POST
