

BY SEEMA MUSTAFA

# The cost of nuclear conflict

**T**ake this scenario: the peace talks between India and Pakistan fail. Tensions build up. Troops return for an eyeball to eyeball confrontation along the Line of Control. And suddenly, even before war is declared, a 15 kiloton nuclear bomb is dropped on the Fort area of unsuspecting Mumbai, in clear daylight, on a weekday, at a height of 600 metres. In a radius of 1.1 kilometres of the Fort/Stock Exchange building 2.3 million people will die immediately.

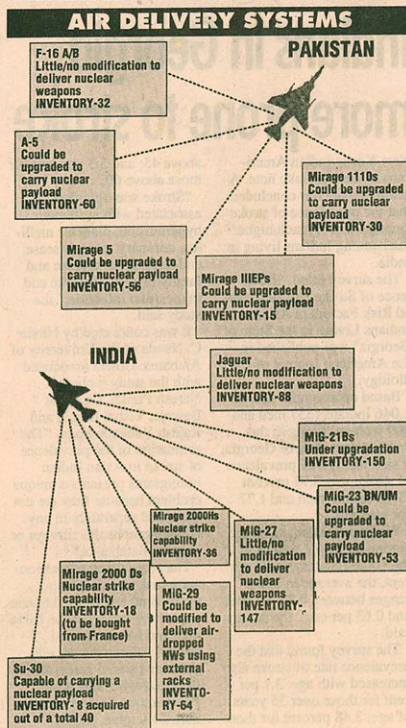
It will take 0.1 milliseconds for the radius of the fireball caused by the explosion to reach a radius of 15 metres with a temperature of about 300,000 degrees Celsius. Some might or might not see the mushroom cloud caused by the hot air, the products of the explosion and the debris. The entire area within and around the hypocentre would be incapacitated, there will be no survivors. Two main suburban railway stations Churchgate and Chhatrapati Shivaji Terminus will be destroyed. The Maharashtra government secretariat — Mantralaya — will be wiped out along with important government and financial offices as well as entire shopping centres and bazaars.

The Strategic Foresight Group has published a well documented study on "Cost of Conflict between India and Pakistan" based on painstaking research and inputs from scholars of both countries. Cold assessments of the cost of conflict between the two countries, conclude with the visions of a nuclear attack on Mumbai in India, and Karachi in Pakistan. The two cities have been selected for the study because both are known as "gateways" to their respective countries, and are major financial cities that could attract a nuclear strike from the other side. The statistical consequences of the strike, that is often discussed very casually with hardliners on both sides actually advocating it, are horrifying to say the least. The untold human suffering alone should be sufficient to bring pressure on New Delhi and Islamabad to hasten to put, as a first step, the nuclear confidence building measures into place without delay. Presently, there is no communication between the two countries that could ward off a nuclear strike with Washington being on the record about having averted a possible nuclear war between the two neighbours less than two years ago.

The Mumbai Stock Exchange will vanish from view. As will the Army Navy Building, the Central Government Mint, the Gateway of India, the Reserve Bank of

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NUCLEAR EQUATION		
INDIA		PAKISTAN
No first strike policy	Nuclear Doctrine	No official doctrine
Prime Minister	Control of nuclear weapons	National Command Authority
May 18, 1974 May 11 and 13, 1998	Nuclear tests	May 28 and 30, 1998
Pokhran	Nuclear test sites	Chagai
Between 60 and 90	Stockpile of nuclear warheads	Between 24 and 48
14	Number of nuclear reactors Operating	2
9	Under construction	1
2720 Mwe (of operating reactors)	Nuclear power programme capacity	425 Mwe
17.8	Nuclear electricity generation in billion KWh (2002)	1.8
3.7	Nuclear electricity generation as per cent of total electricity production (2002)	2.5
MWe: Megawatts electric KWh: Kilowatt-hour		



## MISSILE DELIVERY SYSTEMS

- INDIA**
- PRITHVI SS-150**
    - 1000 kg
    - ▲ 150 km
  - PRITHVI SS-250**
    - 500-750 kg
    - ▲ 250 km
  - PRITHVI SS-350**
    - 700-1000 kg
    - ▲ 350 km
  - AGNI I**
    - 1000 kg
    - ▲ 1500 km
  - AGNI II**
    - ▲ 2000-2500 km
  - AGNI III**
    - ▲ 3700 km
  - AGNI IV**
    - ▲ 4000-5000 km
  - SURYA (ICBM)**
    - ▲ 5000 km
  - DHANUSH**
    - ▲ 350 km
  - SAGARIKA (SLBM)**
    - 500 kg
    - ▲ 300 km

- PAKISTAN**
- HATF-1/1A**
    - 500 kg
    - ▲ 80-100 km
  - HATF-2**
    - 500 kg
    - ▲ 300 km
  - HATF-3**
    - 500 kg
    - ▲ 550 km
  - M-11**
    - 800 kg
    - ▲ 280 km
  - SHAHEEN-I**
    - 1000 kg
    - ▲ 750 km
  - GHAURI-I**
    - 500-750 kg
    - ▲ 1300-1500 km
  - GHAURI-II**
    - 750-1000 kg
    - ▲ 2000-2300 km
  - SHAHEEN-II**
    - 1000 kg
    - ▲ 2500 km
  - GHAURI-III**
    - ▲ 3000 km
    - Payload (in kg)
    - ▲ Range (in km)

India, the Shipping Corporation of India, the Western Naval Command, the Western railways headquarters, to name just a few important installations in Zone 1. Relief work will be hampered by the destruction of roads that are the main link between north Mumbai and the areas south of this zone. Markets like the Crawford Market, the Mangaldas Market, Lohar Chawl will be hit. Two major hospitals, ENT hospital and Parris Lying In Hospital will be completely destroyed.

Then there are Zone 2 and Zone 3 with varying degrees of damage. Zone 2 will be directly affected by firestorms and radiation that will affect more than 40 per cent of the population, residential and commuting. To give an idea, the Air India building, Bombay Docks, Income Tax building, etc. towers fall into this zone where for 5 kilometres around the hypocentre any and everything that could burn would catch fire. There will be full exposure to gamma and neutron radiation with symptoms of internal haemorrhage. In Zone 3, the study predicts, partial fires, small explosions, widespread panic and a complete breakdown of infrastructure, including the vital link of communications. Most of the sea falls in this area, with the marine life being affected as well.

India and Pakistan have been spending crores on their nuclear programmes. Today India is committed to a no first strike policy while Pakistan still has no official doctrine. Control of nuclear weapons rests with the Prime Minister in India and with the National Command Authority in Pakistan. India has a stockpile of nuclear weapons between 60 and 90, while Pakistan's figures vary between 24 and 48. India has 14 nuclear reactors and Pakistan has two. Both have a number of missile delivery systems with India's ranging from the Prithvi SS-150 with a 150 km range to Surya with a 5,000 km range. Pakistan has Hatf 1/1A with a 80-100 km range and at the other end of the line Ghauri-III with a 3,000 km range.

Pakistan's strategic expert Niaz Naik, in a foreword to the study has explained its importance well. "While people are aware that costs are incurred in the hostility between India and Pakistan, they often believe that such costs are manageable. It is therefore, necessary to have an in-depth understanding of the cost involved, in a conflictual relationship and the benefits that can be accrued by reconciliation and peace building," he said. The cost of conflict has to be factored into the peace initiative between India and Pakistan to make it truly effective.

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Source: Strategic Foresight Group