

The myth of nuclear civilian defence

In his customary address on the eve of Independence day on 14 August 1999, the President of India has stated that it is important to equip our armed forces with the latest weapons and force multipliers. He has called upon the nation to remember that 'it is prudent of us and it is our duty to our people to be prepared for any surprise attack'.

It is therefore to be assumed that there are serious plans afoot, or in preparation, to protect civilian populations from such attacks, with nuclear weapons or massive bombardment. Accidental attacks of this kind can also be triggered by technical errors, as a survey of recent literature indicates.

As concerned citizens, we have, therefore, the responsibility of making our own independent assessment of these measures for our protection. The first step is obviously the identification of the targets in each area, and the size of the nuclear weapons likely to be used. The authorities have this information, and sharing it with the public is likely to enhance chances for mutual co-operation. Have they planned for the construction of shelters in the area, or are they already available? The strength and capacity of these shelters is important in view of the crowding in our urban centers.

In 1982, admittedly optimistic projections by the British Home Office were 25 to 40 million dead in a nuclear attack lasting only a few hours. Have the authorities any plans for their disposal? The recent earthquake in Turkey and instances of ethnic cleansing in Kosovo have shown, that in most cases, the authorities were helpless. However, it is possible to conclude that the suppression of civil protest and unrest will be carried out with efficiency, as the British Government planned, in the event of nuclear war, years ago.

The probable number of survivors is difficult to estimate, but similar figures of several millions are not unrealistic. Any plans for civilian protection would have to take into account the medical facilities available after an attack. It is sobering to speculate on the number of hospitals that would remain and the number of doctors and nurses available. There would be very few, indeed.

It is possible to obtain, by extrapolation, the number of people that would be alive fifteen days after the 'event', and the question is – are arrangements for the supply of uncontaminated water and food for these debilitated millions, at all possible, and, if so, for how long? The homeless millions would pose enormous problems of public health, with massive problems of hygiene and sewage disposal, for which funds have to be allocated and plans made in advance.

What level of radiation would prevail in the area after attack and for how long? As an indication, a single megaton bomb would contaminate 1200 sq miles with 2 rads for a year – the current safety limit is 0.5 rad. Dropped on a 1000 mW power reactor, 24,000 sq miles would be contaminated and an area of 180 sq miles for at least 50 years.

A British Home Office Circular of 1976 expects enteric infections of 'epidemic proportions', respiratory and other diseases, excluding burns, in the absence of public health and ordinary medicines. The treatment of millions of cases of burns, second, and third-degree, needs massive doses of blood plasma, transfusions, antibiotics, and expert care, in shelters of reasonable comfort.

All these measures would need energy supplies and it is relevant to enquire of our elected authorities if any plans have been considered. The electromagnetic pulse associated with the 'event' would destroy all communication faci-

lities dependent on integrated circuits and transistors, and their replacement would have to be taken into account, on a scale which is daunting.

The conclusion can only be that no programme of civil defence can ever cope with a nuclear attack.

As Lord Zuckerman, chief scientific adviser to the British Government from 1964 to 1971, said in a letter to the *Times* on 21 January 1980:

'As our own White Paper put it as long ago as 1957, there was then no means of protecting the population against the consequences of a nuclear war. There are none today when the scale of an attack that could be envisaged may be 100 times greater than it was in 1950'.

An accident is, by definition, unplanned. In the journal *Computing in Science and Engineering*, a joint publication of the American Institute of Physics and the IEEE, of May/June 1999, a few instances of near accidents are reported. On 5 October 1960, the North American Defence Command went on a 99.9% alert because the moon, rising over the horizon, showed up as a threat on radar. In 1980, twice in one month, NORAD reacted to computer glitches by full alert. The software on Apollo II had the sign of the gravitational constant wrong. Two different binary versions of the number 0.1 caused *Patriot* missiles to miss targets in the Gulf War.

Nuclear war is something we are planning. As Melvin Calvin, Nobel Laureate, 1961, said, in effect, 'wars are not conducted with the intention of being kind. *When a weapon is efficient, it will be used . . .*'.

RADHA KRISHNA

53, 13th Cross Road,
Malleswaram,
Bangalore 560 003, India