Environmental Degradation and Subversion of Health

by Mira Shiva

When the concept of 'maldevelopment' was launched in the context of the 1975 Dag Hammarskjöld Project on Development and International Cooperation, it was primarily intended to characterise the over-supply and over-consumption of inessential and unnecessary goods and services in the industrialised countries and in their small annexes in the Third World. In this contribution, Mira Shiva shows how 'maldevelopment' is expanding in the Third World together with the increase in abject poverty. This trend can be described as one of irrational excess on the one hand and of extreme deprivation on the other. What large segments of the population are deprived of are, as Mira Shiva emphasises, essentials like food, clean water and air, health care and safe living and working conditions. The excess, on the other hand, consists of the bombarding of our beings, our lives and our environment with hazardous gases, chemicals and biological contamination, i.e. irrational and inessential toxification. In her contribution, Mira Shiva also provides a series of other striking examples of how Third World societies are flooded with inessentials in the midst of an increasing scarcity of essentials. She ends her thought-provoking article with a section devoted to the politics of population policies, an area where the North for more than thirty years has been trying to solve problems of extreme deprivation of essentials with an ever increasing number of hazardous and irrational technological fixes.

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A series of environmental tragedies over the last decade—Minamata, Chernobyl, Bhopal, the contamination of the Rhine with toxic effluents from Roche, the oil spill in the Gulf, etc.—have focused attention on the increasing 'chemicalisation' of the environment; more or less at the same time, the thalidomide, SMON (subacute myelo-optic neuropathy) and DES (diethylstilbestrol) tragedies and, more recently, the increasing incidence of iatrogenic disease and pesticide poisoning have dramatically illustrated the growing 'chemicalisation' of the body. Both developments have forced us to realise that health and environmental issues cannot be dealt with in isolation; not only are they intrinsically linked to each other, but neither can be easily solved by a quick technological fix. For pollution today is not merely...
chemical, it is also biological, social and psychological. The resulting damage, disability, disease and death are totally unwarranted, usually irreversible and hardly ever compensated; the ultimate tragedy is that they are often compounded by exploitative trade practices and heavily weighted research priorities.

To my mind, the problem may be articulated as one of extreme deprivation on the one hand, and of irrational excess on the other. The deprivation is that of essentials, such as food, clean and adequate water, air, health care, and safe living and working conditions. The excess consists of bombarding our beings, our lives, and our environment with hazardous gases, chemicals and biological contamination, i.e., irrational and inessential toxification. Important lessons in this area of deprivation and excess can be drawn from the experience of the politics of population policies, which has long divided the South from the North.

History has shown that laws can act as a deterrent whereby social conscience and responsibility take precedence over individual profiteering. But where vested interests have ensured an accumulation of power and money, the silence of the tormented is enforced, and that of law enforcers bought. Legal loopholes are given precedence over morality and ethics, and unjust laws are passed, while attempts to enforce controls are scuttled, whether they relate to the Bhopal gas tragedy, the violation of the Baby Food Code, drug dumping or the indiscriminate use of toxic pesticides. Ecological and health hazards cannot be prevented or dealt with unless a collective consciousness is built up among those who are willing to make sacrifices and to live without destroying and exploiting. It is only when enough people have cared and dared that changes have been enforced.

The impoverishment of the poor is increasing worldwide, even as unprecedented power and means of control are being monopolised by a few, through instruments like GATT, structural adjustment programmes, or through a development model which causes debt and dependency rather than benefiting the poor, as it purports to do. As the disparities and inequities grow, as liberal market forces are let loose, we will see more and more people deprived of essentials, and both people and environment flooded with the irrational and hazardous.

Deprivation of essentials

The deprivation of adequate and appropriate nutrition; of safe and adequate drinking water and pure air; and of basic needs including health care, education, employment, the right to safe working and living condi-
tions and to human dignity, constitute a denial of the essentials of a civilised and just society.

The greatest energy crisis today is that of hunger, suffered by millions of poor across the globe, and especially in countries burdened by the debt crisis and reduced food security as a consequence of structural adjustment programmes, which have severely eroded the survival base of the poor.

Iron deficiency

Nutritional deficiency starts very early in life and is manifested as underweight, stunted height and so on. The most common nutritional deficiency amongst women in India is iron deficiency anaemia; 60-80 per cent of pregnant women suffer from anaemia and 20 per cent of maternal mortality is due to it. They live with chronic fatigue, breathlessness on exertion, headaches, and palpitations, often experience heavy bleeding during childbirth and give birth to low birth-weight babies. Iron deficiency anaemia is not only caused by a lack of iron in food or by menstrual loss, but also by common hookworm infection. This is picked up by walking barefoot on soil contaminated with hookworm, due to inadequate sewage disposal.

The inadequacy of technological fixes is illustrated by the case of the National Anaemia Prophylaxis Programme. An evaluation by the Indian Council for Medical Research of this programme costing several million rupees shows its failure significantly to raise the haemoglobin level in the blood of women administered ferrous sulphate, as part of ante-natal care. The haemoglobin level was 11 gm/litre in 88 per cent of those given iron tablets and the same in 87 per cent of those who were not given the tablets. Frequent pregnancies, childbirth and lactation obviously further deplete the women nutritionally, especially when their nutritional reserves are already low.

Iodine deficiency

In iodine-deficient areas—not merely the Himalayan belt, as recognised earlier, but also large tracts of the Gangetic plain which flood annually—the washing away of iodine from the soil along with many other nutrients leads to iodine-deficiency diseases (IDD). Iodine deficiency in pregnant women can result in miscarriages or the necessity for abortion, stillbirths, the birth of cretinous or hypothyroid babies, deaf-mutes, or babies with psychomotor retardation. In India alone, 120 million people are exposed to IDD and 60 million actually suffer from it. It is well known that if the total population suffers from goitre then four per cent of the babies born will be cretins or mentally retarded. Iodine deficiency is now being identified in other
parts of the country where it was not previously considered endemic. Its appearance can probably be attributed to the increased use of pesticides and fertilisers, and to sewage contamination. All these have goitrogenic properties, while thiocyanates in cabbage, ladies finger, etc., decrease the uptake of iodine.

**Vitamin deficiency**

Nutritional deficiencies that result from an inadequate intake of vitamins are similarly on the increase for a variety of reasons. The prices of natural sources of vitamins—fresh fruits and vegetables—have increased; as cropping patterns change with the cultivation of cash crops for export, as food prices soar and public distribution systems shrink, the nutritional status of the poor worsens. In the last few decades not only has the consumption of pulses per capita decreased, but land under cultivation with pulses and oil seeds has also been substantially reduced. In addition, budgetary cuts in health and education spending and a trend towards the privatisation of these services will only worsen the health status of the poor majority.

**General neglect of women’s health**

The very high rate of maternal mortality in our parts of the world is indicative of the systematic neglect of women’s health, not just at childbirth but for several years before and after. Early marriage, early and repeated pregnancies, and the burden of household responsibilities, all take their toll. The solution to unwanted births lies not in bringing more powerful contraceptive technologies into the market nor in adopting more and more coercive population control methods, but in enabling women to take at least some decisions affecting their own lives. In India, the State of Kerala has shown that women voluntarily choose smaller families; this is clearly due, in some measure, to higher female literacy, awareness of rights and a somewhat improved socio-economic status, but it is also a result of land reforms and the introduction of minimum wages and access to basic health care to ensure the survival of children. Indeed, it is not possible to think realistically about a drastically reduced birth rate without first ensuring food and social security for the poorest among the poor.

Systematic neglect apart, women’s health is very adversely affected by a range of social and cultural biases and practices which result in common, avoidable gynaecological disorders, sexually transmitted diseases, AIDS, infertility and a very high incidence of anaemia, urinary tract infections and cervical cancer. Women are also frequently in danger of extreme physical violence.
Without a significant change in their health, and social and economic status, exhorting women to have one or two children only, for the sake of making the population control programmes a success, is meaningless. With increasing poverty such a demand becomes even more untenable, particularly as unjust trade and economic policies will only make matters much worse for women. This has been amply illustrated by analyses of the impact of structural adjustment programmes in Africa and Latin America.

Medical technological fixes cannot compensate for the deprivation caused by deep-seated gender bias, poverty and shockingly inadequate health care, primary education, rural sanitation and drinking water. Each of these has a direct bearing on population control, as we shall see.

Inadequately supplied with water by the municipal corporation, slum-dwellers in the colony resorted to using water from thousands of shallow hand-pumps, only 5–10 feet deep, hurriedly installed prior to the previous elections. During the summer of 1988 over 1,000 overflowing septic tanks remained uncleansed. Each toilet had 108 users. The onset of heavy monsoons spread the faecal sludge all over, contaminating the water in the shallow hand-pumps. Had the people had access to safer drinking water, the tragedy could have been averted or at least minimised; and had the infection cycle been broken by ensuring adequate toilet facilities, and collection and treatment of sewage, the disease would not have spread. The question then arises: was the epidemic caused by the contamination of drinking water or by the non-disposal of overflowing sewage? One thing is clear: the area is six to ten feet below the riverbed, requiring a series of pumps and drains to drain waste and sewage water. Most of these were not functioning at the time. Toilet facilities were grossly inadequate; despite the rapid increase in population as a result of rural migration, there had been no improvement in civic amenities, even basics like sanitation and drainage. Maldevelopment continues to erode the environment base in the periphery as well as in the cities.
The Delhi epidemic of 1988 was just the tip of the iceberg, and the medical response to it was sadly inappropriate. Over 800,000 people were vaccinated within a week during the peak period, at the expense of oral rehydration therapy and containment with antibiotics, when it is well known that the cholera vaccine has little or no role to play once the epidemic has set in. Oral rehydration therapy on the other hand has been hailed as the greatest medical revolution of the century. Its use during the Bangladesh war in 1971 in the refugee camps reduced cholera mortality from 31 per cent to two per cent.

Cholera is a water-borne disease of acute onset in which rapid loss of water and electrolytes through vomiting and passing of watery stools can prove to be fatal unless rapid return of fluids is ensured. This prevents the patient from suffering severe dehydration, after which only an intravenous infusion of glucose saline and an intravenous administration of the deficient electrolytes can save life.

But costly commercial preparations of this kind are liable to backfire: written instructions on how to administer them are in English, a language that most people, especially poor women, cannot read or understand, and many of the packs do not conform to standards set by WHO for the combination of glucose, sodium, potassium and bicarbonate. A few years ago, the head of the paediatrics department at a large hospital in South India noted that a majority of the cases of hypernatremia and convulsions in the paediatric ward were of children with diarrhoea, who were given the commercial oral rehydration solutions in wrong doses. Home-made solutions, taught to the mother and given early enough, are a far safer and more efficient remedy than strawberry-flavoured solutions in 'scientific quality packs', administered unscientifically and too late.

It is important to deal with the issue of irrational and hazardous anti-diarrhoeals since they flood the market and figure in the prescriptions of a majority of medical practitioners. Over-the-counter brands of hydroxyquinoline (Mesaform and Enterovioform, marketed by Ciba Geigy), have been withdrawn, following consumer pressure. Several brands of gut-paralysers (diphenoxylate hydrochloride) which have a very narrow risk-benefit ratio have been linked to toxicity and death in children. Unfortunately, because no warnings are carried in regional languages, such medical remedies for diarrhoea can sometimes prove to be very hazardous. Another common antibiotic combination, which the government's own Drug Consultative Committee recommended, in 1980, should be weeded out im-
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...mediately, was the fixed dose combination of chloramphenicol streptomycin. This was officially banned through a Gazette Notification on November 3, 1988, but different brands continued to be freely sold, as drug manufacturers managed to get a stay order against the ban. The adverse effects of commonly used drugs, where the side effects are often more serious or more likely to be fatal than the diseases they are supposed to cure, have been highlighted by rational drug campaigners. Chloramphenicol, once commonly used to treat typhoid (because of its effectiveness and low cost) can cause severe bone marrow depression and a fatal drop in white blood cells. When given to small babies it is known to cause 'grey baby syndrome'. Moreover, its over-use or misuse for trivial problems such as viral diarrhoea (for which, incidentally, antibiotics are an ineffective treatment) results in the emergence of drug resistance.

The irony of it all is that while environmental hazards continue to grow, medical solutions for the commonest and fairly well understood medical problems become more and more warped. Thus instead of early and adequate rehydration for diarrhoea and appropriate use of antimicrobials when needed, irrational and hazardous drugs proliferate. They not only detract from the main treatment, but have serious side effects of their own, besides being economically wasteful.

New vaccines—new technological fixes

The Vaccine Action Programme (VAP) was initiated in India in 1985 as part of the Reagan-Gandhi Science and Technology Initiative. The 9.6 million dollar Indo-US vaccine project, financed by USAID and US Public Health Service, was concluded, bypassing the high-powered biotechnology scientific advisory committee set up by the Government of India. The Union Science Minister was ignorant of the details, as was the Science Advisor to the Defence Minister. The Director-General of the Indian Council of Medical Research said categorically that he would not allow any vaccine to be tried on Indians unless it had been approved for use in the US. The priority areas identified for vaccine trials were cholera, typhoid fever, rotavirus, hepatitis, dysentery, rabies, pertussis, pneumonia and malaria, most of which are either water-borne, air-borne or vector-borne.

There has been an exaggeration of the role of vaccines in disease control and a gross underestimation of the risks and hazards of bio-engineered vaccines. It has been estimated that only 23.5 per cent of the decline in mortality due to infectious diseases can be credited to medical intervention; purification of water, safe disposal of sewage and better food and nutrition have been the most significant reasons for disease control in industrialised countries.
Micro-organisms have always existed in nature with other forms of life and have evolved with animal and plant species. Genetically engineered organisms are not part of this evolutionary process. The exploitation of recombinant DNA viruses as live vaccines increases the probability of initiating major alterations in the genomes of cells, organisms and species throughout the biosphere. They are potentially volatile agents, which can spread new forms of disease and epidemic even as they are being offered as palliatives for old ones.

The environmental hazards of these technologies are well known to scientists and regulating agencies, for which reason regulatory constraints, public protest and court injunctions against experiments feature domestically in the North. Little wonder then that these experiments are carried out in countries with lax legislation and low public awareness. Bio-engineered anti-rabies vaccine trials were held by Wistar, an American bio-engineering company, in Argentina, in 1986, without the consent of the government or people. As soon as the Argentinian government became aware that they were taking place, the trials were terminated. The Health Ministry stated that farm hands caring for vaccinated cows showed a rise in their antibody titres—they, too, had had the live vaccine passed on to them from the cattle. In India, too, the bovine rabies vaccine field trials constitute a part of the Vaccine Action Programme; all documents, plans, specifications, contracts, schedules and other arrangements, with any modifications therein, must be approved by USAID.

Apart from the question of who determines health priorities and the nature and control of research is the issue of the use of live viruses as vaccines. How will the adverse effects of these live organisms released into the environment be monitored when their full dimensions are not even adequately known? When they present themselves—as they did in the case of thalidomide, DES, the Dalkon shield, SMON and estrogen-progesterone drugs cases—who pays the price in terms of suffering, disability and death? There was a time when it was said that the use of antibiotics in veterinary practice would not affect humans adversely, but very soon sensitisation and the emergence of drug resistance were noticed. When hormones such as oestrogen were used in poultry and animals to make them bigger and to increase profits, the public was told there was no danger—until men consuming poultry that had been hormone-treated developed gynaecomastia, i.e. growth of breasts.

The use of the hormone, pitocin oxytocin, in cattle at the time of delivery was found to have been passed on in their milk, and there have been reports
of pregnant women aborting following its intake because oxytocin is known to cause contraction of the uterus. The use of chemicals in animals affects human health as they move down in the food chain. In the US in Maine in 1973, highly toxic polybrominated biphenyl (PBB) was added to cattle-feed instead of magnesium oxide, killing thousands of livestock. By the time the public was alerted the PBB contamination had moved down through the food chain.

Animal feed and Bovine Spongiform Encephalopathy

As the demand for animal feed increased with commercialisation, intensive farming spread to include cattle, pigs, ducks, fish, etc.; 'rendering' plants and 'efficiency' were given priority over microbial safety and nutritional value and by the end of the 1980s the rendering industry was deeply entrenched and considered highly successful in financial terms.

It was in late 1988 that there was a major controversy in the UK over the presence of salmonella in eggs. While attempts were made to convince the public that they could not cause typhoid in humans, the controversy was serious enough to end in the resignation of the Health Minister. It was only due to the salmonella-in-the-egg fiasco that the British public learnt that the reason that salmonellasis had spread so widely in chickens, even infecting the eggs, was because the remains of the food animals were returned to the same species in their feed.

It was in late 1985 that the first cases of Bovine Spongiform Encephalopathy (BSE) occurred, and by 1987, the scale of the epidemic was confirmed. In April 1988, Sir Richard Southwood, Professor of Zoology at Oxford, was asked by the Ministry of Agriculture, Fisheries and Food, to advise them on BSE. His report was published in February 1989 and its key conclusion was that, 'From present evidence it is likely that cattle will prove to be a “dead-end host” for a disease agent and most unlikely that BSE will have any implications for human health. Nevertheless if our assessments of these likelihoods are incorrect, the implications would be extremely serious.'

It is now being found that BSE can successfully be transmitted to mice and pigs and has probably infected cats and zoo animals such as antelopes and their offspring. It is quite clear that cattle are not a ‘dead-end host’. It was earlier thought that BSE might be caused by the scrapie agent from sheep, and that due to a low degree of infectivity there was little cause for alarm. But it is now thought that 'BSE resulted from the amplification of this type of agent many thousandfold, so that between one to five per cent of cows and cattle in the UK may be infected'. Southwood's recommendation that
carcasses of all BSE-infected animals be incinerated was never implemented and they were dumped in landfill sites where the infective agents, being exceptionally resistant to heat, can survive for years.

Lessons from Minamata

The contamination of fish in Peru and the subsequent cholera epidemic there in 1989, and the mercury poisoning which led to the Minamata tragedy in Japan, are too well known to bear repeating. In both, facts were suppressed, fears were assuaged by falsification of information, and the toxic threat problem denied. But some lessons may be drawn from the Minamata tragedy, at least. First, we really know very little about the chemicals that we use, produce and discard as untreated waste, believing them to be 'safe'. There are chemical disease entities which do not exist in medical textbooks, that are recognised only when tragedies have already occurred. Until the early 1960s, it was widely assumed that elemental mercury emitted or dumped into the biosphere was not much of a hazard because it does not react easily with other substances, is quite stable and is only slightly soluble in water. Since 1907 when the Chissio plant had been built, routine dumping of the industrial waste in Minamata Bay had continued. While all the industrial waste dumped into the water was in an elemental inorganic form, it was the more toxic alkyl form, methyl mercury, that was found in the fish inhabiting these waters.

By 1972 it had been demonstrated in many parts of the world that relatively insoluble elemental mercury could be transformed into a highly toxic and soluble form of methyl mercury by micro-organisms living in the sediments on the beds of natural waterways. This bio-transformed methyl mercury, when absorbed by fish tissue and consumed by humans and predators, settled in kidney, liver and brain tissue. Bacteria isolated from human faeces can methylate mercuric chloride, suggesting that the synthesis of methyl mercury compounds from mercury present in food can occur in the human intestinal tract. Dr Hajime Hosokawa, Chissio's own physician, had begun animal testing on cats after the 1956 outbreak, feeding them Chissio waste; on October 7, 1959 he noted that after feeding a cat with cetaldehyde wastes containing mercury, 'it convulsed, salivated and then suddenly whirled at a great speed, crashing into laboratory walls'. It was a tragic decision on his part not to publish the results of his findings until he was on his deathbed in 1979. Irreversible and incalculable human suffering and maiming could have been avoided, since Chissio continued to maintain that insoluble elemental mercury could not make its way into the food chain. In 1958 when Chissio quietly moved its effluent discharging outlet from the bay to the river, people along the river contracted Minamata's disease within months.
In 1959 Chissio installed a cyclator waste water treatment unit with great fanfare. It was hardly used, because Chissio engineers knew of its ineffectiveness, and mercury-laden waste continued to be dumped into the river. Ten years later mercury poisoning broke out in Migata in Central Japan due to the dumping of toxic substances in the Agano river by the Showa Denko company; the victims sued the company and it was only then that a suit against Chissio was also filed by its victims. They fought for four years, demonstrating, picketing, going on hunger strikes. In 1968 Chissio stopped dumping mercury waste into the Minamata bay, not because of its health hazards or the fear of having to compensate victims, but because the use of mercury catalysts in making aldehyde had been rendered obsolete.

On March 20, 1973, Japanese courts ordered the payment of USD 60,000 to USD 68,000 to each victim of the Minamata disease, depending on the severity of the disability and damage caused. In a second agreement, the victims forced Chissio to bear the living and medical costs of each sufferer, to publicly apologise for negligence, and pay out over USD 200 million in damages. Of 1,401 individuals certified as victims of Minamata disease, 353 had died by 1979.

With more stringent environmental pollution controls in the US and Europe, many polluting industries are moving into the Third World. There is a proliferation of pesticide units in India in Gujarat, Maharashtra and Uttar Pradesh, discharging their effluents into the river Ganges. The Bhopal leak was a disaster not only because it caused the death and disability of thousands, but because it made obvious the fact that neither the government nor the state authorities, nor the scientific and medical professionals had a clue regarding the toxicity of the chemicals being used or produced as intermediates and final products. They were completely ignorant of their hazardous effects and of how to manage poisoning if it occurred, and fairly ineffective in preventing and managing such toxic hazards.\(^2\)

The 1988 H acid (chemical used in making of dyes) poisoning case of Bichri (Udaipur) in drought-prone Rajasthan is another case in point. Five companies making this chemical were discharging their effluents into Udaisagar canal. Sixty wells were polluted, making the water undrinkable for a five kilometre radius and up to a depth of 200 feet, and over 500 acres of land were made uncultivable.

The extensive use of pesticides, many of which are banned in their country of origin, has made cultivation more capital-intensive and also seen the adverse effects of pesticides in the food chain. Pesticide resistance is beginning
to appear, failed crops make livelihoods perilous, and the consequent indebtedness has led to some tragic fall-outs. In 1987 over 60 cotton farmers in India's prime cotton-growing district of Prakasam (Andhra Pradesh) committed suicide by consuming pesticides.

The accidental ingestion of pesticide caused the Basti tragedy of 1990 when food distributed in recycled pesticide containers was distributed at a wedding. Two hundred people died as a result. Pesticide poisoning cases have also been reported when highly toxic pesticide pellets have been ground with grain for making flour. Reports of thousands of fish in Kuttanad developing sores on their bodies have been received; similar reports have come in from Malaysia and are related to the presence of industrial chemical effluents in rivers.

Unfortunately, this tendency towards potentially dangerous and irrational excess does not stop with chemical pollutants or fertilisers and pesticides. It pervades the thinking of most planners and policy makers in both the Third World and industrialised countries, and is nowhere more evident than in the prevalent discourse on population control.

The politics of population policies

There is a growing number of people which views population control policies as dangerously close to being racist, sexist and imperialist, as well as anti-poor. These individuals and groups are equally concerned about the health of the nation and the health of its people, and are asking some extremely uncomfortable questions for which there are no easy answers. They want to know why so many corporate giants sit on the Board of the International Planned Parenthood Federation—i.e. representatives of Dupont Chemicals, US Sugar Corporation, General Motors, Chase Manhattan Bank, International Nickel, Marconi, RCA, Xerox and Gulf Oil. They want to know why population policies and research in fertility control are supported by the defence wings of certain countries, and why population is seen as a 'security threat' by them, requiring 'stringent action, bordering on subtle coercion of national governments and through them of their people—which in almost every case happen to be the women'. They say, if stringent population policy was an anti-poverty measure, then those countries in Latin America which have had 80 per cent of their women sterilised should have begun to lead a qualitatively better life, rather than become poorer and more deprived. There should have been fewer poor and fewer street children in Brazil, which brought down its birth rate by 50 per cent within 20 years—something its northern neighbours took several centuries to accomplish.
Hunger, poverty, and national indebtedness have worsened dramatically for most Third World countries. Denied social security, the poor in these countries continue to look to their children to provide labour and social security, especially in agrarian societies. Consequently, they look upon solutions which are ‘good for them’, coming from outside, with doubt and suspicion. For those involved in health work, population control policies have been a double tragedy, first because they failed to meet women’s contraceptive needs and second because they eclipsed other necessary health care work.

India was the first country in the developing world to formulate its National Population Policy in 1951 with the First Five Year Plan. It was centrally planned, financed and monitored, and implemented at the state and local levels in a typically top-down manner. It did not require the statistical evidence provided by the Planning Commission’s mid-term evaluation report to demonstrate that the policy was a failure; recipients of the service had been saying all along that it was not meeting their needs. The predictable bureaucratic response was to change the nomenclature from ‘family planning’ to ‘family welfare’ and ‘maternal and child health’. But the strategies, attitudes and methodology with regard to family planning, and therefore the treatment of women, remained unchanged. Unfortunately, no one was really listening to the people. After all, the foreign expert’s solution is always right, especially when it is handed out together with funds. In their view, women were prone to breeding like rabbits, and therefore their fertility had to be curbed.

How different the scenario would have been had the obvious been recognised at the outset: that female literacy, the guarantee of a minimum wage, and social and political awareness, especially in relation to women’s status, have a great deal more to do with opting for a small family norm than do technology-centred, coercive population control programmes. Where the former are not ensured and where women are subordinate in everything, from access to food, education and skill development to freedom in decision making, equal wages and access to productive resources, birth rates are always higher. They are high when the survival of children is not ensured, when there is a repressive compulsion to produce male children, when female children do not count. ‘Demographic fundamentalism’ is what Ashish Bose calls the craze for male children. When women have no easy access to safe and effective contraception, and absolutely no control over their fertility or sexuality, the freedom not to conceive is not in their hands: they do not have the right to say ‘No’. It is ironic and tragic for brain-washed, insensitive or desensitised health workers to mouth slogans and dish out accu-
sations, holding the women 'guilty' of producing too many children, when
the women themselves have had little or no say in matters related to con-
ception.

No one cared to listen to what the women had to say—listening with sym-
pathy to their problems and constraints was not part of the population pol-
icy. Had those whose hearts bleed for the soaring population of India cared
to listen, they would have recognised the need to strengthen the hands of
women early enough, educationally, economically, and socially so that they
could be helped to make choices about conception and contraception.

The insensitivity and dehumanisation of the programme can be seen in its al-
most total neglect of all other aspects of women's health problems. The inci-
dence of gynaecological problems—trichomoniasis, moniliasis, acute
chronic pelvic inflammatory disease, sexually transmitted diseases, cancer
of the cervix and urinary tract infection—is significant. A community-based
study by Drs Rani and Abhay Bang carried out in Ghadhcharoli, a tribal dis-
trict in Maharashtra, found that 92 per cent of women were suffering from
gynaecological diseases, 52 per cent with symptoms including pain, discom-
fort, leucorrhoea, and dyspareunia (pain during sexual intercourse). Other
health problems related to child bearing, nutritional deficiencies, com-
municable diseases, infections, etc., also seemed to merit no concern. Only
fertility receives sustained attention.

It is well known that maternal mortality in India is shockingly, embarras-
ingly high, worse than in many poorer nations. It is also well known that 20
per cent of it is related to iron deficiency anaemia and its complications.
Most causes of maternal mortality are preventable; why is it then that
women continue to be poorly nourished and to die during childbirth? Is
child-birth the cause of death, or is the failure to diagnose, prevent and treat
the reasons for maternal mortality (all connected with women's status and
their access to food, education and health care) responsible? High maternal
mortality is just another symptom of a deep-rooted, widely prevalent and
socially accepted gender bias which begins at birth and continues until
death. Now, with amniocentesis and pre-natal sex determination, it can be
seen even prior to birth. If all the money spent on family planning, where
'target setting' resulted in manipulated 'target meeting' attempts, and
where the magic of incentives linked with sterilisation made even conscien-
tious health workers neglect spacing methods and other aspects of health
care, had been used more judiciously to meet women's needs, the results
would have been more encouraging. The focus on meeting targets led to
large-scale corruption; statistics were concocted, family planning camps car-
ried out as many tube ectomies as possible, without after-care or accountability, leaving women with complications and a great deal of dissatisfaction. This in itself turned women against sterilisation, and was far more influential than all the propaganda, including the money incentive.

As a consequence of this misguided policy, not only were women deprived of much-needed health care, they were also denied the knowledge and provision of other non-incentive-related and non-terminal spacing methods that were sorely needed by them and by the nation. It is not surprising that when they began to recognise the lack of genuine concern or interest in solving their health problems, and experienced only aggressive and sometimes subtly coercive manipulation, they became alienated from the health care system. No one really cared about how the family planning programmes were run, how satisfied the recipients were and what problems they faced. In such a situation, the failure to achieve any significant drop in the birth rate was only to be expected.

According to Ashish Bose the major reasons for the failure of the family planning programme have been (i) undesirable foreign orientation; (ii) monopoly on the part of bureaucrats; (iii) monopoly on the part of the central government; (iv) sole concern for quantitative targets and their achievement, irrespective of their impact on birth rate; (v) neglect of women's health. Who should be held responsible for the billions of rupees wasted on this futile exercise, undertaken with the guidance of foreign experts and tied foreign aid? If it were just a question of waste, it might have been explained away; what is regrettable is that a sensitively conceived programme, which could have met the genuine contraceptive needs of many women, was never allowed to take shape. The involvement of people is necessary for the success of any programme like this; if the very people on whom its successful implementation depends have been alienated by target chasers (who should have been health-care providers), the loss has to be calculated in more than just monetary terms. The social costs of this misadventure have been tremendous.

If our health services had addressed themselves to women's health problems and their genuine contraceptive needs, women today would have been the greatest supporters of a humane and sensitively implemented family planning programme. It is the failure of our programmes, policies and of governments to respond to their concerns that has made women refuse to participate in a 40-year old attempt to regulate their fertility.
The myth of choice

In a society where a woman has no choice about when and to whom she should get married, when and how many times she would like to conceive, or even how much she should eat while she is pregnant or lactating, and where she is in no position to avail herself of minimal rest from strenuous work in the terminal stages of her pregnancy, does she really have any choice regarding contraceptive methods? Can she be expected to make an informed decision when she has no access to information, when often the only alternative open to her is sterilisation?

A powerful deterrent to using commonly prescribed, non-terminal methods of contraception has been the serious lack of accessible health care. None of the many thousands of women in whom Dalkon shields had been inserted could seek advice or compensation for serious complications, simply because they had no access to their own medical records. Again, when roughly 50 per cent of our people live below or on the poverty line and are nutritionally deficient and prone to infection, insertion of IUCDs in women with gynaecological infection often causes chronic pelvic inflammatory diseases. These in turn can cause adhesions in the Fallopian tubes, which may result in infertility, ectopic pregnancies and so on. When the number of women involved runs into several millions the potential magnitude of the problem is self-evident.

Although policy advisors, policy makers and health officials responsible for implementation utter the usual reassuring rhetoric on the importance and safety of the various technologies, actual experiences belie their promises. The apparently 'successful' vasectomy camps of Kerala, when repeated in Uttar Pradesh, led to tetanus deaths and had to be abandoned; the laparoscopic method of female sterilisation, considered a 'revolutionary step' in our national family planning programme, led to callous over-use of this technology. Air, pumped through bicycle pumps, was used to inflate the abdomen, rather than carbon dioxide. The question then arises: will the use of newer contraceptive technologies be caring, sensitive and objective or will the same callousness prevail because it is intrinsic in a programme which has failed, from the outset, to consider the social reality of our people and their basic need for treatment with care and dignity?

This leads us to a related question: why is most contraceptive research aimed at women? Why is it that when a recognition of the hazards of hormonal contraceptives have made for lower and lower doses of hormones in contraceptive pills in the North, long-acting injectible contraceptives are considered safe and effective for anaemic, malnourished, infection-ridden, underweight women in the South? If a woman in the North voluntarily
chooses such a contraceptive, hers may be considered an informed choice. She is usually in good health and if she happens to develop complications, she has access to follow-up diagnosis and proper treatment. At the best of times, this cannot be assumed for the majority of women in the South. Significant menstrual problems are a recognised side-effect of long-acting hormonal contraceptives; in our context, such blood loss in an already severely anaemic woman can compound the problem considerably.

Similarly, what would the effect of the contraceptive pill be on the foetus if it were given to a pregnant woman? The teratogenic effects of hormones have been recognised, and it is unlikely that they are insignificant in the case of long-acting hormonal contraceptives. Fears have been raised by women's organisations and health and consumer groups about an excessive preoccupation with meeting targets without due warning about side effects.

Objections have been raised to the conducting of trials in violation of the Helsinki Declaration of 1964 guiding physicians in biomedical research involving human subjects, which demands informed consent. Public interest litigation has been filed in the Supreme Court of India by several women's organisations who felt that the bias underlying studies undertaken without full ethical clearance would definitely lead to one-sided results which would then form the basis of family planning policy-making.

If growing population is a major health problem, then the hugeness of the market for new reproductive technologies is staggering. It is little wonder that many pharmaceutical companies have been heavily involved in researching contraceptive technology.

Public memory is short, but we would do well to remember the case of Dr Michael Briggs, consultant to the World Health Organisation, and actively involved in the preparation of a technical report series on female sex hormones. Dr Briggs testified to the safety of hormonal contraceptives, thus obliging the pharmaceutical companies in whose pay he was. Dr Isobel Gal on the other hand, who, in 1967, had showed the link between teratogenesis and hormonal pregnancy tests, and warned about the effect of hormonal preparations in pregnancy on the unborn foetus, had her research work abruptly stopped as it was a threat to vested interests and the rapidly increasing hormonal preparations market. She was hounded, criticised and belittled, her work was discredited, but her long and lonely battle warned others involved with women's issues, consumer rights, health and human rights, of the danger of using hormones in pregnancy.
Thalidomide was supposed to be safe for women and unborn babies, as was diethyl stilbaestrol. No one expected children to be born without arms and legs as a result of the use of the former; daughters to develop adenocarcinoma of the vagina in young adulthood, sons with abnormalities in the testes, or the women themselves to develop breast and cervical cancer years later.

The question is not merely one of side effects; it has to do with denial of information; about who benefits and who loses when decisions are made regarding certain technologies; about who controls them and who is controlled by them; who pays in terms of money and who in terms of health; who carries out and who sponsors the research. If certain technological options are challenged today in terms of their safety and increasing external control it is with good reason. Experience has shown that if provided with unbiased information and safe and effective alternatives, women avoid technologies that are hazardous to their health. It has often been said that potentially hazardous contraceptives are less hazardous than childbirth; such a sentiment can only succeed in perpetuating the failures of yesteryear.

If we are serious about an effective decrease in population growth then the approach to the problem has to be more comprehensive and rational. Technological fixes alone will not solve the problem; after all, why have anti-TB drugs not controlled tuberculosis or anti-malarials not eradicated malaria? And why have the great Green Revolution and the presence of food reserves not succeeded in removing malnutrition and hunger?

If an increasing number of women's and health groups across the world are raising their voices in concern it is because they believe that the prevalent understanding regarding population and conventional strategies to deal with the problem remain basically flawed.

Populist population 'education' succeeds in persuading people that the poor are poor because they multiply like rabbits, and that poor nations are poor, because we have too many people. There is never a mention of over-consumption and waste by the few at the expense of the majority, not just by rich nations but by the rich in poor nations. There is never a mention that the new economic order will further increase disparities and indebtedness-inflation, cutting welfare budgets in health and education, increasing privatisation of such services, removing food subsidies as country after country is forced into structural adjustment programmes. As poverty increases so does social insecurity; the poor and disadvantaged will tend to look for security
That the poor and their children can be held responsible for the nation's poverty is one of the greatest economic myths of our times; it shifts the focus away from the real roots of poverty and injustice, while aggressively pushing subtly coercive policies on to Third World countries. Ironically, but not surprisingly, it is often the propounders of the most coercive population policies who exhibit the greatest 'concern' for women and their welfare. It is no secret that there is a complicity of interests between medical and pharmaceutical research, transnational funding for such research and international aid policies. The politics of the pharmaceutical and pesticide industries, however, pales into insignificance when the ramifications of existing population policies are recognised.

Increasing populations are today being blamed for environmental degradation at the same time that forests in Sarawak are being cleared for making disposable chopsticks for Japan; and Indonesian forests, for making toilet paper and face tissues. The indigenous peoples in both are made destitute and homeless in their own land. The inclusion of population policies as an agenda item for the UN Conference on Environment and Development in Brazil, 1992, was cause for concern, because it lent credibility to ridiculous claims, such as the pressure of people and cattle on land being responsible for the size of the hole in the ozone layer. It also allowed those guilty of dumping toxic waste and pumping tons of pollutants into the air and water and soil to arm-twist the poor into silence, for daring to raise their voices in protest. How sensible is it for us to import the diagnosis of what ails us and then import the technological solutions for it, without in any way positively or significantly affecting the birth rate, or adequately meeting the health and contraceptive needs of women?

At a time when social action itself needs to be totally redefined, population is rapidly becoming a human rights issue. It is no longer possible to ensure basic needs at the micro-level when policies at the macro-level are geared to just the opposite. Those concerned with questions of justice and equity, and indeed with issues of development, will have to question the very conceptual basis of strategies formulated elsewhere.

What has made for indebtedness, what are the loans for, who decides the terms and conditions, who is forced into austerity and who benefits from liberalisation; all these are urgent preoccupations, especially when aid is being yoked to population policy. It is difficult to believe that when our
sovereignty is being denied in every other sphere, a heavily foreign-funded present-day population policy will have the interests of the 'poor suffering people of India', especially the women, at heart.

Population policy can no longer be one of curtailing the fertility of ignorant, indisciplined Indians. It has to be seen as a consequence of the failure of other policies—economic, education, health, and so on—at a national level, and of gross economic imbalance induced by the biased and unjust trade policies of the rich North. Coercive family planning measures, with or without incentives, peddled and imposed as a panacea for women's health problems, are no longer acceptable, just as technological fixes for environmental hazards are no longer credible.

Notes