

I. EDITOR'S NOTE

With the test of nuclear devices by India on the May 11th and 13th, and by Pakistan on the 28th and 30th of the same month and the formal claim by both the countries to possess nuclear weapons, the long-drawn process of the nuclearisation of South Asia has reached its culmination. The development has posed a host of severe challenges to the international community as well as the regional countries. Of particular importance are the challenges posed to the non-nuclear regional countries, particularly Bangladesh. In terms of area, population, the size of its economy and politico-diplomatic clout, Bangladesh is the major non-nuclear power in the region. The country is also committed not to develop or possess nuclear weapons and single-mindedly committed to rapid socio-economic development through close co-operation with the regional countries as well as the international community.

In the circumstances, it is important to ask how the nuclearisation and its aftermath would affect Bangladesh and what are the options available to the country. A host of issues are pertinent to such an inquiry. How would India and Pakistan manage the nuclear arms and facilities already in hand as well as the ensuing nuclear arms race? What would be the impact of their failure to manage properly? Under consideration are a number of issues: the management of nuclear hazards, particularly in view of unreliable nuclear reactors possessed by both the countries, the problems of the dumping of nuclear wastes, safeguarding the foodstuffs and consumer goods imported from these countries as well as the environment. The central question in this regard is how Bangladesh or other non-nuclear states of the region would respond to Indo-Pak nuclear arms race? Another important issue is the economic impact

of nuclearisation. What would be the cost of nuclear arms race for the concerned countries and how would it effect the region as a whole? What are the possible consequences of Western sanctions if implied? How Bangladesh should prepare itself to face the challenges and avail the opportunities, if there is any. Bangladesh has been all along a champion of regional co-operation within the framework of SAARC. Hence, a major concern to Bangladesh is how to facilitate the SAARC process in the context of nuclearisation? All these would necessitate remarkable diplomatic skills to be displayed by the country. Therefore, exploring the challenges faced by Bangladesh diplomacy and devising possible options became a crucial task.

It is in this backdrop, that the Bangladesh Institute of International and Strategic Studies (BISS) has organised a Discussion Meeting on **INDO-PAKISTAN NUCLEAR TESTS AND FALLOUT ON SOUTH ASIA** on June 04, 1998. Six speakers made brief presentations on the four sub-themes with a view to initiating the discussion. Following are the details:

1. MOTIVES, COMPULSIONS AND TIMING: Mr. A. K. M. Abdus Sabur (BISS) and Dr. Imtiaz Ahmed (Dhaka University);
2. DIRECT FALLOUT ON SOUTH ASIA: Dr. Anwar Hussain (former Chairman of the Atomic Energy Commission);
3. INDIRECT FALLOUT: SANCTIONS, CHANGED POWER RELATIONS: Dr. Shaukat Hassan (North-South University);
4. OPTIONS FOR BANGLADESH: Ambassador Faruq Ahmed Chowdhury (Former Foreign Secretary) and Prof. Shahiduzzaman (Dhaka University).

Barrister A.K.H. Morshed, former Foreign Secretary and former Chairman, BIISS moderated the Discussion.

This was followed by a Seminar organised by BIISS on the theme: **NUCLEARISATION OF SOUTH ASIA: CHALLENGES AND OPTIONS FOR BANGLADESH** held on August 27, 1998. The Seminar was divided into two sessions. The Director General of BIISS, Brig. Shahedul Anam Khan, with his Introductory Remarks, initiated the Seminar. In the first Session titled **NUCLEARISATION OF SOUTH ASIA: THE SECURITY DIMENSION** and chaired by Ambassador Anwar Hashim, Principal, Foreign Service Academy and Secretary, Government of Bangladesh, two papers were presented and these were discussed by two designated discussants. Following are the details:

1. **THE DANGER OF THE PHYSICAL FALLOUT OF NUCLEARISATION: CHALLENGES FOR BANGLADESH**, presented by Dr. Anwar Hossain, Former Chairman, Atomic Energy Commission and discussed by Dr. Dildar Hossain, Professor, Department of Physics, Jahangirnagar University, Savar, Dhaka;
2. **INDO-PAK NUCLEAR ARMS RACE: THE RESPONSE OF NON-NUCLEAR STATES**, presented by Dr. Shaheen Afroze, Senior Research Fellow, BIISS and discussed by Dr. C. R. Abrar, Professor and Chairman, Department of International Relations, University of Dhaka..

In the second Session titled **NUCLEARISATION OF SOUTH ASIA: POLITICO-ECONOMIC DIMENSION** and chaired by Mr. A. M. A. Muhit, Former Finance Minister, Government of Bangladesh, three papers were presented and these were discussed by three designated discussants. Following are the details:

1. **NUCLEARISATION OF SOUTH ASIA: CHALLENGES FOR BANGLADESH DIPLOMACY**, presented by

Ambassador Khurshid Hamid, Former Bangladesh Ambassador to Italy and discussed by Dr. Abdur Rob Khan, Research Director, BIISS;

2. SAARC IN THE CONTEXT OF NUCLEARISATION: A BANGLADESH PERSPECTIVE, presented by Brig. Kalam Shahed, psc, Military Secretary, Army Headquarters, and discussed by Dr. Harun-or-Rashid, Professor, Department of Political Science, University of Dhaka..
3. ECONOMIC IMPACT OF NUCLEARISATION : CHALLENGES FOR BANGLADESH, presented by Dr. Munim Kumar Barai, Faculty Member, Bangladesh Institute of Bank Management and discussed by Mr. A. K. M. Shamsuddoha, Member, Executive Committee, FBCCI and Former Vice President SAARC Chamber of Commerce and Industries.

This volume, BIISS Papers, No.17, contains the introductory remarks made by the Director General, BIISS and five papers presented in the Seminar on the theme **NUCLEARISATION OF SOUTH ASIA: CHALLENGES AND OPTIONS FOR BANGLADESH** held at BIISS on August 27, 1998. However, in view of the useful discussions taken place in both the academic forums, Discussion Meeting on **INDO-PAKISTAN NUCLEAR TESTS AND FALLOUT ON SOUTH ASIA** held on June 04, 1998 and the Seminar just mentioned above, a brief summary of conclusions and recommendations of the two forums are also included at the end of the current volume.

Mr. A. T. Salahuddin Ahmed, Mr. Md. Shamsul Islam and Ms. Neila Husain, Research Fellows at BIISS, served as rapporteurs of both the forums and the editor gratefully acknowledges their valuable assistance in summarising the outcome of the forums.

II. INTRODUCTORY REMARKS

Shahedul Anam Khan

The veil of strategic ambiguity on the nuclear question, that had existed for about a decade in respect of India and Pakistan was lifted with the detonation of five nuclear devices by India on the 11th and 13th May. Pakistan returned the compliment by detonating six nuclear devices on 30th May 98. This has forever changed the security environment of entire South Asia.

Any discussion at this point of time, of the motivations of these two countries to test their devices, may seem to be merely academic. But in order to put some perspective on the subject we should perhaps go into the rationale of both India and Pakistan and their compulsions for undertaking the tests so that subsequent discussions would not be devoid of logic and reason and we would hopefully be spared the rhetoric and the emotion that such matters engenders.

Last month we heard the representatives of both India and Pakistan describe in the most lucid language their compulsions for under taking the nuclear tests. Convincing and justifiable as they may seem to be from the point of view of India and Pakistan, these developments in South Asia are regrettable since we are now faced with a serious situation where, given the nature of relationship between India and Pakistan, not only is there a potential for an arms race in the region with these two countries in a no win situation in that race, and the misery of the two peoples compounded, the entire security scenario in South Asia runs the risk of being adversely impacted.

While it was known to the outside world that both these countries had nuclear capability, in the case of India it was amply

demonstrated in 1974, the timing of India's May 98 tests confused the pundits. The explanation offered by the Indian establishment subsequently flies in the face of logic. India feels that the status of a nuclear weapon is "...an endowment to the nation by our scientists and engineers. It is India's due, the right of one sixth of mankind". For India, "these tests provide reassurance to the people of India that their national security interests are paramount and are promoted and protected." For Pakistan the nuclear tests were conducted, "to restore the strategic and military balance in the region," and "were essentially a defensive act". It was a, "...security response and a carefully considered one."

Only a few days before India's nuclear test I chanced upon an excellent article on the current nuclear scenario in South Asia. The author of the said article postulated three main reasons as to why he thought that India would not go openly nuclear at that point of time. They were:

India's conventional predominance over Pakistan.

Her present economic conditions.

Marked improvement in Sino-Indian relations over the last ten years.

Each of these points is highly logical yet have been totally invalidated by India's decision to exercise her nuclear option. The difference between India's explosion of 1974 and 1998 is that this time she has made no secret of her intention to follow up her recent test to what she perceives as her next logical step i.e. weaponisation. Pakistan had not fallen behind in articulating her future intentions.

Suggestions that Pakistan's nuclearisation was a reaction to India's nuclearisation would suffer from the malady that Churchill

characterised as 'terminological inexactitude', but whether Pakistan could have done without following India's suit in May 98 is a matter of opinion.

Notwithstanding the merits of the arguments of the security dimension of the issue, one should not overlook the internal compulsions of the two countries particularly of India. Thus we are tempted to query:

What were India's compulsions? How has the security scenario changed for India? Do Indo-Pak nuclearisation have regional relevance? Is this a regional problem only to necessitate the recent tests? Will it enhance Indo-Pak security any more than what is currently existing? Will it encourage BJP to unwrap her electoral manifesto? These are some legitimate questions that we should seek answers to.

The Indian government has stated four motivations for the tests, namely: the nuclear environment in India's neighbourhood, her national security, gradual deterioration of India's security environment as a result of nuclear and missile proliferation, and reluctance of the P-5 to, "take decisive and irreversible steps in moving towards a nuclear-weapons-free-world."

A close scrutiny would reveal that those were perhaps not the only motivations that prompted the BJP government to conduct the tests. There were ideological as well as domestic factors along with the gratuitous feeling of an elevated status that this would accord India if she went nuclear.

Some would like to argue that despite the recent nuclear tests and the expressed intentions of the two countries to nuclearise, there has not been, nor is there any likely hood in the future of any

qualitative change in the strategic scenario of South Asia, and thus the apprehensions about a nuclear proliferation and an arms race is therefore unfounded. This assumption is perhaps based on the fact that both India and Pakistan were known to have possessed nuclear capability for sometime now and have lived with this reality so long without engaging in open conflagration. But more than this the fact that the Super Powers had not used their nuclear option to resolve their disputes during the height of the Cold War is flaunted as an argument that the same *denouement* would apply to the Indo-Pak equation. The Korean, Vietnam, and lastly the Afghan Wars were long drawn conflicts whose conclusions were effected through conventional forces even though the disputants possessed nuclear capability. This is how the protagonists of the theory of Nuclear Deterrence seek its validation.

While the underlying efficacy of deterrence cannot be contested, (*one might ask what if Japan had the bomb? Would there have been a Hiroshima or Nagasaki?*), there were many factors that made deterrence effective between the two Super Powers that are non existent in the case of India and Pakistan.

The dynamics of deterrence and proliferation are unique and are inter linked. First let us understand the fact that having nuclear weapons do not prevent proliferation of conventional weapons. Deterrence on the other hand gives snowballing effect to proliferation particularly nuclear proliferation. Deterrence to be effective should not only be seen to exist, its potency must also be clear to the potential adversary, and that it would be used under certain set of circumstances must also be known to her. Deterrence requires attaining a second strike capability which should not only be versatile to withstand the enemy's first strike but should be able to take out her second strike capability. This automatically necessitates

perfecting the delivery 'triad' to ensure flexibility and survivability of the weapon system. India and Pakistan will therefore be caught up in this inevitability. Proliferation will take place not in spite of but because of the detonations.

However, I would like to take issue with those who feel that the spectre of a nuclear holocaust is looming large on the horizon of South Asia. We cannot deny the reality that this region now is more vulnerable and the probability of a nuclear exchange is enhanced because of the fact that we have two nuclear states with shared borders, a long history of animosity and unresolved issues which have proved intractable over the last fifty years. But we ought to credit the leadership of both the countries with the sagacity to comprehend the catastrophic consequences of a nuclear exchange. However, the premise that a Indo-Pak nuclear exchange may not be the result of deliberate strategic planning emanating out of rational assessment of factors but rather occur as a result of miscalculations and accident is highly convincing. The concerns expressed by the other countries of South Asia reflect the concerns brought about by the proximity factor. It is well to remember that "nuclear cloud knows no frontier, it drifts with the wind".

After the initial euphoria and ecstasy that followed the tests in India and Pakistan had subsided, overtures were made by India by way of offering the "no first use" options. There has also been a modification on India's stand on CTBT. Pakistan's stand on CTBT has however undergone a radical change in that it has now been de-linked from India. Both the countries have summarily dismissed each other's proposals for loose control regime.

India is perhaps in the process of evolving her Nuclear Doctrine, elements of which were disclosed by the Prime Minister, A. B.

Vajpayee to the Indian parliament on 6th Aug 98. It has three elements, namely, first, retention of "a minimum but credible nuclear deterrent", second, India "will not use nuclear weapons against non-nuclear states and no first use of nuclear weapons against nuclear states" and third is her commitment to all non discriminatory arms control. We are awaiting expression of Pakistan's policy on use of nuclear weapons.

The question now is whither to now India and Pakistan? What has been tested can be detested but not de-tested. The nuclear genie is out of the bottle and would be hard to put back into it. How would the world community, particularly the non-nuclear states of South Asia, like these two countries do now that they have crossed the nuclear Rubicon? I am thinking about modalities and mechanisms to prevent an accidental exchange? The matter of appropriate command and control measures including fail-safe devices to ensure that no jittery fingers press the button unwittingly should also be addressed by India and Pakistan.

Her land area, population and economy make Bangladesh the major non-nuclear state in the region. Her commitment to non-proliferation as well as her all out efforts for socio-economic development, particularly through close co-operation with the regional countries is well known. The visits of the Bangladesh Prime Minister to the two capitals should be seen not so much to mediate between the two countries as to convey to both India and Pakistan our apprehensions at the developments, that it is no longer an issue between these two countries only, because, in the event of an Indo-Pak nuclear exchange the entire region would suffer from terrible consequences.

I see the impact on us as being multi faceted. We face a physical threat in a nuclear environment that may occur out of miscalculation or mistargeting, a distinct possibility given the level of technical sophistication in this field attained by both the countries.

One can foresee the effect of sanctions on the region as a whole, but specifically how would our trade with these two countries be affected as a consequence of sanctions on India and Pakistan is something that we must seriously address.

Possession of the bomb would lend a separate class to the two South Asian countries. Would this affect their disposition in dealing with their neighbours in future? Only time can tell.

What is the role of the big powers in this matter? The nuclear issue in South Asia has gone beyond the region and has assumed an international significance and relevance. The big powers, particularly the P-5, have a very important role to play. To start with, the existing international nuclear control regimes must be modified to change their discriminatory character to be acceptable to all concerned. Attempt to force India and Pakistan to roll back their nuclear programme would be fruitless. Our main effort should therefore be directed towards de-escalation. South Asian countries have a role to play in this regard.

In the circumstances it is important to ask how the nuclearisation and its aftermath would affect Bangladesh and what are the options available to us. A host of issues are pertinent to such an inquiry. How would India and Pakistan manage the nuclear arms and facilities already in hand as well as the ensuing arms race? What would be the impact of their failure to manage properly? Under consideration are a number of issues: management of nuclear hazards, particularly in view of the unreliable nuclear reactors possessed by both the

countries; the problem of dumping of nuclear wastes, safeguarding the foodstuff and consumer goods imported from these countries not to speak of protecting the environment. All these lead to the central question: how would Bangladesh and other non-nuclear states of the region respond to Indo-Pak arms race? Another important issue is the economic impact of nuclearisation. What would be the cost of nuclear arms race for the concerned countries and how would it affect the region as a whole? What would be the cost of sanctions? How should Bangladesh prepare herself to face the challenges and avail the opportunities, if any. Having been a champion of regional co-operation, a major concern for Bangladesh is how to facilitate SAARC process in view of the changed situation? All these would demand nimble diplomatic foot stepping by Bangladesh. Therefore, exploring the challenges faced by Bangladesh diplomacy and devising possible options became a crucial task.

Some of you would recall that we had a discussion session, at a smaller scale on 4 June where the nuclear tests was addressed in a broader framework. One of the recommendations that came out vividly was that Bangladesh should re-evaluate the situation to determine to what extent this development impinges on Bangladesh's security and the possible direction the nuclear arms race in South Asia may move in and our response thereto. The purpose of this seminar is to discuss the micro issues in a way that would help us to prepare a policy paper for further informal discussion.

III. THE DANGER OF NUCLEAR RADIATION, ESPECIALLY PHYSICAL FALLOUT OF NUCLEARISATION: CHALLENGES FOR BANGLADESH

Anwar Hossain

1. Background

Before coming to the question on danger of nuclear radiation not only from the military uses but also from natural sources and peaceful uses of the atom, it is necessary to explain, in short, the meaning of nuclear radiation that could lead to nuclear power. Theoretically any radiation that is emitted due to a reaction inside the nucleus of an atom is called nuclear radiation. In the physical world, there are 92 elements, each having several isotopes. Elements beyond lead (atomic number 82) are naturally radioactive except three light elements (H^3 , C^{14} and K^{40}). Other radioactive isotopes have been created from man-made reactions including nuclear explosion. Fig 1 shows the sources of ionising nuclear radiation.

The nuclear reaction, which leads to the splitting of a nucleus into two large fragments, along with release of large kinetic energy, is called fission. The only fissionable element that exists on earth is Uranium, especially U-235 isotope. U-238 and Th-232 are called fertile materials because they can produce fission material by bombarding neutrons on them. The other fissionable material is Pu-239. Which can be artificially created. Fig. 2 illustrates a fission process and action of neutrons on fissionable and fertile materials. If a fission process can be maintained continuously, then the process is known as chain reaction. In a nuclear reactor, we witness the process of controlled chain reaction producing heat that can be converted to electric power, while a nuclear explosion is the result of uncontrolled

chain reaction. In both cases, we need a critical mass.

The fissile U-235 isotope accounts for only 0.7% of natural uranium, the rest being U-238. Separation of U-235 from natural uranium is possible through extremely difficult and expensive diffusion process, using the difference of weight between them. The common method is the gaseous diffusion process of UF_6 gas. While a power reactor can operate with an enrichment of less than 4%, the enrichment should be 90% for U-235.

The other fissile material (Pu-239) can be artificially produced, first in a reactor and then by a reprocessing plant. Again, weapon grade Pu-239 should be highly enriched.

The principle of hydrogen bomb lies in the fusion of two light elements but to produce an explosive chain reaction, high temperature is required, which can only be provided by a fission bomb. The first hydrogen bomb was due to a fission fusion fission process, giving rise to weapons of megaton range, while pure fission bombs, which fell on Hiroshima & Nagasaki, were equivalent to 10-20 Kilotons of TNT.

A nuclear bomb gives rise to blast, heat (fireball) and penetrating nuclear radiation. The total damage by them is probably in the ratio of 50%, 35% and 15%. Table 1 and Fig 3 give an indication of the intensity and the range of the damage caused to Hiroshima and Nagasaki. The penetrating nuclear radiation that come out of a nuclear explosion can be divided into two categories – prompt radiation, consisting mainly of neutrons and gamma rays, causing instant damage to the body which could lead to death, serious injury or malfunctioning of the body organs in the immediate neighbourhood and residual radiation. The way radioactive materials released in the environment cause human exposure is shown in Fig 4. The harm that such radiation causes to the body is shown in Fig 5.

2. Fallout

The residual nuclear radiation, generally known as fallout, can be a hazard over very large areas that are completely free from other effects of a nuclear explosion. From fission of uranium-235 or plutonium-239 in a bomb, two radioactive nuclei are produced for every fissile nucleus split. These fission products account for the persistent radioactivity in bomb debris, because many of the atoms have half-lives measured in days, months, or years (radioactive decay time is theoretically infinity and thus measured in half-life, as shown in Fig 6).

Two distinct categories of fallout, namely, early and delayed, are known. If a nuclear explosion occurs near the surface, earth or water goes up into a mushroom-shaped cloud and becomes contaminated with the radioactive weapon residues. The contaminated material begins to descend within a few minutes and may continue for about 24 hours, covering an area of thousands of square miles downwind from the explosion. This constitutes the early fallout, which is an immediate hazard to human beings. If a nuclear bomb is exploded well above the ground, the radioactive residues rise to a great height in the mushroom cloud and descend gradually over a large area. Also, when a nuclear weapon is exploded close to the earth's surface, the violence of the detonation pulverises vast quantities of surface material, much of which is drawn into the fireball and subsequently sucked into the hot mass that rises to form the characteristic mushroom cloud. Inside the fireball and stem of the bomb cloud, the radioactive particles become attached to heavier particles.

The more massive bits of matter fall back to earth within a matter of minutes, forming extremely localised fallout. Less massive but easily visible particles, borne downwind by the bomb cloud, fall

within several hours, and are designated local fallout. The nature and extent of local fallout depend on the type and size of explosion, the altitude of destination, and the strength and direction of the winds.

Microscopic particles stay aloft for longer period of time. If the bomb explosion is of small or medium power, the bomb may not penetrate the tropopause, that is, the atmospheric layer between the troposphere and the stratosphere. In this case, known as tropospheric fallout, the bomb fragments are swept around the world in a zone at the latitude of the explosion and are brought to earth when rain and other forms of precipitation cleanse the foreign material from the atmosphere.

If the force of the detonation is sufficient to inject the bomb debris above the tropopause, many of the small particles remain in the stratosphere to be acted on by stratospheric winds. This is known as stratospheric or global fallout. Because no precipitation occurs in stratosphere, these particles may remain there for considerable period of time. They are scattered horizontally, so that some of the particles, after having made a number of revolutions around the earth, are found throughout the stratosphere. Vertical mixing, especially in the polar regions during winter and early spring, brings the material into troposphere, where it behaves as tropospheric fallout.

The fission fragments produced by the splitting of uranium atoms or plutonium atoms and neutron-activated materials make up approximately 300 different radioactive isotopes. Each radionuclide is characterised by its own half-life. Within the first hour after the explosion, most of the extremely short-lived substances, that is, those with half-lives that are measured in seconds and minutes, decay, and the total radioactivity from the bomb decreases more than a hundred fold.

After the first hour the remaining radioactivity dissipates at a constantly slower pace. The longer-lived fission products account for the bulk of residual radioactivity. A few fission products are long-lived; for example, the radionuclide strontium-90, also known as radiostrontium, has a half-life of 28 years. These long-lived species constitute the long-term radiation hazard.

Long-lived radionuclides, such as ^{90}Sr , do not decay much during the time spent in the stratosphere therefore, they may exist for many years as a potential hazard, primarily through contamination of the foods that are consumed by humans when these radionuclides come down to earth by some means.

Radiostrontium is similar to calcium in its chemical behaviour, including its deposition in human bone. Most biological systems prefer calcium to strontium; therefore, the amount of ^{90}Sr absorbed by plant roots and by animals depends on the availability of calcium. Once ^{90}Sr enters the body, part of it is excreted and the remainder is deposited in newly formed bone along with calcium. In young bone, the ^{90}Sr and calcium are continually being replaced as the bone grows. In adult bone, little replacement occurs; little ^{90}Sr deposited and its removal is quite slow. The amount of ^{90}Sr remaining in bone depends on the quantities of ^{90}Sr and calcium in the diet during periods of bone growth. The long retention time of ^{90}Sr in bone is the basis for the potential hazard. In animal experiments and in human cases of radium poisoning, where sufficient amounts of radioactive material are deposited in bone a higher incidence of leukaemia and bone cancer is seen. Current levels of ^{90}Sr in humans are far too low for such effects to be observed.

Other Radionuclides

Although radioactive iodine-131 is short-lived (half-life, eight days), it is one of the important potential sources of internal radiation

exposure because it is concentrated in the thyroid gland. Soon after a nuclear accident or explosion, grass-bearing iodine-131 is consumed by cows; the isotope quickly appears in their milk. Because milk is commonly consumed within a few days of production, significant amounts of iodine-131 can be ingested by people who are unaware of the danger. Other foods are generally consumed after a longer interval, so radioactivity would have decreased. When large amounts of radioiodine accumulate in the thyroid, an increase in the incidence of thyroid cancer occurs; levels accumulated from fallout to date are too low, or exposure is too recent, for such an effect to be observed.

Cesium-137, which has a half-life of 30 years, also enters the food chain and thus the human body. Like potassium, which it resembles chemically, it is found throughout and irradiates the entire body. Radiocesium remains in the body only a few months, however. Carbon-14, which has a half-life of 5760 years, is produced primarily by activation of nitrogen atoms in the air during nuclear detonations. It is also produced naturally and continuously by actions of cosmic rays. It comes down to earth as carbon dioxide and as such is taken up by plants, eventually being distributed in all biological material. Radiocarbon, therefore, is another radionuclide that irradiates the entire body. Cesium-137, Carbon-14, and those nuclides deposited on the earth that irradiate the body from without, contribute to a whole-body radiation dose. Such a dose is a potential hazard genetically, and also affects the body itself.

In evaluating the long-range results of fallout, it is essential to consider the genetic effects of radiation also. Radiation may cause mutations, that is, changes in the reproductive cells that transmit inherited characteristics from one generation to the next. Practically all radiation-induced mutations are harmful, and the deleterious effects persist in successive generations.

Potential Risk

Evaluation of the risk of potential radiation hazards from fallout involves much the same considerations, as do other risks to large populations. Such evaluations are complex and are necessarily relative to possible benefits and other risks. In the case of fallout, the potential risk is global and involves many uncertainties regarding radiation doses and effects; the changing international situation must be continually assessed.

It may be pointed out that a major portion of nuclear radiation sources comes out of natural background (Fig 7). We are concerned with radioactive fallout from nuclear weapons or their tests (or from a nuclear reactor accident) because radioactive isotopes of long half-lives can spread far and wide and without any protective device (which exists in peaceful nuclear uses).

Human experience with radioactive fallout has been minimal. The principal known cases are from the delayed effects of the two nuclear bombs that fell in Japan, the accidental exposure of fishermen due to the fallout from 15-megaton test explosion on March 1, 1954, subsequent large-scale atmospheric nuclear weapon testing in the 1950s and early '60s until the limited test ban treaty was signed in 1963. Since then, the fallout levels have waned. Some fallout was, however, produced by Chernobyl nuclear accident. The underground nuclear tests will hardly give rise to any fallout. Even then, comprehensive nuclear test ban treaty (CTBT) should be welcome, to discourage any country developing nuclear weapons. Recent underground nuclear test by India and Pakistan have given rise to world-wide concern and has led to renewed campaign for signing CTBT by all countries.

The real danger to mankind is the possible use of nuclear weapons either for tactical or strategic purpose. With all the treaties and

persuasions, there is no absolute guarantee that nuclear weapons that are already in existence will not be used unless all of them are safely destroyed. This is the challenge behind the crusade for nuclear disarmament.

3. Strategy for Bangladesh

Bangladesh has always expressed her intention for peaceful uses of nuclear energy (including nuclear power) but should, nevertheless, be ready for maximum possible protection in the event of nuclear war/accident and continue research in health physics. After Bangladesh Atomic Energy Commission was formed in 1973, it took twenty years to pass a Nuclear Radiation and safety Control (NRSC) Act in the Parliament (1993) and NRSC rules have been formulated only in 1997. In addition to hazards from possible radioactive fallout, this Act and the subsequent rules, have been made for the safety of the users of nuclear and X-radiation in medical establishments, persons working at Nuclear Establishments (e.g. accelerator & reactor), those using radioisotopes and radiation sources for non-destructive testing & in other uses.

Protection from nuclear hazard out of waste disposal that is coming out of nuclear power reactors, reprocessing plants and other nuclear establishments is an area on which International Atomic Energy Agency is giving due attention and devising various ways of safety. We in Bangladesh should also be careful about it, especially dumping of nuclear wastes in our territorial waters.

As for detection of nuclear explosion, Bangladesh has absolutely no device. It is known that seismometers that can record earthquakes can also be used for detecting nuclear explosion. Bangladesh possesses only one seismometer in Chittagong (belonging to Meteorological Department) which can record seismic event only

partially (only in one dimension out of three). Its range is small and in the absence of any other station, direction and magnitude of any seismic event (earthquake or nuclear testing) cannot be determined. The Government is now contemplating accession of three seismometers in Dhaka, Rangpur & Sylhet. The process should be accelerated and the Chittagong one should be modernised. Interestingly enough, the person in charge of Chittagong seismic station has undergone training in the detection of seismic signals.

The Nuclear safety control Act should be strictly enforced (e.g. requirement of proper shielding of X-rays & other radiotherapy machines and proper protection in non-destructive testing work). Radiation film-badge service should be extended to all nuclear & X-ray establishments and regular fall-out measurements should be carried out from selected air, water and soil samples, in addition to existing nuclear safety tests for imported food items. We should also be in readiness for maximum possible protection in the event of a nuclear war/accident in a nuclear assembly and continue research in health physics.

Finally, I would like to point out a word of caution that the Bangladesh has a background nuclear radiation above the world average with at least one area of high radiation risk. The radiation risk factor for normal background (1-2 m SV) is shown in Fig 8. The background radiation survey should be regularly carried out all over the country.

4. Conclusion

The energy from the nucleus of an atom can be used both for peaceful and destructive purposes. No doubt, we should be in readiness to combat potential radiation hazard from fallout. But many

artificial radioisotopes (including Sr^{90} , I^{131} & Cs^{137}) are now being used in Bangladesh in medicine, industry and agriculture (Fig 9). We should take adequate safety measures in using them.

It is very import to disseminate information on nuclear radiation and have a clearer view of the power of the atom to derive benefit out of it, rather than live in a frightened state due to the danger of a nuclear war/accident. We should, instead, make all-out efforts to avert the danger of a nuclear war, especially in South Asia, by taking active part in all joint efforts for nuclear disarmament. We should also co-operate with International Atomic Energy Agency in its efforts to universalise nuclear safeguards and assist developing countries in extending peaceful uses of the atom, including nuclear power (electricity).

Finally, Bangladesh National Security Council should either have a nuclear expert as a Member or the Council should have an expert committee to advise them periodically and work out a nuclear policy for the Government to be updated from time to time.

APPENDIX

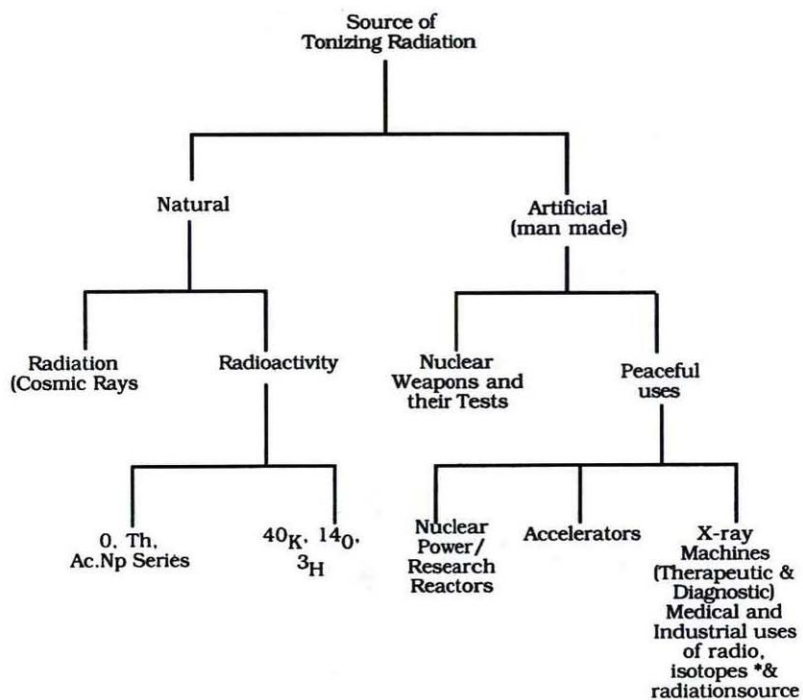


Fig. 1

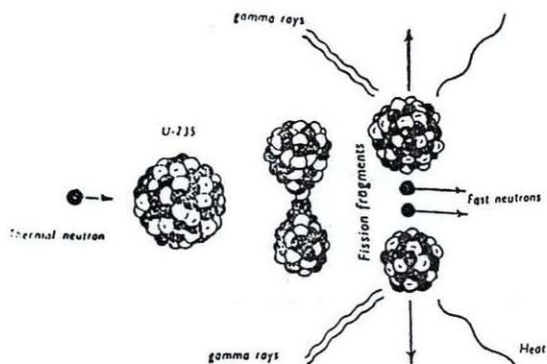


Fig. 1. An artist's conception of the fission of a U^{235} nucleus by a thermal neutron. The white circles represent protons in the nucleus.

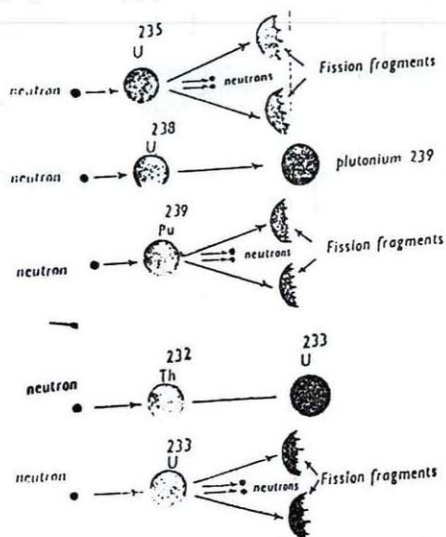


Fig. 2. Action of neutrons on fissionable and fertile materials.

Fig. 2

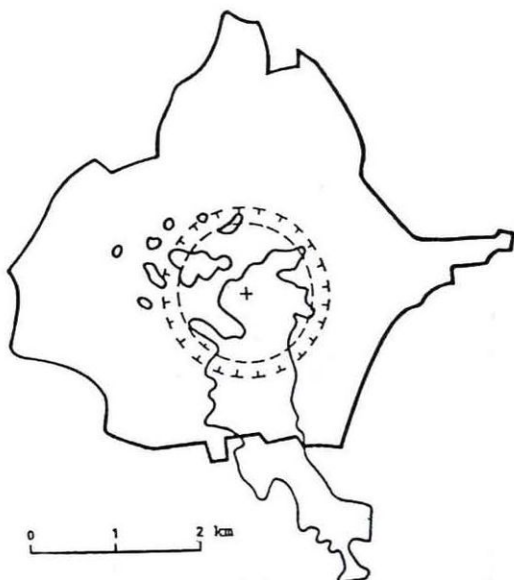


Fig. 3. Comparison of damaged areas in Hiroshima and Nagasaki /68/
Hiroshima: continuous line indicates city limits; dashed line shows the burned-up zone;
Nagasaki: thin continuous line shows the burned-up zone; dot-dashed line shows the totally demolished area

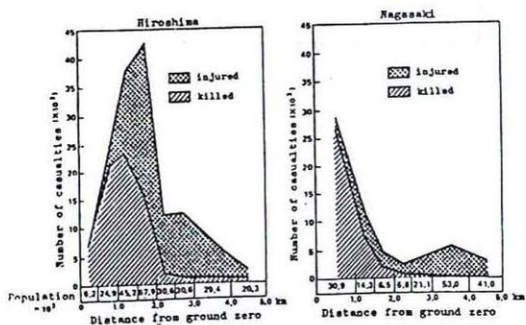
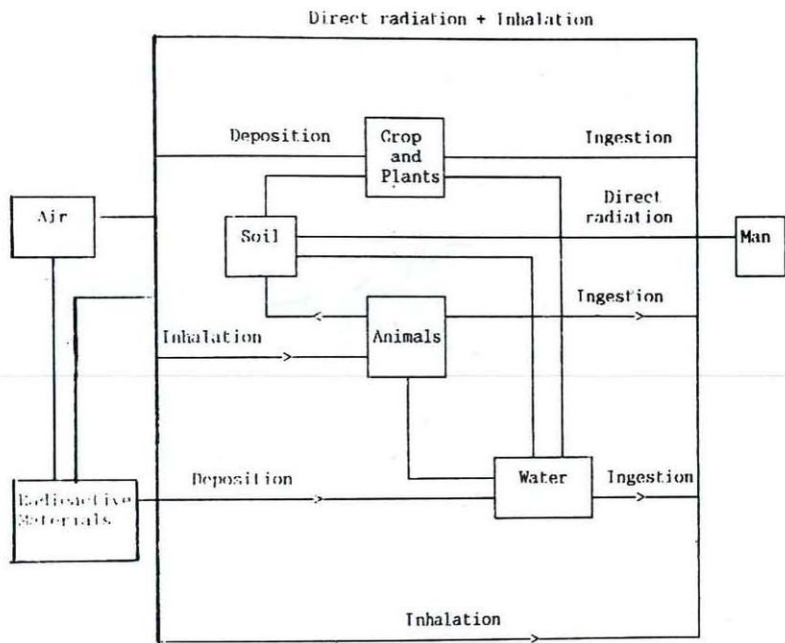


Fig. 2. Civilian casualties in Hiroshima and Nagasaki in relation to distance from ground zero /4/



Simplified pathways by which radioactive materials released to the environment may cause human exposure

Fig. 4

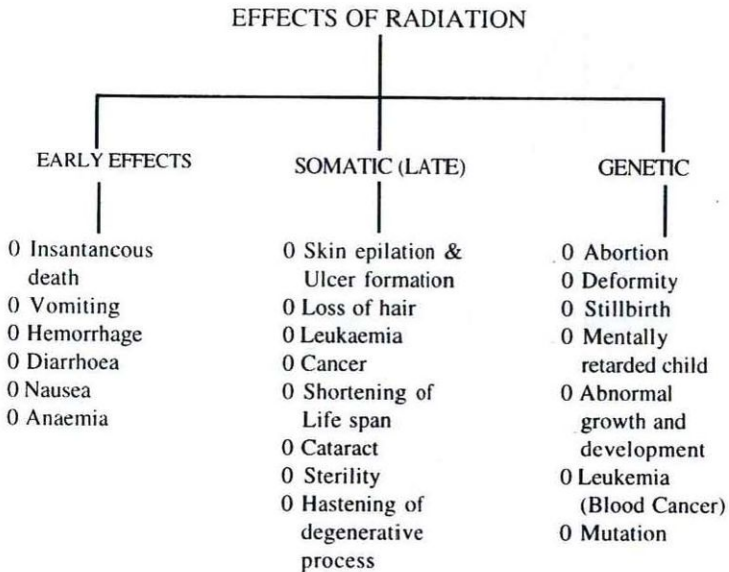


Fig. 5

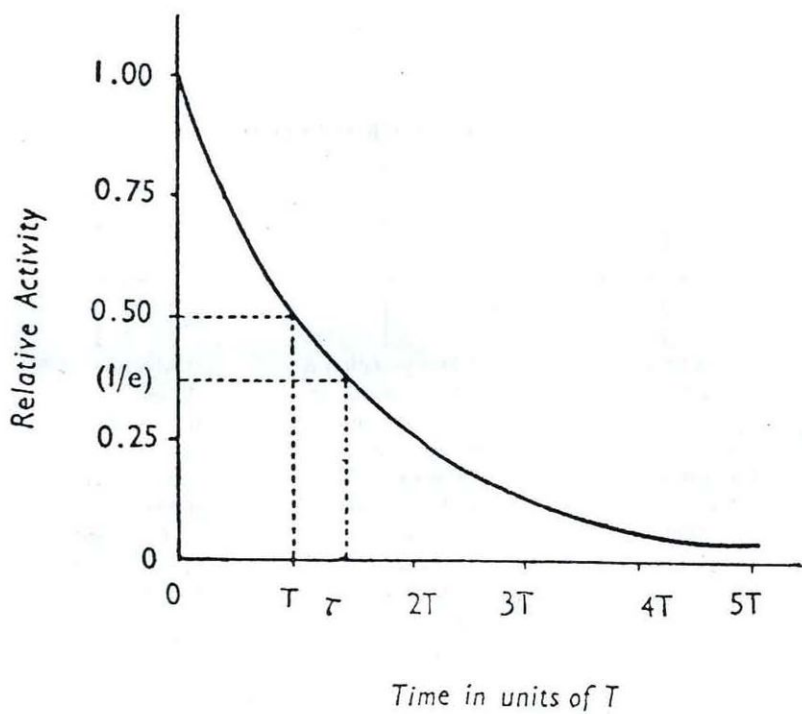


Fig. 4.1. Radioactive decay: Half-life (T) and mean life (τ)

Fig. 6

RADIATION : SOURCE

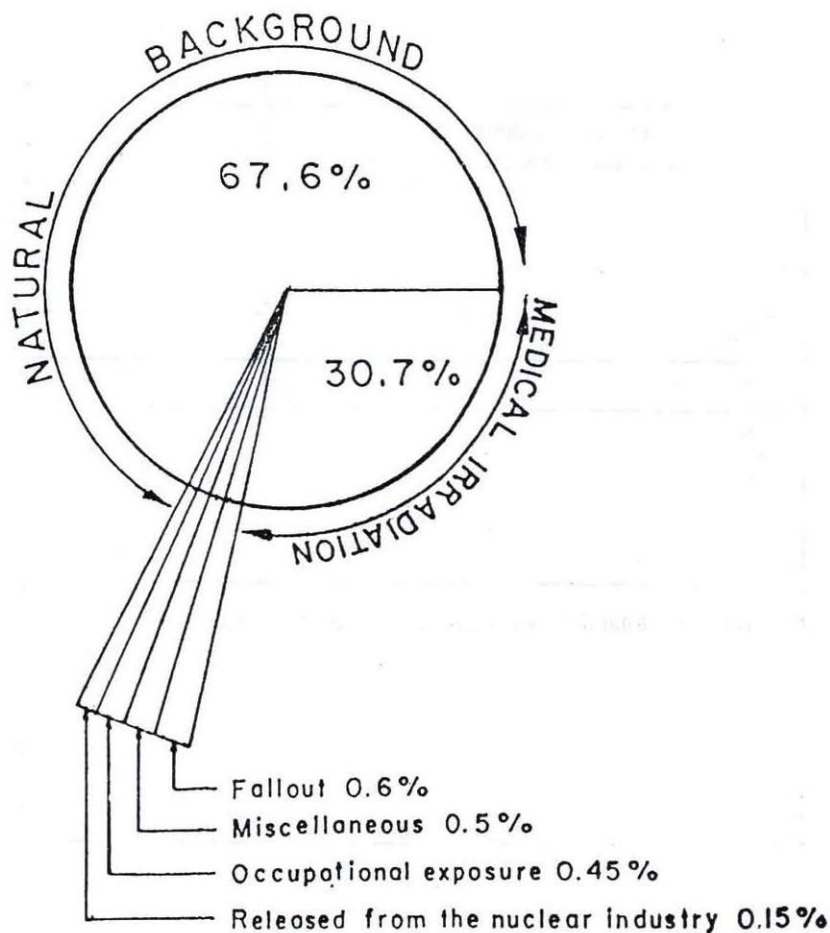


Fig. 7

Radiation Risk Factors	
	No of effects exposed in a population of 1 million persons receiving a dose of 1 million sievert (1mSV.)
A. For serious hereditary defects in the first two generations from irradiated gonads.	40
B. For late fetal cancers from irradiation of various tissues :	
Breast	2.5
Lung	2.0
Thyroid	0.5
Bone surfaces	5.0
Remainder whole body	2.5
C. Total for serious hereditary defects and for fetal cancers	16.5
Therefore the total risk to as individual per unit dose equivalent	

Fig. 8

Radio-Isotope	Half	Medical Uses	Industrial Uses	Agricultural Uses
Iodine-131	8 days	(1) For detecting (2) For diagnosing thyroid gland disorders.	For detecting leak in water lines.	For study of plant growth.
Phosphorus-32	14.3 days	(1) For locating the extent of brain tumours. (2) FOR Treatment of chronic leukemia.	For testing tread wear on tyres.	For the study of phosphate fertiliser uptake.
Cobalt-60	5.27 years	For cancer treatment.	Radiotherapy testing.	Nutrition studies in animals.
Carbon-14	5568 years	For studying cancer studying agents.	Testing Floor wax.	For tracing drugs vitamins and hormones in cattle.
Gold-198	2.69 days	For studying cancer.		
Cesium-137	27.3 years	For cancer therapy.	Radiography.	Metabolic studies.
Sodium-24	15.06 hours	(1) For detecting normal and restricted blood circulations.	Leak test studies.	Animal blood circulation studies.
Iron-59	45.1 days	(1) For studying body's use of iron. (2) For studying whole blood reservation.	For friction studies.	Iron uptake in animals.
Calcium-45	163 days	Metabolic studies.	For concrete tests.	Plant nutrition studies.
Strontium-90	28 years	For treating surface gauging.	For thickness gauging.	Used as betaray source for treating animals.

Fig. 9

IV. INDIA-PAKISTAN NUCLEAR ARMS RACE: RESPONSE OF THE NON NUCLEAR WEAPON STATES OF SOUTH ASIA

Shaheen Afroze

INTRODUCTION

Nuclear tests conducted by India and Pakistan during May 1998 provoked a risky arms race and added an alarming dimension to an already volatile situation in the region of South Asia. In the aftermath of the Indian tests, Indian Premier atpayee declared that his 'Government' had not characterised the nuclear tests as peaceful tests ... we do not want to cover our action with the veil of needless ambiguity India is now a nuclear weapons state.¹ Pakistan too had not fallen behind in articulating her intentions. As the Newsline¹ observes, "the two geographically contiguous countries, who have fought three wars in the last fifty one years of their existence, are now face to face in a new stand-off and their fierce nuclear arms race has turned the region into a nuclear flash point". As soon as the news of nuclear tests broke out there were spontaneous jubilation from people of different walks of life in both the countries. For India, "these tests provide reassurance to the people of India that their national security interests are paramount and are promoted and protected."² As Mr. Vajpayee puts it, "the tests have given India *Shakti*, they have given India strength, they have given India self-confidence."³ For Pakistan the nuclear tests were conducted "to

1. *India Today*, May 25, 1998.

2. *Newsline* (Pakistan), June 1998.

3. Statement of the Principal Secretary to the Indian Prime Minister on 11 may 1998.

restore the strategic and military balance in the region."⁴

But the eleven nuclear tests have given the world a sense of exasperation. The international community reacted quickly and strongly and condemned the explosions. Japan and the US were quick to slap sanctions on India and Pakistan. With the two countries going openly nuclear, a stark reality dawned on the people of the Non-Nuclear Weapon States (NNWS) of South Asia. Under the changed circumstances, it is important to know the reactions and responses of the non-nuclear weapon states of the region? After all any possible nuclear exchange in South Asia is not just a bilateral matter between India and Pakistan, it would destabilise the entire region as well. Are the NNWS like Bangladesh, Nepal, Bhutan, Sri Lanka and Maldives worried about the escalating tensions and arms race in the region? What are their concerns? What type of explanation do they have?

The present paper endeavours to look into the reactions and responses of the NNWS of South Asia and tries to bring out the pattern of their responses. The first part of the paper deals with the responses of the NNWS while the second part attempts to understand why the NNWS responded the way they did? The final part draws together the threads of the discussion and touches upon what the NNWS could do in the changed circumstances.

RESPONSES OF THE NNWS

Although the capability of having a nuclear weapon does not necessarily imply that it will be used, nevertheless, the capability does imply that it may be used. As such the NNWS are fearful by the very presence of nuclear weapons and their deployment in the

4. Pakistan's Prime Minister's remarks on 29 May 1998.

region. Also their fear erupts from the fact that even if the nuclear war is limited to India and Pakistan, the physical consequences of the nuclear radiation could be equally disastrous to all of them. Moreover, they face a physical threat in a nuclear environment that may occur out of miscalculation or mistargeting. As such almost all non-nuclear countries not only in South Asia but also throughout the world want a cessation of nuclear arms race. They want to halt the testing, production and further development of nuclear weapons. In other words, they want to stop both the horizontal and vertical proliferation of nuclear weapons. Having said, let us now look at the responses of the NNWS of the region after the recent blast of India and Pakistan. It may be noted here that all the responses are of official level. At unofficial level, responses from the opposition and the people in general are included only when and where available.

BANGLADESH : The first official response of Bangladesh came on the 13th of May 1998, when Foreign Minister Abdus Samad Azad in a statement said, “Bangla-desh hopes that all South Asian countries will refrain from further escalation of nuclear arms race”.⁵ Prime Minister Sheikh Hasina said, “it is the sovereign right of every country to decide on its own security perceptions and take measures accordingly”.⁶ With Pakistan’s nuclear test it had no specific reaction. When asked about Bangladesh’s reaction about the Pakistan’s nuclear test, the State Minister for Foreign Affairs said, “we have signed CTBT. Bangladesh sincerely hopes for peace which is required for every country.”⁷ While on the other hand the main opposition political party of Bangladesh, BNP in a statement on May

5. *Daily Star*, 13 May, 1998.

6. *Holiday*, 15 May, 1998.

7. *Daily Star*, 30 May, 1998.

12, expressed concern and said that "the tests had created an environment which would encourage arms race in South Asia and intensify tension".⁸

SRI LANKA : Sri Lanka's initial response was, "While expressing deep concern at the missile and nuclear test, Sri Lanka wants the entire international community with no exception to continue its efforts to achieve global nuclear disarmament leading to the total elimination of nuclear weapons without which peace and international security will continue to be in constant jeopardy."⁹ Subsequently, however, Foreign Minister Lakshman Kadirgamar in a statement said, "Sri Lanka is not opposed to India being a nuclear power and is opposed to sanction being adopted against that country".¹⁰

According to reports, some nationalist and anti-western elements within Sri Lanka have openly acclaimed India for bringing forth a South Asian bomb. There has hardly been any India bashing in the media either, "perhaps reflecting a general Sri Lankan perception that if the western powers can have the bomb, so also can a great third world power like India".¹¹

A former Sri Lankan diplomat in his article in *The Daily News*¹² stated that India's nuclear tests could be a blessing in disguise. He stated that it is precisely the national security consideration, which made India to resume nuclear testing for military purposes after a lapse of 24 years. If India had continued with nuclear development

8. *Daily Star*, 13 May, 1998.

9. *The Daily News* (Sri Lanka), 13 May, 1998.

10. *Ibid.* 14 May, 1998.

11. Jehan Perera, *Holiday*, 29 May, 1998

12. Yogendra Duraiswamy, *The Daily News*, 28 May, 1998.

for military purposes after her first test in 1974 like what the great powers did, she would now, have been a major nuclear power with an array of sophisticated nuclear weapons. He also feels that Sri Lankan government of Chandrika should be congratulated on its stand on India's nuclear tests.

NEPAL: A press release of the Ministry of Foreign Affairs of Nepal states that 'Nepal as a party to the nuclear non-proliferation treaty and signatory to the comprehensive test ban treaty, views with concern nuclear tests by any country'.¹³ Nepal hopes that the recent nuclear tests by India will not unleash nuclear arms race in the region. It urges all to exercise maximum restraint and refrain from nuclear tests in order to create an atmosphere of trust and confidence essential for global nuclear disarmament.

It has also offered Kathmandu as the venue for the Indo-Pak dialogue to ease the mounting tension in the region. Addressing a press conference at the Tribhuvan International Airport after his arrival in Kathmandu from the 10th Summit Meeting of the South Asian Association for Regional Co-operation (SAARC), the Nepalese Prime Minister G. P. Koirala said. "Nepal as a small nation may not be able to play the crucial role of a mediator between Pakistan and India, but it can arrange a meeting place for the two".¹⁴

MALDIVES: Maldives stated that "it remains committed to a nuclear weapon free world". However, a Maldivian diplomat said, "as neighbours we are naturally concerned. India and Pakistan at peace with each other acts as a stabiliser for the region".

13. *The Rising Nepal*, 15 May, 1998.

14. *Ibid*.

PATTERN DISCERNED: From the above responses one can ascertain the following pattern:

- i. The responses of the NNWS were hesitant and restraint;
- ii. There was no condemnation in their statement.

With a view to understanding the constraints and underlying reasons that determined such a pattern of behaviour an attempt would be made below to analyse the threat perception of the NNWS, their security concerns, defence build up, defence expenditure, nuclear energy capability as well as the nature of their relationship with both India and Pakistan.

THREAT PERCEPTION AND SECURITY CONCERNS :

South Asia is basically Indo-centric not only in geographical terms but also in terms of history, culture, politics and economy. In geographical terms, all the South Asian states are physically contiguous to India but none of them is contiguous to one another. Consequently, the concern about India surfaces more strongly in the minds of the non-nuclear weapon states than about any other state. Besides, India is so close to each one of them in terms of shared history and inheritance and a shared culture (with all the pride of success, follies and misgivings) that one cannot help but recognise her overwhelming influence. For them, to divorce the past, which all these countries shared with India, is to cut themselves off from their roots.

Again, none of the NNWS of South Asia matches the Indian power capabilities with respect to any of the attributes of power. The power differential (be it military or economic) is so enormous that no NNWS can either singly or collectively encounter the Indian pressures and threats. Therefore, both militarily and economically

the states are extremely vulnerable *vis-à-vis* India. All these issues bear out the fact that India, a single overwhelming factor, looms very large in the minds of the small states of South Asia when matters not only of external relations but also of domestic importance are considered. India therefore, is very important in their foreign policy calculus. Difference in power is not the only significant difference between India and its neighbours. They are also aware that India matters more to them than they do to India. Their perception of India's self-image is not simply that India sees itself as big: they believe that India sees itself as unaffected by relations with the neighbours.

Pakistan is also an important actor in the region and appears big in the minds of the NNWS too, but they do not so far perceive it as a threat. Nevertheless, when India and to some extent Pakistan acquires huge arm forces, with the latest in combat aircraft, tanks and guns, a vast industrial establishment, a nuclear capability, and even a nuclear powered submarine, the smaller countries of South Asia cannot help but watch with a high degree of nervousness.

In order to overcome their nervousness we see a tendency among the NNWS to an increased spending in their defence, albeit for enhancing defensive capability in a tactical nuclear environment. But a look at their defence budget and defence expenditure shows that their defence takes them nowhere near India or Pakistan.

The NNWS also do not have any major arms producing facilities like India and Pakistan. The armies of these countries depend on foreign arms and ammunition supplies.

Bangladesh is the only other country in the region to possess a nuclear research reactor, which is under IAEA safeguard as required by its adherence to the non-proliferation treaty. Sri Lanka does not

have any nuclear reactor or research facilities dealing with weapons development but they do have state-run Atomic Energy Authority. Bangladesh, Bhutan, Maldives, Nepal and Sri Lanka are all signatories to the NPT regime. Nepal and Maldives were the first two countries of the five South Asian smaller states to sign the NPT in 1970 at its inception.

NNWS' RELATIONS WITH INDIA AND PAKISTAN: With the coming of the present government in Bangladesh, highest priority has been given to its regional neighbours India and Pakistan. Bangladesh is keen in improving relations with India in an effort to settle outstanding differences over water, trade and transit. The issue of Ganges water, which had been in deadlock since the 1980s, was solved. Both the governments assured each other that they would not allow their respective territories to be used against each other. Despite occasional ups and downs in their relationship over issues like the push back of the Bangladeshis from India, the present moment is witnessing a relatively improved relationship between the two. With Pakistan, although, there were hard feelings and bitter memories over the military brutalities in 1971, repatriation of the Biharis and distribution of assets and liabilities, there are no substantial altercations between the two countries now.

Sri Lanka has always moved very cautiously on Indo-Pakistan relations. The Foreign Minister of Sri Lanka has once said that Sri Lanka would never take sides on Indo-Pakistan dispute of any kind. Having good relations with India is also important for Sri Lanka in the context of the ethnic problem which India got bogged down and could once again be embroiled in. Pakistan had helped Sri Lanka at times of its crisis. In 1983, when Sri Lanka faced an uprising and had a virtual international arms embargo placed on it, it was only

Pakistan who bailed her out of that situation by providing her military assistance.

Since 1989-90, when Nepal had problems with India over trade and transit matters, its relations with India has much improved. It remains somewhat cordial and without less controversy despite frequent changes of government. Because of its landlocked status, Nepal has realised that its trade transaction has to remain almost confined to India. This geographical determinant also means that Nepal has to depend on India absolutely for the access to the sea needed for extending its economic relations beyond India with the rest of the world. During the 1989-90 crisis in Indo-Nepalese relations, China could not do much except offering moral support to Kathmandu and that led Nepal to realise the usefulness of its China card *vis-à-vis* India.

Unlike others in the region, Bhutan views India not as a threat but as a market of unlimited potential. With its treaty relationship with India, it follows pro-Indian policy and does not involve itself with any bickering with its big brother.

ANALYSIS: Although the responses and reactions of the NNWS were very hesitant because of the suddenness of the whole thing, the fact remains that the NNWS carefully avoided condemnation of India or Pakistan. No doubt, without their own nuclear or conventional retaliatory capacity they are lesser strategic actors in the post-nuclear South Asia. The reality is that, the vast disparity in the level of conventional force between non-nuclear weapon states and of those states possessing nuclear weapons, particularly in South Asia makes it practically impossible for NNWS to be able to resist intervention – conventional or nuclear as the situation stands today. To them, India with or without nuclear power is a threat to the region. Although it has provided a nuclear balance

with Pakistan becoming a nuclear power as well, they became more cautious in their pronouncement because of the fact that from now on they will have to cope with not only one but two nuclear powers in the region. Although A. B. Vajpayee has stated that India will not use nuclear weapons against non-nuclear states, there are no legally binding instrument providing assurances on the part of the nuclear weapon states not to attack or threaten to attack a non-nuclear weapon state with a nuclear weapon, as well as assurances of coming to their defence if someone does so.

Again, apprehensive of implications in bilateral relations, their responses to the India-Pakistan tests have been restraint. They are conscious of their own predicament and as such cannot afford to antagonise India. All the smaller states of South Asia have come along a long way in their relationship with India. Their more traditional priorities in bilateral context are overwhelmingly crucial to be taken care of at the moment than the threat emanating from the nuclearisation of the region. They comprehend the proximity and power of India. If NNWS, being so proximate to India, withstand India's explosion, they cannot deny the same response with regard to that of Pakistan.

As such Bhutan has preferred to remain silent. Nepal expressed its muted disapproval only by urging to exercise maximum restraint and refrain from nuclear tests in order to create an atmosphere of trust and confidence. Sri Lanka went to the extent of supporting the nuclear tests. The bitter memory of Indian policy towards Sri Lanka under Indira and Rajiv Gandhi is still fresh in the minds of Sri Lankan decision-makers. It is noteworthy that a few days after Sri Lanka supported the Indian testing, India renewed the ban on LTTE

for a further two years.¹⁵ Bangladesh only hoped that all South Asian nations would refrain from further escalation of nuclear arms race. There has not been any serious public outrage in any of these countries. When the French tested in the Pacific few years back, the NGOs in Sri Lanka organised protest rallies in Colombo, nothing of that sort happened thus far in Sri Lanka too.

At the 10th SAARC Summit also the NNWS leaders neither expressed concern about nuclear arms race in South Asia nor urged India and Pakistan to sign NPT or CTBT. On the contrary, they gave limited endorsement to the retrograde position of the offending states, India in particular, by declaring that the NPT and the CTBT "had not led to any progress towards nuclear disarmament nor prevented proliferation". The leaders of NNWS, instead of convincing and persuading the two protagonists to throw away nuclear ambition, urged the UN conference on disarmament "to commence negotiations on a comprehensive, universal and non-discriminatory international instrument".

CONCLUSION

From the above it is clear that the reactions of the non-nuclear weapon states (NNWS) of South Asia although hesitant and restraint were expressive of their concerns. The initiative taken by Prime Minister of Bangladesh Sheikh Hasina to explore ways to ease tension between India and Pakistan, and her address to the army in the CHT Cantonment calling for consolidation of the country's defence and for a change in strategies because of the changed situation implies that NNWS are concerned. The visits of the Bangladesh Prime Minister to the two capitals should be seen as not only as to mediate between the two countries but also to convey to

15. Perera, *op. cit.*

both India and Pakistan the apprehensions of Bangladesh at the developments; that it is no longer an issue between these two countries alone. In the event of an Indo-Pak nuclear exchange, the entire region would suffer from terrible consequences. It may be mentioned here that the Prime Minister of Bangladesh, was the first Head of Government to visit India and Pakistan after their nuclear tests. This initiative of Bangladesh needs to be followed up jointly by other South Asian NNWS as well.

As NPT signatories, the NNWS should make de-nuclearisation of South Asia a policy choice. They should launch pro-NPT, pro-CTBT and anti-nuke campaign. They should work to formulate ways to peace education and set up disarmament institutes. In the interest of regional stability and co-operation, NNWS of South Asia should strive to take more active role on the issue. The SAARC, the United Nations and other international forums should be used frequently to persuade and urge the NWS to have restraint and control over their stockpiles and start thinking to reduce them gradually. They should also try to convince India and Pakistan that the acceptance of CTBT does not prohibit them from going ahead with their current plans of weaponisation and deploying a nuclear delivery system or setting up the associated command, control, communications and intelligence networks. Article IX of the treaty allows for withdrawal after a six-month notification period, if the nation feels "extraordinary events have jeopardised its supreme interests." Last but not least, the NNWS should stress the need for negotiating and implementing more confidence and security building measures (CSBM) at both bilateral and regional levels to create conditions in which outstanding issues can be dealt with more maturely so that eventually they could be resolved peacefully.

V. NUCLEARISATION OF SOUTH ASIA: CHALLENGES FOR BANGLADESH DIPLOMACY

Khurshid Hamid

With the traumatic eleven nuclear tests conducted by India and Pakistan last May, Bangladesh's very own world within the worlds, South Asia, has been nuclearised and is on its inevitable way to being nuclear-weaponised forever and a day. The political leaders of India and Pakistan in the aftermath and continuing till today are striking eyeball-to-eyeball postures against one another, indulging in shooting skirmishes in Kashmir, and the first face-to-face of the two Prime Ministers at the SAARC Summit in Colombo has not registered any forward move. The permanent nuclear powers and the West initially cried foul with strident raucousness and slapped sanctions on the two countries, but the harshness of both has since been toned down to sweet reasonableness.

One has not subscribed to the doomsday scenario of a runaway nuclear armaments race in South Asia of nuclear madness and trigger-happiness and a possible nuclear shooting war over flashpoint Kashmir. Nor has one agreed that the nuclear tests have thrown the regional security of South Asia out of skelter. Briefly one has argued as follows:

- a) Nuclear armaments, and its accompanying weapons delivery systems, make the possessing states most acutely aware that the moment of deployment of their full resources and military power and the testing of their true strength will also be the moment of regional or global destruction. The irony is that this results in a moratorium condition rather than a potential state of war. In such an environment, of the four

accepted functions served by military might, that is defence, deterrence, compellance, and enhancement of prestige, one hundred per cent weightage is attached to deterrence and enhancement of prestige, which are the peaceful uses of power, than to defence and compellance or the actual deployment of arms, which are the historical uses of power.

- b) Both the Indian and Pakistani Prime Ministers have been screened through multiple elections and an arguably democratic process, and if democratic governance with its massive checks and balances is all it is touted to be, such a continuum is not likely to yield to roguish nuclear adventurism.
- c) There already exists for some time an overwhelming asymmetry of military capabilities between India and Pakistan on the one hand and the rest of the South Asian countries, including Bangladesh, on the other. Nuclear armaments are likely to bring some awesome deterrence balance in the region.

Nonetheless, the raw fact remains that a possibly nuclear weaponised South Asia has riveted world attention on our region as never before, the security tensions in our region have been heightened and electrified. It would indeed be a good thing too if it jump-starts our political leaders and the intelligentsia to do some deep soul searching and seriously attempt a conceptualisation of what ideally the defence and foreign policies, both within the ambit of over-arching diplomacy, of Bangladesh should be.

Bangladesh is by far the largest of the non-nuclear South Asian states in terms of the critical mass of population and territory plus economic capability to wage warfare. Had she somewhat more

economic and technological testosterone, she too would have been compelled by the dynamics of history to take the critical nuclear path blazed by India and Pakistan. But she does not. And she has, therefore, to survive by her wits, and that means diplomacy with a capital D.

In the event, to have any meaningful discussion on the successful pursuit of activist Bangladesh diplomacy in post-nuclear South Asia, it will be necessary to stand on their heads some of the traditional concepts of nationhood, power, power politics, warfare, influence and bargaining power, and the emerging international order, so that we arrive at new levels of understanding of these terms.

POWER POLITICS IN A MORATORIUM WORLD

Professor Okonogi Keigo of Japan has posited the thesis more than a decade ago that the international situation is in a transitional stage with the traditional Westphalian international order of military preparedness gradually advancing towards Emmanuel Kant's ideal of a world order marked by perpetual peace through the establishment of a general collective security system. In the fleeting years since the Soviet Union has broken up into a number of nation-states as obtained before the Bolshevik putsch of 1917 and the forward march in Central Asia in the late 1930's and the early 40's demonstrating that a) the aggrandisement of nations through brute power politics prove to be evanescent Cheshire cats in the medium run, and b) the accretion of superpower military prowess to practice power politics entails an intolerable suicidal burden and is thereby self-defeating in its ends. The rock-hard Soviet bloc of the Cold War era has also been pulverised, and the constituent countries are queuing up with alacrity and a glint in their eyes to join a much more enlarged general collective security system of the NATO. Whither then the traditional

power politics and its practitioners in much of the first world and the less heard of second world?

Another giant leap forward for the global civil society has been taken in July this year with the almost consensus of the community of nation-states over the vehement opposition of the United States towards the establishment of the International Court of Crimes, appropriately in the country of my abode for the past more than four years, Italy, the epitome of the Renaissance half a millennium ago and thus the harbinger of modern Western civilisation and culture predominant in the world today. The Court shall have inherent supranational powers among the signatory nation-states to try war crimes (with an initial seven-year moratorium to opt out), crimes against humanity, genocide and aggression, and to bring the culpable parties to the dock and pass binding sentences on them. Unfortunately nuclear weaponry and its use has been left out of the Court's purview.

Nonetheless for the first time in mankind's long conflict-ridden history an international court will have the policing and incarceration clout of national municipal courts, and the long-felt uncivil gap betwixt the two has been narrowed. Will not this Court, once ratified it is likely to be activist, dampen somewhat the predilection of traditional power politics practitioners?

NATIONHOOD

Nation-states in the traditional sense have been ideologically oriented national security states, jealously guarding the countries' core values. Because of her geographical advantage Bangladesh never had to organise herself as an ideology-governed nation with her own distinct core values in order to survive against annihilation by the great civilisations that prospered in South Asia. Both the

British and the Pakistanis instituted in Bangladesh a regime of Government by law and bureaucratic rationalism with little or no indigenous ideological content.

In the face of the Pakistan Army's ruthless action and the worsening internal situation in 1971, Bangladesh adapted to the crisis, forming a crisis consensus, by espousing Bangladeshi nationalism as her core value, and for a short while appeared to have a true ideology of her own. But subsequent history shows that Bangladesh's adoption of a core value was a mere flash in the pan. After liberation, the Constitution Bangladesh adopted and even its subsequent amendments do not reflect in practice any strong ideology (of Bangladeshi nationalism? Secularism? Islam? Socialism? Free market? Democracy?), and do not clearly indicate what core values she cherished. Rather, Bangladesh has circumscribed the role of the state to the neutral, purposeless outer shell traditionally established, and this has allowed her citizens a liberal and free choice of ideologies. Bangladesh will choose to pass muster as a moratorium state respecting the core values deeply rooted in her national sentiment. In the meantime, out of economic compulsions and as a conscious policy she will delay paying her legitimate defence costs as long as possible and devote her energy and resources to cater to the economic well-being and improving the quality of life of her people and to creating a new international order during the interregnum of grace.

SHIFTS IN BARGAINING POWER

In today's moratorium world of nuclear deterrence and economic interdependence, international politics is shifting from a one-dimensional power game to a multi-dimensional game of strength and influence. As a result, the nature of strength needed by a country

to back up her negotiations with other countries has become highly diversified and complex. In the historical analysis of national power, strength was measured in terms of the will and capability to mobilise resources to win wars. Dr. Ray S. Cline, a former CIA information analyst, has devised the following formula:

$P_p = (C + E + M) \times (S + W)$, or national power (perceived power) = (critical mass + economic power + military power) \times (national strategic objectives + willpower), where critical mass = population + territory.

This kind of power analysis however tends to misguide one when he measures bargaining power in the complex, fluid and interdependent world of today. The following criteria are a more dependable guide to the assessment of bargaining power in the present-day world:

1. Bargaining power is most effective when it remains in latent form. The more power is realised in visible, concrete form, the more it becomes a burden and less a promise and results in restraints on freedom of action. Since the Second World War, both the United States and the Soviet Union became engaged in an unprecedented armaments race in the face of magnified threat each perceived from the other and thereby lost sight of the self-evident truth that power as potential provides the greatest bargaining power. The Soviet Union particularly, in her frenetic but successful catch-up drive for military parity with the United States, must have ruefully realised that the law of diminishing returns for military prowess operated in the world today, and ultimately disintegrated under the burden of her own overweening power. Both India and Pakistan are likely to realise the same truth once the atomic dusts of their explosions settle.

The People's China is a salient example of embedding the self-evident truth that power as potential provides the greatest bargaining power, remaining an anachronistically armed, moderate economic power for much of the hey-day of the Cold War, and yet reaping rich dividends in her negotiations with the then Soviet Union, the United States and the rest of the world, and she has come a long long way forward since. In this context, Bangladesh must consciously realise that the source of her true strength lay in exploiting this principle of bargaining power in its latent or potential form by maintaining her inconsistency of status as militarily a lightly armed power despite her large population. If at any point of history, India's political and military pressures on Bangladesh were to overreach the limits of tolerance, public opinion in our country would be aroused and once again fused to a crisis consensus (and our fellow countrymen seem to be singularly adept at only this form of consensus), leading to the mobilisation of the nation's vast potential of manpower to conduct a prolonged faceless war of guerrilla attrition against our enemy. This was evidenced in the Bangladesh liberation war. The awareness held by India and other countries of the region of this potential threat serves as a genuine source of Bangladesh's bargaining power because it deters India from exerting undue pressure on her.

2. Bargaining power today depends largely on having the ability to integrate the special interests scattered among the various spheres and raise the country's degree of governability. A political leadership that can integrate the different domestic special interests within Bangladesh and thereby pursue a more effective diplomacy is a vital imperative for Bangladesh's future security. Given the traditional bureaucracy, very adaptable and

amenable to the country's political culture, it should be quite possible to build up Bangladesh's bargaining power and establish a credible security policy through inter-Ministry co-ordination within the framework of a cogent political system. Only Governmental leadership can fully take into account the deep complexity of international relations today, adopt a long-term perspective and provide a sense of direction and co-ordination worthy of a national interest. Within this context what is presently most needed in Bangladesh is the culling, examination and analysis of detailed information about various countries. A high standard of political analysis functions as a source of bargaining power. The Foreign Ministry, as the central body specialising in external affairs and strengthening the country's bargaining power, needs to broaden vastly the scope and dimension of its work and its functions both qualitatively and quantitatively, gathering information, making political analyses and conducting bilateral and multilateral foreign negotiations. A special effort must at the same time be made to greatly extend facilities for research on external problems and regional studies so as to improve the standards of political analysis. This is vital to national security and survival.

3. Finally in this economically globalised world, the more fungible a nation-state's strength is the better it serves as a basis for flexible bargaining. Power, unlike the purchasing power of money, lacks fungibility and adaptability. The effectiveness of power thus lies precisely in flexible reactions arrived at through the political and contextual analysis of a particular time and circumstance, that is, who is influencing whom on what issues. For this reason, and this is especially true of big brother nation-states, technological know-how and economic power, the latter

includes external purchasing power and foreign aid, which are highly fungible, have proved to be devastatingly effective in international power politics. Witness in this regard, the sharp, no-nonsense and sudden-death manner in which the United States debunked, demystified and dismantled the erstwhile Soviet Union and put final 'paid' to the Cold War. For Bangladesh in this context, the top priority should be an in-depth contextual analysis of her asymmetric political relationship with India. That is to say we should minutely scrutinise all straws in the wind with regard to the political aims and intentions of India's policy towards her neighbours and in the region, including Bangladesh, and attempt to exert an influence on such intentions to veer in a direction favourable to Bangladesh. Furthermore, especially in this economically interdependent world, it is not unlikely that not only the use of arms but even economic sanctions, if applied with genuine political will and true grit, will prove cankerously damaging to long-term national interests. In the present-day world of nuclear stand-off and potentially brisk proliferation, with India and Pakistan having arrived and pointing the way, it is imperative for the major powers to make detailed contextual analyses of their asymmetric relationships with other countries with regard to economic interdependence. For in the futuristic power politics, the really painful pressures are likely to be brought to bear on deviating nation-states not through non-nuclear or nuclear arms threats, but through the possibility of a snapping of economic relations through I-mean-business sanctions or other means.

In Bangladesh's foreign policy perspective, India looms large with cinerama effect. Hence the creation of an interdependence matrix of economic and commercial relations through substantially

increased co-operation and the quantification of the long-term interests for India of maintaining her economic relationship with Bangladesh and the damaging effects of even a temporary suspension of the relationship would serve as a foundation for our bargaining power with our overweening neighbour.

Bangladesh's Exclusive Defence in a Hypothetical War with India given the geopolitical realities of South Asia, only India could become the most serious threat to Bangladesh's core values. In the event of an armed conflict between Bangladesh and India, one would postulate for our defence the theory of asymmetric conflict, based on the post-Second World War experiences in Algeria and Indochina, the Bangladesh liberation war and the Soviets in Afghanistan, which was born of the attempt to analyse politically the reasons for the defeat of stronger countries by the national resistance of weaker countries. In its essence an asymmetric conflict is a battle based not on military capability but on intention or political will.

As long as the meaning of strength is narrowly limited to military capability, Bangladesh does not have an iota of a chance of succeeding in defending herself against India, just as her chances of defeating Pakistan in the liberation war was nil. What this means theoretically is to aim at influencing Indian political objectives, intentions or will, as was in practice done in the liberation war in respect of Pakistan.

The primary point in counter-Indian defence is thus not to allow India any occasion to nurture any intention of invading Bangladesh. This manoeuvre involves two basic elements. First, a path must be thrashed that enables India to make optimum use of Bangladesh's economic potential, both as a supplier of raw materials, particularly natural gas, and a ready market for Indian finished goods, technology

and minerals. This can be achieved by building up a mutually trustful and beneficial relationship through trade, economic and technical co-operation, joint development of a gas pipeline to West Bengal, joint construction of permanent waterworks for equitable sharing of the waters of the Ganges and other common rivers, and finally frequent cultural exchanges.

The second element in counter-Indian defence is that the cost of occupying Bangladesh through armed aggression must be made exceedingly high. This can be done through the deterrent of firmly upholding and further intensifying the close and friendly relationship and co-operation between Bangladesh and China, nursing friendly relations with Pakistan, and maintaining a relationship of friendship with the United States, the Islamic countries and the West.

Of cardinal importance in asymmetric conflicts is the mobilisation and support of international opinion. In the event of a war with India, Bangladeshis, with the same enthusiasm as shown by them in the liberation war, must mount vigorously diplomatic efforts so as not to be isolated from the rest of the world. Diplomats and bureaucrats of high calibre and articulation will be needed in greater numbers to carry out an aggressive and effective diplomacy of intimate international involvement. In fine any hypothetical counter-Indian defence strategy must be anchored on an exclusively defensive posture postulated on the doctrine of asymmetric conflict. Since such a struggle involves not military capability but manoeuvring of India's political will or intentions so as to lead her aims concerning Bangladesh in a direction favourable to Bangladesh's security, diplomacy with its intricacies and nuances comes to play an excessively predominant role. In order to pursue these diplomatic policies vigorously and effectively, it is essential to be rid of ill-informed and half-baked notions about Bangladesh's

foreign policy and its pursuit for her national interest and security that seem to enervate the thought-process of our political leaders and senior civil servants. Bangladesh political leaders will have to mutate themselves into true statesmen, the senior bureaucrats into responsible patriots, and diplomats selected for their intellectual substance and articulateness.

PRESCRIPTION FOR BANGLADESH'S DIPLOMATIC INITIATIVE

Bangladesh has so far like a pious ineffectual angel only flapped her luminous wings in vain before the nuclear dragons of South Asia. One feels that we have a definitive rôle to play to bring about sweetness and light in the exacerbated security concerns in our region. Prime Minister Sheikh Hasina was profoundly ill advised to make her post-haste high-profile day-trips to India and Pakistan in the aftermath of the tests and which did not have any positive outcome, for the nuclear tests are a core nationalistic issue for both countries not prone to instant solutions. But the Bangladesh Government was well-advised in not coming out with official public condemnation of the nuclear tests of India and Pakistan, at least we did not welcome it as the hitherto arch anti-nuclear proliferation state Sri Lanka did, for the matter is too much of a life-and-death issue for us and facile public posturing is likely to deter our flexibility and thus be counter-productive.

From the Bangladesh perspective of her security concerns in post-nuclear South Asia, what is the crying need of the hour is Rolls Royce quiet and Rasputin-like frenetic behind-the-scene diplomacy on her part. As she is by far the largest of the non-nuclear states in South Asia it should be a categorical moral imperative on her part to take the initiative in organising a Contact Group of all the non-

nuclear states of South Asia for conducting shuttle diplomacy between New Delhi and Islamabad to delicately probe for an empathic understanding of the real thinking of the leadership of the two countries on their post-nuclear happenstance, to patiently seek possible common ground however fragile and remote in their perceptions of the short and long-term security, economic and societal welfare of their respective nations, to attempt to exert an influence to direct their attention and focus towards these commonalties, to try to influence the development of their nuclear weapons and missiles to be limited to numbers rationally tolerable to their civil societies, with all the foregoing negotiated through their agreeing to no first use of nuclear weapons and eventually signing the NPT and the CTBT would be natural corollaries, and finally and most importantly to try to facilitate their meeting across the negotiating table in a reasonable cordial frame of mind. Bangladesh and non-nuclear SAARC would be eminently suitable and relevant for the foregoing task, and it would be in consonance with the present moratorium world style of regional bodies settling their household altercations.

If the matter fails to be amicably resolved at the South Asian level and provided the two concerned parties India and Pakistan give the nod, the SAARC Contact Group could reach out to the five permanent members of the Security Council and Japan and Germany to form an open-ended group, friends of India and Pakistan, to soothe ruffled nerves and facilitate reconciliation between the two countries. The efforts of the friends after the Contact Group has softened the ground is likely to bear fruit as they would be accompanied by the licit boost of bringing along the potent paraphernalia of bilateral economic assistance and the these days over-arching International

Monetary Fund and the World Bank. No moves along the latter direction seem to have yet taken place.

The foregoing shuttle diplomacy should under no circumstances be conducted at the high profile Prime Minister or Minister level, but rather at the senior diplomat level away from undue public interest. By a Bangladeshi Richard Holbrooke, if you may, but less abrasive and more subtly feminine in wheedling compromises as he shall not have any superpower or other military back up. In conclusion now is the time for all good countrymen, be it the political leaders, the senior bureaucrats, the intelligentsia, the various special interest groups, and the more informed members of the civil society, to come forward to give consensus, crisis consensus if you like, support to the above proposal of activist diplomacy within sober parameters by Bangladesh in the new paradigm of nuclear weaponised South Asia.

VI. SAARC IN THE CONTEXT OF THE NUCLEARISATION OF SOUTH ASIA

Kalam Shahed

INTRODUCTION

The hallmark of contemporary politics is the proliferation of regional groupings of different kinds. Regionalism has been on the political agenda of many nations of the West and the Third World for this was widely believed to be a useful strategy for meeting the challenges of the changing world economic and political order. Power-oriented theory of international politics gave way to co-operation, drawing on the concepts of bargaining and peaceful negotiations. Of many regional organisations, the South Asian Association for Regional Co-operation (SAARC) is comparatively a recent one. After 18 years of its formation, the organisation continues to be plagued with many limitations and obstacles. The recent introduction of nuclear weapons in South Asia poses new stresses and strains on the structure and viability of the organisation. We need to look at the security threats to the region, in particular, those emanating from the recent nuclearisation and their impact on the perceptions of regional co-operation. We also need to underline the domestic impediments to co-operation among the member countries in the wake of nuclearisation.

This paper attempts to examine the challenges the SAARC encounters in a nuclear South Asia that tend to dim the prospects of longevity, growth and effectiveness of the organisation. The paper concludes that caught in the fallout of nuclear hysteria, the prospects for co-operation may look obscure and even irrelevant in the short run, but the socio-economic compulsions and the ramifications of

nuclear holocaust would prevail upon the leaders to engage in meaningful co-operation in the region on a long term basis.

SAARC: PARAMETERS AND GROWTH

Creative diplomacy, historical and cultural ties, the imperatives of economic development and a shared concern for security help to foster regional co-operation. SAARC came into life in December 1985, eighteen years after the formation of ASEAN and twenty eight years after the European Common Market came into being. SAARC's evolution and growth ought to have benefited from the experience of both the preceding organisations, particularly from the ASEAN, which had similar socio-economic challenges to encounter. Economic compulsions and intra-regional discords persuaded regional countries, mainly the smaller neighbours, to think about a co-operative venture that would reduce the cost of security and increase the potential for economic development in South Asia. A Charter of the association was drawn up that provided a formal framework for co-operation among the members. The Dhaka Declaration of 1985 opened both formal and informal channels of communication among the members that would assist providing a better grasp of the economic, political and security issues and, in the process, foster co-operation in all fields. Optimists noted that "the birth of SAARC was the testimony to the collective wisdom and far-sighted statesmanship of the leaders of the region."¹ The major goal of the organisation was to accelerate economic and social development of the region through optimum utilisation of the resources, while signatories remained conscious that peace and security were indispensable for attaining such objectives. The

1. M. Shamsul Huq, (1986), "South Asian Association for Regional Co-operation: Past, Present and Future", *BISS Journal*, 2:1, p.424.

regional goals, among other things would include addressing the problems of hunger, unemployment, diseases, illiteracy, achieving collective self-reliance, enhance region's role and image internationally, and building infrastructure for facilitating further co-operation.² It was hoped that co-operation in the political and security domain would eventually take place once the environment was appropriate for such co-operative ventures.

Critics were, however, quick to point out that the atmosphere in south Asia was not yet propitious to launch any effective co-operative venture in the region. The lingering legacy of suspicion, fears and unyielding conflicts would frustrate efforts to create harmony and order in South Asia. Indian response to the idea of SAARC was initially lukewarm as it considered SAARC to be a contrived forum to polarise against India on many bilateral issues with neighbours that India inherited with the partition of the sub-continent in 1947. India prevailed on others so that contentious bilateral issues were not discussed in the SAARC forums and the SAARC charter categorically precludes discussions on the bilateral issues. Pakistan considered SAARC to be another grand political platform for projecting India's dominance, if not hegemony, regionally and internationally. Smaller neighbours saw benefits of collective bargaining with an unequal and often unyielding partner in South Asia.

A regional institution was thus introduced in an atmosphere of mistrust in an area where the history of nation-building was embroiled in communal and sectarian strife, which had whittled down the prospects of co-operation. Domestic political expediency and the challenges of nation-building often encouraged the leaders to

2. *Ibid.* p.428.

resort to bitter regional diplomacy and involvement in internal wars across the borders. Alongwith many other bilateral issues, the high levels of inter-state tension along the Tamilnadu-Sri Lankan border and along the line of division in Kashmir continued to frustrate most economic and cultural ventures aimed at increasing regional co-operation.

Like SAARC, the formative years of ASEAN were shrouded in misgivings and apprehensions about the neighbours. It was hoped that after a period of gestation, SAARC like ASEAN, would rise above bilateral irritants and strengthen the veins of economic co-operation. "Economic co-operation is often the most durable foundation upon which political and cultural co-operation can be built."³ Significantly, trade and commerce among the member countries of SAARC have recently seen upward trends. A number of important multilateral arrangements like the South Asian Preferential Trading Arrangement, (SAPTA) came into being under the auspices of SAARC. In pre-nuclear South Asia, regular informal meetings among the intellectuals helped to take away a lot of steam from the security concerns drummed up by the bureaucrats and politicians. However, given the history of acute mistrust arising out of territorial disputes and ethnic and communal divides, expanding the domain of co-operation remained a formidable challenge for SAARC. A deliberate scrutiny of the conditions and factors that facilitate or impede co-operation in the regional organisations is important to understand the role and effectiveness of such regional organisations in promoting peace and economic development in the Third World.

3. Roger Irvine (1982), "Formation Years of ASEAN 1967-75" in Alison Broinows, *Understanding ASEAN*, London: Macmillan, p.13.

SAARC AND THE CONCEPT OF REGIONALISM

The theoretical literature for regional organisation is derived from the general theories of integration and co-operation. Regional integration suggests a process of interaction among the states as actors to harvest political, economic and security benefits. In its dictionary meaning, the term integration is to "combine parts into a whole." Joseph Nye identifies two types of integration, political and economic.⁴ While economic co-operation among the members of SAARC was taking off, political integration remained a far cry. Ernst Haas considers integration to be the "process whereby political actors in several distinct national settings are persuaded to shift their loyalties, expectations and political activities towards a new centre whose institutions possess or demand jurisdiction over the pre-existing national states."⁵ Functionalists consider integration to be the cause and consequence of co-operation in some specific functional areas. Functional co-operation would generate chain actions, spilling over co-operation from one functional area to another. Many considered the functionalists to be unaware of the political realities as they depended too heavily upon the technical needs and compulsions for co-operation. Neo-functionalists moved away from the functionalists' idealism and recognised the political and economic impediments to co-operation. These scholars, however, recognised the incremental growth of international

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4. Joseph Nye Jr. (1968) "International Regionalism", *World Politics*, 21(1), October, p.88.
 5. Ernst B. Haas, (1968) *The Uniting of Europe: Political, Economic and Social Forces, 1950-57*, Sanford, Calif. p.16.

institutions that would greatly increase interaction and demand co-operation. Neo-functionalists further believed that the growth of deliberately designed institutions would lead to greater integration. The regional organisations like SAARC can be considered as such contrived institutions that can foster integration and co-operation among the members.

Karl Deutsch maintained that intra-regional transactions increased expeditiously than international transactions and, logically, increased communication and transaction within the region would lead to greater integration.⁶ According to Donald Pushala, "when handled properly, transaction flows provide reasonably reliable descriptive barometers for several social, economic and political processes that occur during regional integration."⁷ Deutsch introduced the term *security community* where it was hoped that "the members of that community will not fight each other physically, but will settle their disputes in some other way."⁸ Joseph Nye, however, maintains that many regional organisations are little concerned about the sovereignty of states and the integration theory is devoid of political realism. Regional functional organisations can, nonetheless, prevent violent conflicts by "raising the cost of conflict" and through "integrative solutions or creation of a sense of community."⁹

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6. J. Frankel, (1973) *Contemporary International Theory and the Behaviour of States*, New York, p.54.
 7. Donald Pushala, (1970) "International Transactions and Regional Integration", *International Organisation*, 25(4), August, p.736.
 8. Karl Deutsch et al., (1975) *Political Community and the North Atlantic Area*, Princeton, p.2.
 9. Nye, *op. cit.*, p.125.

Along with the concept of political and social integration evolved the idea of economic integration. The apparent "conflict between national sovereignty and economic self-interest can be resolved only if there is a political interest and political will to do so."¹⁰ Such a political will can only be created when the institutional framework of regional relation is supportive of the promotion of economic growth of individual countries as well as the region as a whole.¹¹ The European experience of economic integration inspired the countries of the Third World to experiment with programmes of collaborative efforts to invigorate their national and regional economies. Asymmetry of economies among the SAARC countries makes the distributive benefits of economic integration unequal.

Balassa found that the progress in developing economic integration was complicated among other things by protectionism, restrictive tariff barriers, and a nagging concern for political and economic sovereignty.¹² Broadened regional markets, created through regional organisations within the Third World, offered some prospects for goods produced regionally; and this could put the underdeveloped countries on the tracks of rapid industrialisation. It would reduce a region's dependence on the outside world and protect the regional countries from the discriminatory trade practices of the West. To facilitate the regional integration process within some areas of the Third World, it was important to undertake integrative

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10. Bela Balassa, "Types of Economic Integration", in Fritz Machlup ed. (1976) *Economic Integration and World Wide Regional Sectoral*, London, p.30.
 11. Horoshi Kitamura, "Economic Theory and the Economic Integration of the Underdeveloped Regions", in Miguel S. Wionczek ed. (1966) *Latin American Economic Integration: Experience and Prospects*, New York, p. 47.
 12. Balasa, *op. cit.*, p.27.

schemes in such a manner so that it created beneficial relationship among the members, supported the concern for nation-building, and carefully avoided any threats to the bases of support of the national political elites.¹³ This was broadly the ideological basis upon which the foundation of SAARC as a regional organisation was built.

Nationalist sentiments, regional domestic political conditions, the quality of political leadership and, finally, extra-regional factors affect the form and nature of regional co-operative ventures. The concept of co-operation is premised upon the notion of rational actors. Individuals act rationally to attain maximum value or satisfaction at a minimum cost. Rationality relates to the effort or act, not to the outcome of collective action. But success and failure in collective ventures create a new basis for cost and benefit calculus.¹⁴

In the anarchical world order, the "circumstances [that] favour the emergence of co-operation" are complex and highly problematic.¹⁵ The neo-liberal institutionalists emphasise that in spite of the constraints of self-interests, international institutions foster co-operation. In the absence of strong regional institutions, however, co-operation among the peripheral countries like the ones in South Asia is bound to face multiple complexities and hurdles. Robert Keohane argues that co-operation is necessary and possible in the face of discord. "Co-operation occurs when actors adjust their behaviour to the actual or anticipated preferences of others, through a process of

13. Aron Segal, (1967) "The Integration of the Developing Countries: Some Thoughts on Africa and Latin America", *Journal of Common Market Studies*, June, p.263.

14. See Ronald Rogowski (1978), "Rational Thesis In Politics: A Midterm Report," *World Politics*, 30(2), pp. 296-323.

15. Kenneth A. Oye (1986), *Co-operation Under Anarchy*. New York: Princeton University Press, p.1.

policy co-ordination ... Co-operation therefore does not imply an absence of conflict. On the contrary, it is typically mixed with conflict and reflects partially successful efforts to overcome conflict, real or potential."¹⁶

Like many regions of the Third World, South Asia had an overflow interstate problems and issues. For co-operative ventures to take root, there must be reciprocity of interests and mutuality of gains which, in turn, through regional co-ordination, must contribute to the realisation of each state's policy objectives. If these attempts at policy adjustment can succeed in making policies more compatible, co-operation prevails.¹⁷ Among SAARC members, there is abundance of common interests and immense potential for mutual gains, but major policy adjustment aimed at compatibility and complementarity remains a formidable task.

Even if co-operation is set in motion, the returns from co-operation may not be equitable and, as Johan Galtung states, "frustrations due to misuses accumulate."¹⁸ The structural conditions of the countries become relevant to understand 'who gains how much' in the process of intra-regional co-operation among the SAARC countries. The asymmetry in geography, resources, and political structures of the nations makes distributive benefits from co-operation unequitable and lopsided in favour of the dominant country. The mindset for co-operative venture, a pragmatic stance, is a product of socialisation and an awareness of mutual costs and

16. Robert O. Keohane, *After Hegemony: Co-operation and Discord in the World Political Economy*, Princeton, N.J.: Princeton University Press, pp. 53-54.

17. *Ibid.*, p.52

18. Johan Galtung (1968), "Structural Theory of Integration", *Journal of Peace Research*, 5(4), p. 386.

benefits, not only by the leaders of nations, but also the ordinary people. The people are conscious of reaping the fruits of co-operation and buttress the leadership seeking co-operation with neighbouring countries. The ordinary people in South Asia are not reckoned as a conscious variable in decisions regarding regional co-operation, because of their social, economic and educational backwardness. The populace can be mobilised to serve narrow, factional, parochial, and party interests that often subvert many co-operative and collaborative regional enterprises.

POLITICS IN SOUTH ASIA

The British left the subcontinent in a rather low time in their history, when their strength and supremacy had seen tremendous setbacks and they were no longer in a position to offer economic, military or even intellectual leadership to the subcontinent. By the time the British left South Asia, the political institutions were still weak and underdeveloped and the Indian society was highly divided. The leadership of the newly created states came from the elites who had thrived on an elaborate system of patronage installed by the British. The goals of most of the leaders were to demonstrate enough reasons to their people to stay in power, even if this was done at the cost of greater interests of the masses.

Except for Bhutan, which is still a monarchy, all other countries have formally and constitutionally adopted western secular values and democratic practices. In practice, however, irrespective of the political system and ideological orientations, the elites in South Asia had tended to neglect the basic tenets of a pluralistic democracy and sought to create one party regimes, often centring on a family or a charismatic personality. When the opposition movement for fairer electoral practices solidified, the ruling elites, unwilling to yield power to any

other party or group, did not hesitate to employ all the state paraphernalia to placate the opposition.

The parliamentary democracies, where they have been established, are characterised by extreme adversarial politics. Political rivals are often considered disloyal, unpatriotic and treacherous. Beginning with Mahatma Gandhi in India, as many as ten national leaders have been targets of political assassination in the region. This is a reflection of an egregious craving for political power by the opponents who find democratic roads to power blocked by ruling parties or autocrats and, therefore, are prepared to use cavalier means to achieve their political ends.

The strong state and the weak political system the British had left behind allowed the ruling elites to shape the form and nature of their polities. The parliamentary system inherited from the British gradually centralised state power in the hands of bureaucratic and military elites in Pakistan and Bangladesh and well-to-do political and administrative elites in India and Sri Lanka. Nepal and Bhutan remained Kingdoms with only selected and privileged sections of the elite participating in politics. The political practice in all the systems invariably deprived the masses of effective participation in economic and socio-political issues. The deprived sections of the society grew restless over prolonged denial of socio-economic rights and militant mobilisation took place on linguistic, ethnic and regional lines. The affluent classes, witnessing a growing challenge to their vested interests and threats to their legitimacy, began to assert ethnic and religious identities "against the onrush of the deprived sections"¹⁹. In South Asia, like most other

19. Wignaraja, Poona and Hussain Akmal eds., *The Challenge in South Asia: Development, Democracy and Regional Co-operation*, Sage, New Delhi, 1989, p.23.

places in the Third World, the interrelationships between internal political expediency and external threats help to shape the policies and actions of the states.²⁰

Even in relatively pluralistic democracies like India, political power has remained concentrated in the hands of a narrow band of elites. Lack of mass awareness of world affairs and regional politics, and vituperative propaganda launched by the national and controlled media gives senior bureaucrats and senior politicians wide latitude in framing the country's regional policies. When the real challenge facing the populace is day to day bread and survival, regional policy does not take priority on the domestic political agenda.

SAARC AND THE SECURITY ENVIRONMENT IN SOUTH ASIA

The creation of India and Pakistan and, later on, Bangladesh on the gruesome landscape of communal hatred has left memories of a holocaust that is passed over from generation to generation. About one million people died in communal violence in the wake of the partition of the sub-continent and another 15,000,000 moved across borders for their safety.²¹ The ruling elites in India, forced to accept the politically expedient partition of the sub-continent in 1947, considered the creation of Pakistan illegitimate and, at best, a temporary phenomenon.

Consequently, the elites in Pakistan, conscious of the survival of their newly created nation, considered the elites in India as their eternal enemies. Thus a zero-sum co-operation between the two most powerful regional countries marked the diplomatic and political history of the

20. David, Steven R., "Explaining Third World Alignment", *World Politics*, Vol., 43, No., 2, January, 1991, p.239.

21. Farmer, B. H., *An Introduction to South Asia*, London, 1983, p.1.

region which has had a far reaching impact on the subsequent events that shaped the gloomy security spectrum of South Asia.

With the departure of Britain from India, Nepal and Bhutan came under the security umbrella of India, while Sri Lanka followed an independent foreign policy. Conscious of the fragile political system it inherited, and in the face of the unresolved issues like Kashmir and threats from the nationalists leaders in India, Pakistan soon allied herself with the USA, thus inviting the superpower rivalry in South Asia. Pakistan's threat perception remains steadily focused on the mother country India, from which Pakistan was carved out in 1947. Her defence procurement has been closely tied to India's capabilities and intentions.

At the state level, given the physical and cultural closeness of the region, if spill-over from contiguity and neighbourhood has taken place in South Asia it was the spill-over of hostility, not of amity and co-operation. India-Pakistan hostility gradually influenced the other smaller actors in the region precipitating frosty relations between Sri Lanka and India, Nepal and India, and Bangladesh and India. Inadequate communication among the elites across the region and a lack of objective analysis of security issues based on socio-economic realities by the regional intellectuals and the media, created opportunities for the political leaders to blame the neighbouring countries for their domestic economic and political failures. High security needs of the region, chalked-out by the bureaucratic and military elites, which caught the romantic imagination of the political leaders, have made the common interests look dim and often irrelevant. Wars on desolate territories like the Siachan Glaciers in the Himalayas, which the British marked as strategically important on drawing room maps and communal issues engineered and served to the people by power hungry candidates for parliaments and local governments, have

shaped the security analyses of the sub-continental countries. The pathway to achieving security in the cases of India, Pakistan, Bangladesh and Nepal has been through seeking military strength and external alliances, stemming from a belief that greater the military strength and external commitments, more enhanced would be the security.

There was a brief redirection of the dominant country India's foreign policy with calls for building strong bridges of amity and mutual confidence with the neighbours, when the Janata led coalition came to power in 1977, 1989, and again in the 1990s. The Congress elites in the seventies and eighties and the subsequent Bharatiya Janata Party (BJP) coalition dabbled these gains in good neighbourliness as the sell out of India's interests. Many memoranda of understanding signed with the neighbouring countries aimed at improving the relations with these alienated neighbours were not subsequently respected. It is solacing to note that the voices of moderation in regional policies thrive in the intellectuals and politicians pursuing not only Gandhian and socialist philosophies, but also among the Western-minded politicians like Morarji Desai, Narasimha Rao, Deve Gowda, and I.K. Gujral. Regional orientation of other countries have also changed with the ushering of democracy and accompanying changes of governments within their countries, some governments pinning greater hopes on regional co-operation than others. Regionalism embracing a distinct South Asian identity is no longer an unfamiliar and impossible idea.

India's domestic factors encourage the ruling elites to be outward-looking, but the extraneous forces also significantly contribute to her security perceptions and together they have helped to sustain and justify her huge military build-up and eventual nuclearisation. Her insecurity stems partly from her hostile neighbours, particularly Pakistan and China, with whom she has fought major wars. Her

relations with other neighbours are also far from friendly and these countries have, whenever they have had an opportunity, acted against the perceived security interests of India. Thus Bangladesh has sought close ties and military assistance from China. Despite Indian help during the War of Liberation, Bangladesh has cultivated close friendship with Pakistan and the Islamic world which is viewed with greater deal of bitterness and suspicion by India. Nepal has received development assistance and, to a lesser extent, military aid from China. Bhutan has articulated a desire for more sovereignty and lessening of its dependence on India. India feels surrounded by hostile small, ungrateful neighbours who want to enjoy India's good neighbourliness in social, cultural and economic fields but tend to seek help and assistance from countries other than India to mitigate their perceived security needs that often arise out of their fear and distrust of India. The larger neighbours like Pakistan and China have acted against the very territorial integrity of India thus making her peaceful coexistence with these neighbours quite a difficult undertaking.

The smaller countries, however, maintain a different view about the regional security spectrum. India is often blamed for creating the security problems she confronts today. The concepts of national interest and group interest tend to overshadow the deep internal cleavages within the countries and provide the much needed rationale for military build-up. South Asia today is one of the major arms importers of the world catering for almost eighteen percent of the world's imports. India and Pakistan are among the top eight arms importing countries of the world.²² India has one of the world's largest military-industrial complexes and Pakistan is racing hard to catch up. Many would be

22. *SIPRI Yearbook*, 1995.

tempted to argue that South Asia is in the grip of civilian militarism where the concept of military security overshadows the benefits of co-operation and this has led to the eventual nuclearisation of the area.

The hardware side of national security includes physical capabilities, strategic perceptions, force structure and weapons capabilities. The software of security includes political integration of the country, the political system and its efficacy, regional and international legitimacy. Richard Little has formulated an interesting way to measure the strong-weak calculus in broad balance of power politics.²³ In his classification of the states of the Third World, he identifies broad categories: *strong and unified*, *fragmented* and *anarchic* states. Both India and Pakistan fall in the second category, where domestic dominant groups compete for power at state level and thus reaching some form of compromise in governance. Many would argue that Pakistan is closer to *anarchic* than *fragmented* and this was evident in its inability to prevent the split into uncompromising political stances that gave birth to independent Bangladesh. Due to lack of internal cohesion, both India and Pakistan are poorly placed to contribute to the order of South Asian system as a whole. Strong and unified states can communicate with each other as stable and "coherent political entities, on a fairly detached and continuous basis and changes in government within them do not cause major realignments".²⁴ This is

23. Little, Richard, *Balance of Power: Metaphors, Models, and Myths*, London, Allen and Urwin, 1987.

24. Buzan, Barry, "People, States and Fear: The National Security Problem in the Third World", in Azar, Edward, E. and Moon, Chung-in eds., *National Security in the Third World*, Centre for International Development and Conflict Management, University of Maryland, 1989, p.29.

difficult to come across in fragmented or in weaker states of South Asia.

ALTERNATIVE MODELS OF CO-OPERATION IN SOUTH ASIA

If co-operation continues to remain a formidable problem among the two major partners for South Asia, is there a viable alternative model to work on? Disregarding the definitional criteria of South Asia, three models of regional regimes for co-operation can be envisaged other than the SAARC. Firstly, an organisation could be perceived that excludes Pakistan, so that the remaining smaller countries would accept the centrality and pre-eminence of India and engage in purposeful recasting of security needs that would be deemed conducive to the broader and deeper integrative process in the region. Such a scheme, while isolating Pakistan from the benefits of regionalism, would tend to generate many internal contradictions and apprehensions by realigning the smaller economies and political systems into the larger polity with the attendant fears of long term erosion of national sovereignty and political identity of the small countries. Pakistan, left out of the mainstream regional political dynamics, would invite extra regional powers in the regional scene that would vitiate the atmosphere for co-operation among the members.

The second model would create a regional mechanism that excludes India and engage in co-operative ventures among the more equal partners. Geopolitics of the area is bound to impede such a venture due to the lack of physical contiguity and infrastructural support among the participating countries. India would, certainly, perceive such a coalition of regional players as a menacing threat to its security and economic interests and, consequently, introduce fissures and misgivings into such regional organisation. If this regime attempts

to consolidate sufficiently, bilateral relations between India and its neighbours would deteriorate alarmingly, unleashing many volatile ethnic and separatist forces in the region.

The third model envisages a forum for the smaller countries that would exclude both India and Pakistan. Such a regime would deepen co-operation among the smaller countries without raising a great deal of concern, but many co-operative ventures would fail to take off in the absence of active support of the two major neighbours, particularly that of the dominant neighbour, India. If the envisaged co-operation among the smaller countries is extended to include security aspects, India would grow sceptical about the enterprise and closely monitor and even temper with the schemes that would be generated through the forum.

Judged against the theoretical requirements of regional integrational institutions, the SAARC appears inadequate on many counts. There remains a vast area of dispute and distortion, mismanagement and underdevelopment, which SAARC should consider urgent to its agenda. There have been suggestions to create a Council for 'Dispute Settlement' to tackle the intractable issues that they repeatedly caused tensions and discord in the area.²⁵ It must, however, be mentioned that since its inception in 1985, many multidimensional projects have been undertaken in the fields of trade, education, culture and communication within the framework of SAARC. This has created a network of communication, and a closer interaction among the diverse ideas, personalities and interests. Easing of tensions between Sri Lanka and India, rapprochement between Bangladesh and India on many bilateral issues, the settlement of Indo-Nepalese trade discord are

25. Shambu R. Simkhada (1989), "Issues Before SAARC", *BISS Journal*, 10; 4, p.435-6.

spill-overs of protracted multi-lateral and bilateral engagement through the SAARC forums.

While SAARC may have many visible impediments to co-operation, mere disenchantment and disillusion with SAARC provides no easy alternatives. It is the only viable, visible, and acceptable institution for dialogue, consultation and co-ordination as much as for complaints and redresses. As a sub-regional organisation, the South Asian Growth Quadrangle has seen tangles of suspicion, obstacles and impediments. The Charter of SAARC is important, but not necessarily the most potent instrument of the organisation; it is perhaps doubly important how the members perceive the Charter to be, and how they act within and around the formal parameters of the regime to address the pressing issues of the region. Despite formal structures, bilateral issues have cropped up in all formal and informal sessions of SAARC. All the important issues have a degree of political contents and bilateral implications. Opinions and ideas have great capacities not only to defy rigid framework, but also borders and boundaries. It is, however, prudent to remember that institutions themselves have little autonomy and strength unless the leaders of the region are prepared to activate and employ the institutions.

THE NUCLEARISATION AND ITS IMPACT ON SAARC.

India maintains that her nuclear programme is essentially a shield against Chinese nuclear arsenal, while Pakistan's rationale for nuclear weapon is a countervailing "equaliser" against India. Both India and Pakistan are today declared nuclear weapon states. For both the countries, the nuclear weapons programme was conduit for prestige and national pride and the bureaucrats and military elites considered that courting the nuclear option was necessary in a world where nuclear weapons offered the credentials of a great power

status in the Cold War era. Strategic consideration of both India and Pakistan gave the policy planners much needed rationale to spend millions of dollars on nuclear weapons programme. Another important dimension of nuclear politics was prospects of electoral gains by the party in power by colouring the minds of the people with trappings of power that nuclear weapons offer. Security through nuclearisation became the strategic preoccupation among the policy planners of India and Pakistan who remained oblivious of the economic, environmental and political ramifications of a nuclear stand-off. Some quarters suggest that domestic pressures both on Vajpayee and Nawaz Sharif, rather than the security calculus, compelled them to tread nuclear tracks in regional policy and bring a grand finale to their decades long clandestine nuclear programmes.

The excitement mounting high, both the countries have made a flurry of diplomatic statements and manoeuvres that have raised serious concerns about the security dilemmas and challenged effectiveness of SAARC in addressing the menacing nuclear threats to the region. After the first test in Pokhran, India sternly warned Pakistan not to interfere in Kashmir any longer, but soon Pakistan's Chagai tests followed and her support for the Kashmiris gained momentum. If we examine the political and strategic fall-outs from nuclear weapons in South Asia, we would find that little has changed for the better, so far as the real security blanket of the countries is concerned. Both India and Pakistan have been subjects to international condemnation and economic sanctions. India is no close to becoming a member of the Security Council. In fact, Japan and Australia have voiced their disinclination to support a nuclear India's membership to the Council. Pakistan finds itself drifting away from US strategic alliance in South Asia as security projections of the US against its perceived threats from Islamic fundamentalism affects

nuclear Pakistan as much as the terrorism from Sudan and Afghanistan. While there are no visible gainers, it is, unfortunately, the poor people of South Asia who must bear the brunt of the ramifications of the nuclear race. The cost of nuclear technical devices and their maintenance is forbiddingly high for the developing countries. The impact of international sanctions would be felt not only by the hosts to the nuclear blasts, but also in other regional countries. Finally, the cost of a nuclear exchange, even on a limited scale, would be disastrous for the entire region that shares a common geography and demographic features and an integrated ecosystem. A one-megaton detonation in the northern Pakistan would affect Kashmir, both the Punjabs, Afghanistan and the Central Asian republics. A similar explosion in South India would have serious reverberations in terms of fall-out and radiation as far as in Sri Lanka, Nepal and Bangladesh.

When countries go nuclear, the accompanying excitement is nothing new and similar atmosphere of threats and counter threats prevailed among the superpowers when they were also in their nuclear childhood. After a period of threats and counter-threats, a mood of restraint based on pragmatic strategic reappraisal began to take roots after the Cuban Missile Crisis of 1962. There are, however, significant differences between Moscow and Washington as Cold War adversaries and Delhi and Islamabad as hostile policy makers. Washington and Moscow had no common borders, and they did not have a history of mutual carnage, or a historical flash-point along their borders. They had enough strategic and diplomatic space to manoeuvre before any critical nuclear decision would be taken. Such scenario is absent between the two regional countries. Lack of technical sophistication of their nuclear arsenal, doubtful command, control and guidance system, and the frenzy that the weapon has

aroused among the population in both the countries make the spectre of a nuclear holocaust a likely scenario in the region. Nuclear terror does not seem to strike deep into the minds of the leaders in power and nobody can vouch that these two traditionally hostile neighbours, with a bagful experience of shooting border wars, would not resort to hot nuclear exchange someday. Offer of no-first-use agreement has not led to consensus and confidence building between the two neighbours. In terms of political and strategic fall-outs of nuclear weapons, little has been added to the security fabric of the countries concerned, but their threats seemed to have proliferated in many dimensions.

Kenneth Waltz maintains that limited and controlled proliferation of nuclear weapons can be a stabilising factor in many parts of the world.²⁶ A nuclear South Asia can introduce a sort of stabilising balance of terror and, there on, concentrate upon the more pressing needs of their communities. The nuclear aspirations of the countries extended over decades by now, and their weaponised nuclear programmes can not be wished away either by pious sentiments or by porous sanctions. The economic compulsions of the adversaries would, nonetheless, limit the funds necessary for further modernisation and expansion of the nuclear facilities. Sometime in near future, both the countries could be persuaded to sign the NPT and CTBT as the possessing states of world's nuclear club.

In South Asia, the vast land-mass of poverty, the dominant power is as much dependent on the West for technology and aid as the other smaller countries. Efforts to route development through alternative models in India were totally reversed after the collapse of the USSR.

26. See Kenneth W. Waltz (1979), *Theories of International Politics*, New York: McGraw-Hill

The entire region is very much a part of the global economy, and remains inextricably linked to the international market forces. The nationalist intellectuals drumming up the image of a great power in both India and Pakistan, feed into the elite interests in building up large military forces. The peripheral elites are also caught up in a similar frenzy of security and an obsession with an increasingly insecure regional environment that demand greater allocation of resources to the military needs.

Geopolitical and economic asymmetry of the region helps to project India's image as an unequal partner and causes fear and mistrust. Availability of nuclear weapons in the hands two major powers, India and Pakistan, may serve to create a balance of terror, but this is not sufficient to generate purposeful co-operation. Due to the deep-rooted suspicions that the regional countries harbour towards one another, attempts to institutionalise regional co-operation within the framework of SAARC are falling much short of yielding the kind of a political regime in the region that is necessary to generate interdependence and co-operation. There have been calls to reform and reinvigorate SAARC. Regional political regime can be recast to make it more effective and useful, but in South Asia there is a need for a generation leap, to look away from the past towards a common future. An integrated regional order can be established as much by remembering the past as by forgetting it, if the past is not worth the remembrance and celebration.

CONCLUSION

The demise of superpower rivalry in the region has brought little wisdom to South Asian leaders. The intractable bilateral issues often with multilateral ramifications, vitiate the co-operative ventures. South Asian countries are now engaged in wooing the US in a competitive manner, recasting their interests and security in their bid to justify their

strategic concord with the security needs of the US. A viable, functional and autonomous regime is yet to flourish in the region.

South Asia is a twilight zone of security in the aftermath of the nuclear tests by the two regional powers. The doubts and scepticism about the SAARC have multiplied and the security planners see serious impediments to co-operation among the SAARC partners. Feasible alternative paradigms of regional co-operation would not be able to effectively replace the role that SAARC is expected to play in enhancing regional co-operation and security. SAARC has flourished in many fields of co-operation and spill over from the regional interaction is being slowly felt in improved bilateral interstate relations in South Asia. The ensuing challenges to SAARC in the post-nuclear South Asia may even generate forces that could help to strengthen the organisation in the long run by overcoming its present limitations based on the initial Charter. We need to forge new political culture both domestically and regionally, based on tolerance, patience and mutual respect. SAARC can also become a venue from where its members could initiate confidence-building measures and persuade both the regional powers to sign the NPT and CTBT. SAARC ought to explore the possibility of regional security dialogue within its present or adapted future framework. Besides political leaders and technocrats, strategic think tanks, bureaucrats and the members of the armed forces in the region should interact on a regular basis so that tensions do not assume critical levels.

Current disenchantment with SAARC may as well do good to the organisation, and in due course, it would transform into a functionally more expedient organisation to address the regional issue. Initial fears and excitements about the nuclear big bang must eventually yield to a more sober reality, arising from an informed and educated urge to live in peace with safety and security and the prospects for abundance for all in a nuclear friendly, if not nuclear free, South Asia.

VII. ECONOMIC IMPACT OF NUCLEARISATION: CHALLENGES FOR BANGLADESH

Munim Kumar Barai

INTRODUCTION

The month of May of 1998 saw the culmination of the much veiled, but not too secret, and long-expected process of crossing the threshold state of nuclear status by two countries of South Asia. India and Pakistan unveiled and cut their nuclear rubicon to go nuclear. Barely the radioactive dust could settle over Pokhran in India, Pakistan responded with its own nuclear devices at Chagai – a classic case of copycat reaction of the two rivals. The tests have offered the dubious distinction on India and Pakistan – they are being only the two nuclear powers which are yet to provide uninterrupted power supply, portable water, food, shelter or primary education to all their citizens. More too puzzling is the timing of their tests. All five nuclear powers, namely the United States, Russia, France, Britain and China, have stopped weapon testing and signed the Comprehensive Test Ban Treaty (CTBT) that seriously crimps their ability to build new weapons. So why should India and Pakistan choose to go nuclear at this moment ?

The timing could be a matter of subjective interpretation and individuals might differ with their opinions according to their beliefs and national identities. But two explanations could be put forward as the background for the nuclearisation of South Asia. *First*, of course, is the contagious spread of the threat perception. The ideological rift between the former Soviet Union and China and the subsequent estrangement between them in the late-1950s led the Chinese to acquire the bomb in 1964. The nuclearisation of China created a sense of urgency among the Indians to demonstrate their nuclear

ability on the background of a bitter humiliation by the Chinese in 1962. So the Pokhran n-blast as a technology demonstration in 1974 was India's assertion of the ability to create bomb. The defeat of Pakistan in 1971 and the 1974 n-demonstration by the same adversary put Pakistan under pressure to have its own nuclear device. So the Indian test in May, 1998 let Pakistan the opportunity to come out with its options. In this line of explanation we can draw a chain of actions-reactions relating to China, India and Pakistan for the coming up of a nuclear South Asia. The simple line is like this – China defeated India in 1962; India defeated Pakistan 1971; China went nuclear, as a reaction India went nuclear, as a reaction Pakistan went nuclear.

The other explanation is based on the western paradigm of security concept of the Cold War era, which also invaded this subcontinent. The parading reinforced irreversible mind-sets on both sides of the divide among poor adversaries with long historical memories in a way that it is difficult to comprehend by societies without a long enough continuous history. The beginning of the nuclear arms race in South Asia, coinciding with the nuclear stalemate among the western cold warriors, could be traced to this context. Pokhran and Chagai tests are the climax of such a process.¹

Whatever might be the explanations, in the aftermath of Indian and Pakistani nuclear explosions and the subsequent economic sanctions on them by a number of developed countries, many questions have emerged in the political and economic context of the whole of South Asia. The more disturbing question looms in the background: What are present and future costs of the nuclearisation

1. Aswinik Ray, "Domestic Politics and National Security," *Economic and Political Weekly*, (Bombay, June 27, 1998), p. 1635.

on the Indian and Pakistani economies? The pertinent question arises: Will the co-operation effort in South Asia attain the pace needed for the scheduled implementation of South Asian Free Trade Area (SAFTA)? The question that bothers more a Bangladeshi is what are the economic challenges that the explosions and their consequences have posed to Bangladesh?

Many other related questions might come in the nuclearisation context, but the present paper would be devoted to find out some possible scenarios and answers to the questions raised above. Part I of this paper deals with the issue of economic impact of nuclearisation on both India and Pakistan on various fronts. The questions to be asked are how long would the US-led sanctions last and how far would they pose a challenge to the concerned countries? The nuclear related developments in South Asia are bound to pose a host of challenges and also might open some avenues of opportunities for Bangladesh. Part II is an attempt to explore those challenges. The tests have created a spanner on the ongoing effort to accelerate economic co-operation among the SAARC countries. Part III deals with this issue. Finally, the paper ends with some observations and comments.

1. ECONOMIC IMPACT OF NUCLEARISATION ON INDIA AND PAKISTAN

The acquisition of nuclear weapons by India and Pakistan has neither changed the character of war in South Asia nor given any of the adversaries an added advantage in the war front. Instead, both the countries are now destined to face increased tension and expenditure on defence budget. Moreover, consequent to the nuclear explosions, several developed countries led by the United States and Japan have imposed economic sanctions of varying degrees against India and Pakistan. While the effects of sanctions

have so far affected India's economy a little, symptoms of greater negative effects are becoming evident in case of the economy of Pakistan. Actually, the degree of the future economic adversity to be faced by India and Pakistan due to sanctions depends on the following crucial variables:

- (i) How long the presently imposed sanctions last;
- (ii) Whether other countries collectively join the US and Japan to impose sanctions including trade embargoes and development assistance from the World Bank Groups; and
- (iii) Whether economic sanctions would also increasingly cover areas of trade, transfer of non-military technology and investment.

As of now the possibility of happening of the last of the three seems remote and the applicability of the second does not look that real, provided both India and Pakistan do not go for further testing in the immediate future. This is also a remote possibility. So the priority of assessment comes to the question – how long will the present sanctions last?

To understand the severity of the sanctions and their likely economic impact on India and Pakistan, we should have a clear idea of the US Nuclear Proliferation Prevention Act of 1994 as the United States is the principal party of section-imposing countries and it has imposed sanctions under the Glenn Amendment Act, 1994. Under this law, nuclear tests by a non-nuclear weapon state (NNWS) obliges the US government to :

- Terminate sales of defence articles and services including weapon and technology.
- Terminate all military financing.

- Deny any credit, credit guarantees or other financial assistance by US government agencies, except for humanitarian assistance.
- Oppose loans or financial or technical assistance by international financial institutions like World Bank and IMF.
- Prohibit American banks from making any loan to the violator's government agencies, except to pay for agricultural commodities.
- Prohibit the export of technology with civilian and military applications.²

The act does not allow the president a waiver. The only way to avoid sanctions is for the administration to inspire legislation in both houses calling on the president not to impose sanctions. For India and Pakistan's case, the US Senate and Congress have authorised the US President to waive the sanctions for one year. The power is yet to be exercised by the President.

So the sanctions which have been imposed by the United States and few other developed countries are in place and likely to continue for sometime. The longer the sanctions last, the higher will be the economic costs. This is because of the integration of both the economies with the world economies as a whole. A relative economic insularity of a country provides it with the political strength to resist the external pressures and sanctions. Till the process of liberalisation in India it could have been true to it. But globalisation of the Indian economy since 1991 has made the economy more vulnerable to external pressures and sanctions. The

2. Nayan Chanda, "Unholy Act," *Far Eastern Economic Review*, (May 21, 1998), p.19.

dependency of Pakistan on external assistance is much wider and deeper than that of India. So as a result of the sanctions, both the countries now are bound to suffer economically, politically and socially, though the extent of damage would be much more for Pakistan because of its greater external dependence, in case the sanctions are in place for a longer time.

Actually there are two specific economic impacts expected to arise due to the sanctions. These are:

- i. *Direct Impact:* This is due to costs of making and maintaining nuclear bombs; developing a nuclear force and an effective command and control structure on the one side and the costs of the sanctions imposed by the developed countries on the other.
- ii. *Indirect Impact:* This impact is inclusive in nature and could encompass a wide range of costs indirectly related to the nuclearisation. The costs are related to multilateral loans, trade, exchange rate, overseas loans, FDI and the opportunity cost of the society.

To analyse the total economic impact of nuclearisation on India and Pakistan, we like to start with India and discussion would be done under both the heads. But for Pakistan, the discussion remains general in form. The opportunity cost of tests on the societies of India and Pakistan is being discussed together in one sub-section.

1.1 Nuclear India and Economic Front:

Now that India has crossed the nuclear rubicon, there is an imperative need to analyse in depth the economic aftermath of these tests to Indian economy. We have already pointed out that the impact would be felt necessarily in two ways – directly and indirectly. We will devote our following discussion to look into the aspect in detail.

1.1.1 Direct Impact

The issue would be discussed under two sub-themes: i. the cost of weaponisation; and ii. the cost of sanctions.

1.1.1.1 The Cost of Weaponisation

On the assumption that India would pursue an active nuclear weapon programme and that was one of the purposes of the test, we can come to the conclusion that India has to maintain, develop and build bombs as well as to construct basic infrastructure for an effective command and control system to operationalise the entire programme. But the burden of building and maintaining nuclear weapons itself is heavy. Though finding reliable figures of nuclear weapons is hard even for the United State. Reasons are obvious. Nuclear weapons costs from development and production to deployment and controls are scattered across the defence budget and beyond. A preliminary unofficial estimate by the United States Nuclear Weapons Cost Study Project, based at the Brookings Institution in Washington DC, is that, over more than five decades from its inception in 1940 (Project Manhattan) to 1995, the United States nuclear weapon programme cost American tax-payers a minimum of US\$4 trillion (calculated in 1996 dollars) or could be significantly higher than this figure.³

Now what would be the costs of the Indian nuclear weaponisation programme? This is a matter of anybody's guess. Actually various estimates have been floated from various quarters. Based on the western weaponisation programme, an estimated cost of US\$1 billion a year for India's weapon programme has been projected by various estimates. But the Indian media, including a

3. *The Economist*, (January 4, 1997), p. 36.

team of *The Economic Times*, estimates that the programme cost may amount to only Rs. 5 billion spread over the next 10 years.⁴

The Muslim of Pakistan gave a different picture of the costs of Indian nuclearisation. "The building up of a nuclear deterrent by India would cost the country a minimum of Rs. 3 billion a year for the next 10 years. While the mere cost of building a nuclear bomb would be just 8 to 10 percent of the total cost of a nuclear weapon programme, the rest would be required to fund the cost of surveillance through raiders, satellites, and the delivery system through missiles, submarines and aircraft. All these would add up to a minimum of Rs. 3 billion a year for the next 10 years." A report of *The Jane* has an estimate of India's nuclear potentials at par with France and China but ahead of Britain. If this estimate were correct then the costs for the entire programme would be much higher.

The new Indian budget for 1998-99 has reflected the Indian newer vigour for defence preparedness. In the new budget substantial increases have been made from the previous year for three wings of the defence forces. The defence budget has gone up to Rs. 473.83 billion, or 13 percent of the total budget, from Rs. 363.63 billion of 1997-98. The finance minister has promised a further mid-term hike of the outlays, if need being felt so. The new budget has delivered a massive hike of 68 percent, taking the Department of Atomic Energy's (DAE) nuclear power kitty to Rs. 13.91 billion from Rs. 8.28 billion and Department of Space (DOS) to Rs. 13.18 billion, 62 percent up from Rs. 8.5 billion of 1997-98.

So the trend is visible. The outlays from which funds could be diverted and used for weapons development and deployment are going up. The cost commitment for developing effective command

4. *The Economic Times*, (Calcutta, June 20, 1998), p. 24.

and control systems, complicated ways of deploying nuclear weapons with safeguards against accidental or panicky use, would raise the total direct costs for weaponisation programme further up.

1.1.1.2 The Cost of Sanctions

Soon after the nuclear tests by India, some developed countries led by the United States have imposed economic sanctions primarily in the form of suspension of foreign aid and government-to-government credit lines. There is no clear-cut time frame how long the suspension will remain in place and how far the countries are willing to go with their sanction-coverage in the future. Currently the United States, Japan, Sweden, Denmark, Australia, Canada, and Germany are the countries which have queued up with economic sanctions on India, while Britain, France and Russia expressed regret at India's action but did not favour imposition of collective sanctions on it. A point that needs to be highlighted here is that the sanctions are suspension in nature and do not constitute cancellation of any economic deal.

As for the direct impact of the sanctions currently imposed, the accumulated figure widely differs from that claimed by the sanction-imposing countries particularly because of the US figure, and the one given by the Indian Ministry of Finance. Let us have a look on the matter.

As for bilateral official aid, Japan is the single largest donor of Official Development Assistance (ODA) to India. Japan's aid commitment to India currently runs at around US\$1 billion annually, Japan has temporarily frozen most of it. Germany has suspended its US\$300 million aid package. Sweden and Denmark have also done

the same. Their combined aid runs to around US\$200 million. The US has also suspended its aid to India, which is even smaller.⁵

The United States is the single largest party to the sanctions and it has claimed that India would immediately lose aid and other inflows worth US\$20.63 billion on account of sanctions in the wake of nuclear test. The Indian government has contested this as its own estimate of loss is to be much smaller of the order of US\$1.14 billion as the Table 1 depicts.

The Reserve Bank of India is understood to have prepared a report which is stated to have estimated total loss of inflow of foreign exchange due to the suspension of foreign aid to India at US\$ 2.8 billion as a combined of total of all aid suspended by all donors.⁶ Significantly, the United States has also toned down its initial estimate of impact and come out with a realistic picture of impact of sanctions by putting the economic cost of India at a little over US\$2 billion.⁷

So the direct economic impact of weaponisation of India's nuclear programme seems to be relatively small and manageable because of the fact that the potential loss of economic sanctions are involved in those sectors where European governments, corporations and banks are eager to come to deal with nuclear India.

1.1.2 Indirect Impact

The indirect costs of the sanctions on Indian economy are supposed to occur due to non-sanctioning of multilateral loans, bringing trade items under sanctions, a weak Indian rupee which will

5. Charan D Wadhva, "Costs of Economic Sanctions, Aftermath of Pokhran II," *Economic and Political weekly*, (Bombay, June 27, 1998), p. 1604.

6. *Ibid.*

7. *The Economic Times*, (June 20, 1998), p. 10.

Table 1
US\$ 20 Billion Rap

	US Estimate	Government of India Estimate
Overseas Pvt.	US\$ 10.2 bn	Nil; effect is notional
US Exim Bank guarantees	US\$ 4 bn	US\$ 500 m; rest has been disbursed
Loans/guarantees of World Bank, IDA ADB	US\$ 3.8 bn	Nil, unless US can muster support
Loans from US banks to Indian government	US\$ 1.98 bn	Impact unlikely
Termination of licenses for munitions list terms	US\$ 552 m	US\$ 552 m
Agriculture Export Credit Guarantees (Potential)	US\$ 20 m	US\$ 20 m (now waived)
AID development assistance (FY 1998)	US\$ 51.3 m	US\$ 51.3 m
PL-480 aid (FY 1998)	US\$ 9 m	May not be implemented since it is food aid
Trade development assistance grants	US\$ 2 m	US\$ 2 m
Prohibition of exports of specific goods and technology under Export Administration Act	US\$ 12 m	US\$ 12 m
Termination of military sales and financing	US\$ 0.775 m	US\$ 0.775 m
Total	US\$ 20.63 bn	US\$ 1.14 bn

Source : *Business Standard*, (Bombay, May 23, 1998), p.1.

ensure a costly overseas loans, lower inflow of FDI and ultimately due to the opportunity cost of the society. So the possibility of potential damage to Indian economy depends on two factors – the duration of the sanctions and the prospect of bringing new trade related aspects under sanctions. The longer and stricter the rules, the wider and deeper the effects on the Indian economy. So let us deal with the issues in a broader way.

Move had been made to deny India (and Pakistan) the most favoured nation (MFN) status on textile and apparel exports to the US market. Congressman from Massachusetts proposed the move as an appendage to the Defence Authorisation Act for 1999. The amendment proposed that the MFN treatment be denied on the said products to the countries that conducted nuclear test after January 1, 1998. The move also sought to impose restrictions temporarily on India's exports of these products to US markets. Such measures are permitted under the rules of World Trade Organisation (WTO) under a special clause invoking security reasons. If such an amendment was to get passed, it could have seriously jeopardised an Indian textile and garments export market of US\$2.5 billion. A future sanctions targeting on other products and services, including the crucial software exports, might deliver a serious blow to the India's export efforts.

India faces a more serious potential damage from sanctions if the US goes for marshalling enough votes along with its own voting weight to deny India's request for loans to multilateral banks, particularly the World Bank. India is the World Bank's largest borrower with more than US\$44 billion in loans to date.⁸ It borrows

8. *Far Eastern Economic Review*, (May 21, 1998), p. 20.

roughly US\$1.5 billion annually from the World Bank. It was expecting US\$3 billion in loans and credit in the current fiscal year. While still not agreeing collective sanctions on India, the EU-15 along with the US and Japan have resolved to deliberately delay the process of consideration of new development loans to India coming up for consideration at the World Bank's board. Table AI shows the voting weight (in percent) in the Board of IMF and World Bank of the countries who have imposed sanctions on India and Pakistan. Though their total weight is not sufficient enough to block loans or credit, they can exercise their influence on others in terms of future sanctions of loans or credit to either of the newly declared nuclear powers.

For India the process of making deliberate delay for consideration of loan request has begun. The World Bank has announced the postponement of the consideration of four projects proposal (three of them are development projects related to energy and road) amounting to a total of US\$860 million to India which was supposed to come up for discussion on May 25, 1998. The underlying pressure for the postponement is easily understandable. Had all this four loans been sanctioned, the disbursement would have been for the order of US\$50 million to US\$100 million per year for 5 to 10 years to India.⁹

It is now anticipated that future consideration of development assistance or for that matter any future request for IMF loan by India might be turned down if US is successful enough to mobilise enough voting weight behind it. The Indian request for IMF loan seems quite real in the context of dwindling exports against an increase in imports making grounds for huge deficit up to US\$8 billion in the fiscal year 1998-99. This deficit coupled with an estimated outflow

9. Wadhva, *op. cit.*, p. 1606.

of US\$14 billion in payment of foreign loan and interest could trigger a balance of payment crisis at the end of present fiscal.¹⁰

External economic factors like the crisis in East and Southeast Asia, a weak yen were putting a lot of pressure on Indian rupee. In the wake of nuclear test and subsequent sanctions, the indirect market perceptions and market sentiment-based effects are putting further pressure on Indian rupee. Since May-tests, the rupee has been depreciated by seven percent, setting a record low price of Rs. 43.35 per dollar in the meanwhile. Though this should have a positive impact on exports, it is yet to be translated. The indexes of stock markets of Bombay and Delhi are continuously falling, though the tests are not the only causes of it. A bearish capital market will automatically affect the market capitalisation of corporations thus putting a pressure on the recession hit industrial sector of India.

Two prime international credit rating agencies viz. Standard and Poor's and Moody's Investor Service have downgraded India's sovereign credit rating. In the S&P's rating India stands now with BB +, which is a notch below investment grade or a junk bond grade or the highest possible in the speculative category. Whereas Moody's rating for India has been downgraded from Baa3 to Ba2 which is 'speculative grade' category for a country. The negative impact of these downgrading would be felt on two areas – cost of overseas borrowing by Indian corporate and flow of FDI in the Indian economy. It will now become more difficult and expensive for Indian corporations to raise funds in the international market, particularly those with longer-term maturity. Raising of long-term funds from the US market has become a costlier option as the political risk premium on loans to India have shot up by 8 percent. A

10. Time McGrik, "Living with The Bomb," *Time*, (Hong Kong, August 3, 1998), p. 23.

dollar loan from US commercial banks could cost anything between 16 to 18 percent. This has made borrowing an expensive, even unaffordable proposition.¹¹ The US pension and insurance fund (PIF) is the biggest source of long-term finance in the international market. The bulk of debt and equity offerings by Indian blue chips were picked up by US PIFs, which are unlikely to do the same in the newer context.

The other area is the flows of FDI in India, which is likely to be indirectly hit in the change of sovereign rating of India. The United States is the single largest investor in India and its present investment stock is hovering around US\$11 billion. The new speculative grade will make investors uneasy and unconfident with new investment proposals because of increase in political and pure risk premium in India. The Indian effort to develop infrastructure sectors with FDI could be hard hit due to this.

To counter the impact FDI, the government of India has adopted fast track policy for clearing FDI proposals as well as some tax incentives for investment. But these incentives, as put by Swaminathan S.A. Aiyar, "rarely work in a potential war zone. Many nervous investors will wait and watch and so will nervous consumers. If lower investment and consumer spending depress GDP growth by just one percent that means Rs. 18000 crore lost."¹² Thus, the overall indirect cost of nuclearisation for India could be much higher than the direct ones. If the economy is mismanaged or if it shows the signs of weakness that could lead to further lowering

11. *The Economic Times*, (May 14, 1998), p.1.

12. Swaminathan S.A. Aiyar, "Easy to Explode a Bomb, Tough to Supply Basic Needs," *The Economic Times*, (June 1, 1998), p. 6.

of India's credit rating in the international capital market.¹³ The economic repercussion of such an eventuality remains unpredictable.

1.2 Nuclear Pakistan – Costs and Consequences

Going nuclear is certainly proving to be more painful to Pakistan's fragile economy. Since the tests, Pakistan has faced an external economic sanctions from the same group of developed nations those have placed sanctions on India. So the nature of adverse effects on Pakistan economy are supposed to be the same as is the case with Indian economy. But Pakistani economy is likely to suffer more heavily than the Indian economy due to the impact of symmetric sanctions because of the heavier dependence of the former economy on aid and other bilateral external linkages at the official level.

To understand the possible extend of impact, first we should have a picture of the external position of Pakistan economy prior to the tests. Pakistan is heavily dependent on foreign assistance. Its foreign debt stands at US\$32 billion, or 70 percent of her GDP, compared to US\$91 billion or 25 percent for India. In October 1997, Pakistan signed an agreement with the IMF for a US\$1.56 billion credit facility for a period of three years; of this, US\$1.1 billion was yet to reach Islamabad. Pakistan was expected to borrow about US\$2 billion in commercial loans by June 30, 1998. It was also projected to receive US\$3.5 billion in the form of soft loans and grants. It had only US\$1.3 billion foreign-exchange reserves to support imports of only 10-weeks before the Chagai tests.¹⁴

13. Wadhva, *op. cit.*, p. 1607).

14. Ahmed Rashid, "Collateral Damage," *Far Eastern Economic Review*, (May 28, 1998), p. 70.

Pakistan's estimated GDP growth projection for 1997-98 was 5.4 percent. The current account deficit in first 9-months of fiscal 1997-98 was US\$1.127 billion while the budget deficit was likely to be US\$3.4 billion by the end of June, 1998. The World Bank estimates that Pakistan needs US\$5.3 billion annually to service and repay its estimated US\$32 billion foreign debt, of which 20 percent is short-term.¹⁵

With this internal and external statistics, Pakistan exercised its nuclear options in the last week of May, 1998. The immediate response from the US, Japan and some other developed countries was economic sanctions, though most of the European countries were content to condemn the action.

The US sanctions are definitely based on the Nuclear Proliferation Prevention Act, 1994 which bars aids, commercial loans, credits as well as ensures US opposition to loans through multilateral agencies. Though the US is the largest trading partner of Pakistan, it does not give any aid to Pakistan because of the Pressler Amendment. But the sanctions have effectively stopped the rollover of an estimated US\$700 million to US\$1 billion in commercial loans and credit lines for food and oil imports provided by American Banks. Exemption of US food and farm exports might reduce the figure to some extent.

Pakistan's most immediate concern is its precarious reserve position. The forex once went down to US\$500 million – not enough even to cover three weeks import. A Kuwaiti dispatch of US\$250 million improved the position a bit but situation remains serious. Pakistan is still considering a "partial moratorium" on its debt financing. To avert Pakistan's slide into an economic chaos, which

15. *The Economic Times*, (June 1, 1998), p.7.

could have destabilised the region, the US did not oppose a US\$200 million loan to Pakistan. But the US has thereof let it known that a hitherto delayed IMF loan to Pakistan was "non operational, suspended, and outdated" and needed to be renegotiated.¹⁶ So, Pakistan's expectations to have IMF or World Bank funds released may not be materialised in the near future. For Pakistan, the Islamic Development Bank has a rescue package worth US\$1.2 billion to US\$1.5 billion of a mix of loans including term finance, trade credit, rollover of loans and cash assistance.

Crisis of the forex reserve along with the down-grading of Pakistan's sovereign rating to B- from B+ by S&P's coupled with the economic sanctions have had a cumulative pressure on the Pakistani rupee. The two-notch down-grade, according to S&P, reflects Pakistan's "precarious external financial position." The rupee plummeted to 63 to a dollar, though now has stabilised somewhere around 56 to a dollar.

The reactions in the stock market followed a similar line. The Karachi Stock Exchange index dropped to an all time low to 756 in the mid-July from 1400 index figure in the beginning of May. This makes internal capitalisation even more difficult for the corporate of Pakistan.

The S&P's has also lowered its short-term foreign currency rating to C from B. The implications of these ratings make it virtually impossible for the foreign investors to come with FDI in Pakistan or commercial banks to offer short-term loans to Pakistan government or to any corporation.

16. Ahmed Rashid and Sardanand Dhume, "Will it? Wont it?" *Far Eastern Economic Review*, (August 6, 1998), p. 22.

Pakistan's banking sector is the other area where the tests and subsequent developments have hit hard. Soon after the tests, the government declared a state of emergency and froze all foreign currency accounts with the objective of stopping account-holders from transferring their funds abroad. However, reports suggest that this fund had all been lent to importers to finance annual trade deficits. If the freeze is lifted then a rush for the money in foreign currency is expected and that could trigger a liquidity crisis in the banks. An illiquid bank is technically insolvent and failing to improve the situation could lead to a banking disorder in Pakistan.

Apart from this, if Pakistan wants to raise a viable nuclear deterrence, then it has to invest nearly on an equal footing with India. Then the cost estimate for Pakistan's nuclear programme could reach nearly the same of India's estimate. That can prove to be a huge burden for the Pakistani budget and economy.

1.3 Nuclearisation – Opportunity Costs of the Societies

Despite the euphoria soon after their respective tests, the general sentiment in both the countries thereafter has blunted the initial outburst. Attaining the nuclear power status could prove to be a very costly luxury for the people of both the countries, because in the ultimate cost benefit analysis, the opportunity cost of this nuclearisation is very high.

Let us try to draw comparative social positions of the two NNWS following *The Human Development in South Asian 1997* report. Actually both of them cut such a sorry picture that one can not but be very surprised to see their present rush for a costly venture like nuclearisation.

In India 291 million adults are still illiterate, 135 million people are denied access to primary health care, 226 million are without

safe drinking water and 640 million without basic sanitation facilities. Forty four percent of the total population lives in absolute poverty. Almost one-third of the world's poor live in India.

For Pakistan the picture is not rosy either. Over two-thirds of Pakistan's adult population are illiterate, 17 million children were out of primary school in 1995, 60 million people do not have access to health facilities, 67 million people are without safe drinking water, and 89 million people are deprived of basic sanitation facilities. There are more than 36 million people who live in absolute poverty.

But the military profiles of these two countries are quite disproportionate to their social profiles and Pakistan is well ahead of India in most of the comparative analysis of military spending. Table A3 depicts the contrasts between these two. Actually, India and Pakistan together have spent US\$70 billion on defence during 1990-96, compared to only US\$12 billion on education during the period. They have six times more soldiers than doctor.¹⁷

So their basic social agenda waited, as arms accumulated. But a small amount of additional investment by the two countries in the human priority areas can provide universal primary education, basic health care to the entire population and safe drinking water to the all people by the year 2010. The following table gives the average additional amount needed for that.

17. Mahbubul Haq, "India's Nuclear Blunder," *The Dawn*, (Karachi., May 21, 1998).

Table 2
Additional Investment Needed in Human Priority Arrears

Figures are in US\$ million per year for 1995 to 2010

Country	Universal Primary Education	Health care for all	Safe Drinking water for all	Total
India	1536.7	1268.5	1629.6	4434.8
Pakistan	527.9	407.72	436.9	1372.5
Bangladesh	305.5	384.9	230.5	920.9
Nepal	67.6	-	70.6	98.2
Sri Lanka	26.7	16.2	37.9	80.8

Source : Mahbubul Haq, *Human Development in South Asia 1997*, (UPL,Dhaka, 1998).

Figures have been calculated from Table CI, C2 and C3, PP 122-124.

As Table 2 shows, the costs needed for providing the basic social needs to the entire deprived population are not that high. If the two countries give up a part of their defence allocation, investment need for the above factors could then easily be taken care of. At this juncture, this possibility of positive diversion towards social upliftment seems most unlikely. Instead, they have to divert a portion of their development investment towards the weaponisation and maintenance of nuclear programme.

So the opportunity cost of the society is proving too high to both of the countries. The result of such misapplication of scarce

resources is obvious. The recently published report *Human Development in South Asia 1998* presents a shocking socio-economic profile of India and Pakistan which have now fallen behind even Sub-Saharan Africa in most of human development indicators. Such combination of desperate poverty with modern nuclear weapons may not be a welcome proposition to either of them.

1.4 Will the Sanction Last Long?

It has become a big question – how long will the US led sanctions persist on India and Pakistan? Till now there is no straightforward answer to the question as a host of issues have become interconnected with the issue of lifting or keeping the sanctions in place. The result of the July visit of the US Deputy Secretary of State Strobe Talbott to the two nuclear testing countries is still veiled in secrecy. An easy breakthrough might not be achieved immediately. But one point has emerged – the sanctions are not doing good to any party. Germany has already decided to resume its development assistance to India, Japan appears to be also in the process of softening its stand on cutting its ODA to India. The EU-15's decision on generalised system of preference (GSP) to India and Pakistan is yet to come for a formal discussion – but it depends on the US and the UK's stand on the issue. Indications from the United States itself are of softening its attitude towards the sanction issue.

A question that comes at this juncture is how serious is the US with its sanctions on India and Pakistan? Does it want to see India and Pakistan suffer too much for their nuclear tests? Or, does the US want to see them faltered? The US might not be that much willing to push them on the verge of economic collapse. Both India and Pakistan have the potentials to play important roles in the emerging

context of Asia, particularly in this part of the world and the United States has its own strategic considerations for these two countries.

Let us list some of the possible considerations, which are important in this context. We take the case of Pakistan first.

- i. The United States and Pakistan are actively involved in economic and military co-operation since 1950. After receiving so much help and assistance from the US, if Pakistan fails at this moment, it will create a bad precedence for future US relationship and friendship with other countries.
- ii. Pakistan has a strategic location at the confluence of the Central, Middle and South Asia. If the US lets Pakistan slide into economic chaos that could destabilise the region. Moreover, only Pakistan has a leverage over the Talebans in Afghanistan. So, the oil initiatives that the American corporations are planning to make from Kazakhstan to the port of Karachi or even to India, need Pakistan's help in the immediate future and for longer term to have a strong presence in the Gulf which is strategically vital for US interest.
- iii. A resurgent India in the 21st century can make it imperative for the US to have some friendly nations nearby.

Though India since its birth kept itself away from the influence of the US, India's importance to the US in gaining ground in recent years. The reasons behind this are :

- i. India is a big country with a big market. Nearly 200 million Indian middle class is considered to be the largest consumer-group in a single country. The multinationals from the United States have created a substantial business stake in India and more are in the pipeline. According to a recent National Council for Applied Economic Research (NCAER) (New Delhi) study,

"Consumer India" will clock high speed growth in the next eight years and expand to cover nearly half of the population".¹⁸ This is such a big market that no multinational can ignore. Moreover, the uncertainties with the East and Southeast Asian economies make India more too promising. The US strategic policy makers can no more be guided by the perceptions of the Cold War era for formulating policy towards India.

- ii. The potential rise of China as a counterweight to the United States' supremacy is much real today (we assume that the present Asian economic flu will not catch China). With all strategic depths, India seems to be a "natural front-line ally"¹⁹ of the United States to take care of a China which may challenge the Western, specially American, global dominance.

In the circumstances, the US State Department would be happy to get the CTBT signed by India and Pakistan before the lifting of the sanctions imposed on them. However, if this does not happen soon, the US government might consider leaving the economic sanctions porous enough so that the US corporations can do business with India and Pakistan on the promise of good behaviour by them. This is because of the established experience that economic sanctions do not work if only one or two or few countries impose them on a targeted country. Under the current pattern of US sanctions on the two countries, Particularly, India has the potentials to expand its business with MNCs (including banks) from countries like Britain, France at the expense of the corporations from the US and Japan.

18. *The Economic Times*, (June 14, 1998), p.1.

19. *The Daily Star*, (Dhaka, August 18, 1998).

2. NUCLEAR SOUTH ASIA: CHALLENGES FOR BANGLADESH

The nuclear related developments in South Asia will have many direct and indirect bearings on the neighbours of India and Pakistan. Bangladesh has substantial economic relations with both the countries, particularly with India. Over a period of time, India has emerged as the second largest trade partner of Bangladesh. It has also a good political relationship with both India and Pakistan. So, the present developments and related sanctions of developed countries might not affect the two countries only. Spillover effects of their internal developments can affect Bangladesh economically as well as politically. In the international arena, strategic importance of Bangladesh has become a matter of positive evaluation. Moreover, if the sanctions continue to last long and trade related matters are brought under its purview, then a benefit may arise to trade and investment sectors. More precisely, nuclearisation of South Asia can pose threats as well as open opportunities for Bangladesh in various manners. As we are more concerned with the economic dimension, we would focus our attention mainly on the issues of trade of goods and services and possibilities of foreign flows of funds to the Bangladeshi economy in the context of the nuclearisation of South Asia.

2.1 Trade

As a reorientation of policy, Bangladesh has now focused more on a trade-led growth strategy. Increasing industrial base is a basic requirement for giving more thrust to export. To do that Bangladesh is importing more. India and to a certain extent, Pakistan have emerged as important sources of our imports. Actually India is the number one exporter to Bangladesh. If informal imports are

considered with formal imports from India, the figure of import trade will substantially go up. The reasons for this wide base of imports are many. Physical proximity, more advanced production and technology base, availability of a wide base of products make India a more preferable spot for imports. So the phenomenal increase of imports from India in recent years is not that surprising.

Now, what could be the spillover effects of sanctions on the imports of Bangladesh from those countries? The possible impacts could be discussed on the basis of some assumptions and possibilities.

As a consequence of sanctions, both the countries have substantially devalued their currencies. Though Bangladesh has also done the same in the meantime, the rates are much higher in their cases. If the devaluation of currencies of India and Pakistan is translated into reduction of price of their exporting commodities in dollar terms, then the future import trade of Bangladesh from those countries would be cheaper from now. On this basis our trade deficits with India and Pakistan might record a decline in the near future. As can be seen from the following Table 3, in the Year 1996, out of total trade deficit of US\$3600.00 million, Bangladesh had deficit up to the tune of US\$1050.1 million or 29 percent of her total deficit with India and Pakistan. India alone constituted nearly 28 percent of the total deficit. So depreciation will automatically reduce the price of their export commodities that should be translated in the reduction of deficits.

Table - 3
Trade Picture of Bangladesh with India & Pakistan
(Figures in US \$ Million)

	1990			1995			1996		
	Export	Import	Deficits	Export	Import	Deficits	Export	Import	Deficits
India	20	170	150	36	994	958	21	1018.3	997.3
Pakistan	23	70	47	26	138	112	37.3	90.1	52.8
IP-2	43	240	197	62	1132	1070	58.3	1108.4	1050.1
World Total (WT)	1672	3656	1984	3350	6496	3146	3297.2	6897.8	3600.6
% of IP with WT	2.57	6.56	9.93	1.85	17.43	34.01	1.77	16.07	29.16

Source: IMF, *Direction of Trade Statistics 1990-96*, and *Direction of Trade Statistics, First Quarter 1998*,
(Washington, D.C., 1998).

Note: IP = India and Pakistan, WT = World Total

But this possibility hinges on two factors. *First*, if the reduction of price in dollar terms lead to more importing of Indian and Pakistani goods by Bangladesh then Bangladesh might experience a further deteriorating deficit situation with those countries. This is more because of the fact that exports of Bangladeshi goods to India and Pakistan might face tougher regulations due to their foreign-reserve-led restrictions as well as an increase in price of Bangladeshi commodities due to the devaluation of their currencies. Voluntary restrictions, and other non-tariff and tariff barriers could be applied.

Secondly, if the increase in inflation in India and Pakistan also affects the prices of commodities that Bangladesh imports, then import-led inflation can affect the Bangladeshi consumers. The possibility that importers from Bangladeshi will import more from India and Pakistan due to exchange rate depreciation remains valid up to the point that domestic inflation in those countries does completely erode the price competitiveness established by devaluation.

The export from Bangladesh might face challenges on two fronts. *One*, as we have already pointed out, that Bangladeshi export to India and Pakistan will face tariff and non-tariff barriers (NTBs) which have been placed by them under the constraints of foreign reserves. As Bangladesh exports only 1.77 percent of her total exports (see Table 3), to these countries, so it does not constitute a big threat. But another threat comes from the undercutting of export possibility of Bangladesh by the price-competitiveness achieved by Indian and Pakistani products due to the wider devaluation of their currencies. This threat becomes more real because of the similarity of products in the export-basket of these countries with that of Bangladesh.

In case of long lasting and broadening of the sanction coverage, exports of Bangladesh will sure to be holding more promise. The move to remove MFN benefits for Indian (and subsequently Pakistani) garment products could prove to be a bonanza for Bangladesh. India's unilateral removal of NTBs on 2000 products since August, 1998 is an issue that has an indirect link with its nuclearisation. Through the move, India signalled her broadened regional responsibility with the nuclear status. This move might help an increase of Bangladeshi export to India.

2.2. Manpower and Software:

There was a buzzing that Bangladesh might gain in the export of manpower and software as an aftermath of nuclear tests related sanctions on India and Pakistan.

But the fact that we have to remember that if the sanctions imposing countries go for more manpower shunning India and Pakistan, then we might not be able to supply them the professional and technical people they need for. If any positive development happens in this area, that would be very insignificant to have any impact on the economy of Bangladesh.

Software is a very highly sophisticated industry where Bangladesh has to yet develop a strong base. A demand led push can improve the position over a period of time, but very immediately Bangladesh stands on a weaker ground to make any diversion of demand of US and other European countries from India or Pakistan.

2.3 Investment

The prospects for investment in a particular country depend on many factors, such as, physical location of a country, investment environment which covers both economic and political environment of the country, size of the market or economy, sufficiency of

infrastructure, availability of manpower, various financial incentives and so on. The relative investment worthiness of Bangladesh against these issues is a matter of objective evaluation. Even prior to the nuclear explosions by India and Pakistan, Bangladesh offered a very liberal investment regime for FDI. Actually Bangladesh is supposed to have one of the most attractive packages of FDI among the developing countries of Asia. But investment was shying away Bangladesh and it is yet to emerge as an attractive centre for FDI.

Now due to the nuclear tests, nothing has changed overnight except a change in strategic perception on Bangladesh. If India and Pakistan are considered to be a nuclear-war theatre, then Bangladesh is not that far from that theatre. So, thinking in the line that investments, which were on the way to India and Pakistan, might now divert their flight to Bangladesh may not be that realistic. But if there is any prospect of tangible investment benefit that Bangladesh herself can show in the meanwhile, then that could prove to be more meaningful. Prospect for oil and natural gas is one of such areas where we may have a bright future. Moreover, even if the tests have offered some investment opportunities to Bangladesh, a political uncertainty that is looming large in the horizon can act as a barrier to the investment potentials of this country.

Now, what will the change in strategic perception of Bangladesh by others bring to Bangladesh? This is expected to bring some more bilateral and multilateral financial and military aid and some businesses to Bangladesh. That might not happen as a means of diversion.

How the nuclearisation would affect our defence budget? This is a question that the military planners are better positioned to address. But new items have to be added immediately in the military kit for monitoring and controlling of radioactivity in the environment and

imported food items. Bangladesh should wisely ignore any major cost escalation in its defence budget in the new security environment. The opportunity cost of such increase in defence allocation to the poor people of Bangladesh would be much higher than that of the two neighbours.

So, the economic challenges that have been visualised at this moment for Bangladesh in the context of nuclear South Asia have to be dealt with properly. Few more issues may emerge over the passing of times. But as it generally happens, challenges come with some avenues of opportunities. Bangladesh has to explore and exploit those opportunities in a prudent manner.

3. NUCLEARISATION AND REGIONAL CO-OPERATION

The militarisation of politics of India and Pakistan has had a spill over effect on the region. The Indo-Pak arms race has not only affected the economies of both the countries, it has somehow contributed to slow growth of regional "collective co-operation" effort for economic development. The seven countries of South Asia those have created the South Asian Association for Regional Co-operation or SAARC in 1985, could not achieve much tangible benefit from their regional venture. After so many years when SAARC with its trade organ SAPTA was seemed to heading for a better future, a new obstacle has come down on its way.

The broad question that now has appeared at the horizon of SAARC – how will the member countries go forward for co-operation to make South Asian Free Trade Area (SAFTA) a reality? Will that venture be implemented as per the schedule? What are the challenges posed by the nuclear related developments to each country of SAARC and to the region as a whole?

Through the implementation of SAARC preferential Trading Arrangement (SAPTA) in December 1995, the member countries wanted to accelerate the trade relationship among the participants. But SAPTA has so far failed to give much of impetus to the overall increase in trade among the participants. In the two rounds of negotiations, known as SAPTA-I and SAPTA-II of the Inter-Government Group (IGG), as many as 2239 products (in SAPTA-I - 226 products and in SAPTA-II - 2013 products) have been offered for tariff concessions. The main characteristic of these offerings is that most of the products (each 8-digit HSC line makes a tariff line or product) have low trade content. Therefore, concessions on those lines translate into insignificant trade increase among the member countries. In the circumstances, SAPTA is yet to make a major headway. But the idea of SAFTA is broad based where free movement of goods, services and investments over a period of time among the member countries is ensured.

The tests, no doubt have jolted the initiative of SAFTA. In the 10th SARRC Summit in Colombo, Bangladesh had already proposed to defer the decision of the implementation of SAFTA for 10 years. While the proposal had not been supported, Pakistan remains not an enthusiastic supporter of the SAFTA. To be brief, even prior to the nuclearisation, the prospects for SAFTA appeared to be problematic at best. The nuclearisation and its aftermath have put the economies of the entire region to a severe test. The intensity of rivalry between India and Pakistan will also now determine the fate of SAFTA initiative.

EPILOGUE

Weapons of mass destruction, both nuclear and conventional, end up complicating the moral and socio-economic problems caused by nationalism, and indeed, the modern industrial civilisation. India

and Pakistan would not be any exception in this regard. It is also true that there is no possibility of undoing the nuclear knowledge they have acquired. But it is expected that in the short run, India and Pakistan cannot emerge from their nuclearisation with any thing but economic injury.

In a possible arms race between the rivals, India with its larger economic resources and more advanced technological base could outspend Pakistan and achieve its strategic objectives without even restoring to a major military encounter. So as a nuclear power, India's democratic institutions must ensure greater accountability on national and regional security issues and must prevent potential misuse of the nuclear ability by political parties in their struggle for power. Pakistan, on its part, should behave in a responsible manner so that tensions between the two do not escalate upto a war.

The theory of deterrence based on the logic of mutually assured destruction (MAD) has shown to be highly unstable and accident-prone. So the two countries must start and develop confidence building measures (CBMs) between them. Moreover, they should ponder about their basics for national security. None of them can achieve foolproof territorial security until their current levels of unemployment, illiteracy and hunger are substantially reduced.

Keeping the challenges that might arise due to the tests, Bangladesh must draw an effective strategy to face them efficiently as well as to avail the opportunities, which may come along with the challenges.

APPENDIX

Table A1

Perceived Anti-Nuclear Votes at World Bank and IMF Boards

Country	Voting Weight (%)	
	World Bank ¹	IMF ²
USA.	17.03	17.66
Japan	6.04	5.50
Germany	4.67	5.50
Netherlands	2.30	2.31
China	2.89	2.27
Canada	2.89	2.89
Australia	1.59	1.57
Sweden		1.09
Total	37.41	38.79

Sources : 1 *Economic and Political Weekly*, June 27, 1998, p.1605.

2 Rajwade, A.V. *Foreign Exchange, International Finance and Risk Management*, (Academy of Business Studies, New Delhi, 1996), p. 7.

Table A 2
Some Social Indicators of South Asian Countries

Illiteracy rate ¹			Percentage of Population with access to ²		
	Female	Male	Health care 1993	Safe Water 1995	Sanitati on 1995
Nepal	86	54	N.A	48	6
Pakistan	76	50	85	60	30
Bangladesh	74	51	74	83	30
India	62	35	N.A.	63	29
S. Lanka	13	7	N.A.	57	66
World	38	21			

Sources : 1 *World Bank Atlas, 1998.*

2 *World Development Report 1997.*

Table A3
Profile of Military Spending

	India	Pakistan	Bangladesh	Nepal	Sri Lanka
Defence expenditure (US \$ millions, 1993 prices)					
* 1985	7,220	2,065	308	24	215
* 1994	9,500	3,500	380	40	500
Defence expenditure annual % increase (1985-94)	3.1	6.0	2.4	5.8	9.8
Defence expenditure (as % of GDP)					
* 1985	2.6	5.2	1.3	0.8	2.7
* 1994	3.6	7.0	1.5	1.1	4.7
Defence expenditure (as % of central government expenditure)					
* 1985	14.1	30.6	9.4	6.7	1.6
* 1994	12.8	26.9	17.6	5.9	11.6
Defence expenditure per capita (US\$, 1993 prices)					
* 1985	9.4	22	3.0	1.4	13.4
* 1994	10.3	26	3.2	1.9	28

Defence expenditure (as % of education and health expenditure)					
* 1960	68	393	n/a	67	17
* 1990-1	65	125	41	35	107
Armed forces personnel (thousands)					
* 1985	1,265	484	91	25	22
* 1994	1,265	590	115	35	126
% increase (1985-94)	0	22	26	40	483
Number of soldiers 1990					3.8
* per 1,000 population	1.5	4.9	1.0	1.9	25,000
* per 1,000 doctors	4,000	9,000	6,000	35,000	400
* per 1,000 teachers	300	1,500	300	400	
Employment in arms production (thousands) 1994	250	50	n/a	n/a	n/a
Military holdings' 1994					
Index (1985-100)	137	137	222	n/a	149

Source: Mahbubul Haq (1997), *Human Development in South Asia 1997*, p. 148.

VIII. BRIEF SUMMARY OF CONCLUSIONS AND RECOMMENDATIONS

THE DISCUSSION ON INDO-PAKISTAN NUCLEAR TESTS AND FALLOUT ON SOUTH ASIA, Held at BIISS on June 04, 1998,

and

THE SEMINAR ON NUCLEARISATION OF SOUTH ASIA: CHALLENGES AND OPTIONS FOR BANGLADESH held at BIISS on August 27, 1998.

The impetus for both the forums came from the felt need of initiating dispassionate discussions among the representatives from the political parties, academia, media, business community and other concerned professionals for frank exchange of views and suggestions on the subject. These were organised with the expectations that candid discussions on the subject in a free and academic environment would allow the participants, the paper presenters and the discussants alike, to deal with the 'sensitive issues' with less restraint and more candour. The central objective of the organisers of the forums has been to let the diverse ideas come into creative interaction so that the issues could be analysed from different perspectives, and finally, some recommendations could be made.

About fifty participants took part in the Discussion Meeting of June 4 and the number of participants in Seminar of August 27 has been about 80. These included representatives from academia, politicians, and a large number of civil and military officials, both serving and retired, including some high-ranking diplomats and technical experts in the field. Besides, some representatives from the foreign missions based in Dhaka also participated in the Seminar. Candid discussions and frank exchange of views and suggestions

took place in the course of deliberation. The outcome of the forums mentioned above in terms of suggestions and recommendations made by the participants is summarised below:

1. The arms race in South Asia, particularly nuclear arms race, is likely to complicate and worsen the security situation in the region. It would also thwart the process of socio-economic development as well as the regional co-operation in South Asia. The situation has put Bangladesh to face a host of difficult predicaments and the country should be prepared to respond to the development properly and adequately.
2. It was recognised that Bangladesh should re-evaluate its security concerns in view of the nuclearisation of South Asia. The questions to be dealt with are: (i.) how and to what extent does this development impinge upon the security of Bangladesh; (ii.) what are the possible directions that the nuclear arms race in the region may move in; and (iii.) how should the country respond to the challenges posed by the nuclearisation of South Asia. This needs to be done with utmost caution and in the light of the country's unequivocal commitment not to develop or possess nuclear weapons.
3. The spread of nuclear weapons is an international problem and its solution should be global. While dealing with this issue is primarily a responsibility of the international community, Bangladesh also should employ its efforts in dealing with the regional consequences arising out of the nuclear tests by India and Pakistan. Bangladesh, as a signatory to the Comprehensive Test Ban Treaty (CTBT), must make clear to the regional countries as well as the international community its principled opposition to the nuclearisation of any region, particularly South

Asia. Accordingly, the country also should cautiously project its image in the outside world.

4. Bangladesh should urge India and Pakistan to halt the ensuing nuclear arms race in the region, particularly to refrain from further nuclear tests and sign the CTBT.
5. For Bangladesh, it is necessary to possess adequate monitoring facilities to monitor nuclear tests by the regional countries. In this regard, the country's objective should be to enable itself to safeguard its environment as well as consumer goods and foodstuff both domestic and imported from these countries from any nuclear hazard. A number of concrete suggestions were also made. Satisfaction was expressed with regard to the government decision to install three seismometers in Dhaka, Rangpur & Sylhet. It was suggested that the process should be accelerated and the Chittagong one should be modernised.
6. Bangladesh should remain alert against the possible dumping of nuclear wastes adjacent to its land borders and seashores.
7. In view of the fact that both India and Pakistan possess unreliable nuclear reactors, Bangladesh should remain alert about any possible nuclear disaster.
8. Bangladesh also should employ efforts to generate public awareness about the consequences of nuclear arms race in the region in all of their ramifications: socio-economic, political as well as environmental. In this regard, media should be encouraged to pay particular attention to the issue.
9. Reinvigorated hostility between India and Pakistan may thwart the process of regional co-operation within the framework of SAARC. The country should employ its efforts to improve the political environment in the region, particularly Indo-Pakistan relations so that SAARC did not suffer a setback.

10. Bangladesh should evaluate, keenly and carefully, the implications of possible Western sanctions against India and Pakistan. In this regard, the prime focus should be the implications of such sanctions on the region as a whole and Bangladesh in particular. The country should remain prepared to avert any detrimental impact and take the advantage of any opportunity offered by the situation. In more concrete terms, Bangladesh should discourage the international community to impose sanctions against India and Pakistan as it could divert the world attention from South Asia in terms of trade and investment. No less important, such a policy would also allow the country to maintain the desired rapport with New Delhi and Islamabad.
11. However, in case of effective sanctions imposed against India and Pakistan, Bangladesh should be able to offer itself as an alternative to India and Pakistan in terms of trade and investment connections with the developed countries. Notwithstanding Bangladesh's limited ability, concerted efforts on the part of government organs as well as the business community would allow the country to attract at least part of the Western trade and investment that would be diverted from India and Pakistan.
12. It was recognised that the issues pertaining to the nuclearisation of South Asia are highly complex ones. Moreover, its implications are yet to reveal themselves. Therefore, it was suggested that BISS should continue its endeavour in devising ways and means of dealing with ensuing challenges. It was also suggested that in its venture the BISS should involve a host of representatives from the experts in the relevant fields, academia, media, relevant government agencies as well as informed circles.