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26.0 OBJECTIVES

The nuclear issue in South Asia arise out of the nuclear programmes and policies of India and Pakistan, the two countries of South Asia which have acquired nuclear weapon capability. After going through this unit, you should be able to

- Explain how and why India and Pakistan acquired nuclear weapons,
- Describe the nuclear weapon capabilities of India and Pakistan,
- Explain the position of India and Pakistan on nuclear issue, and
- Discuss the need for dialogue between the two nuclear powers of South Asia.

26.1 INTRODUCTION

South Asia is a region with growing political, economic and strategic significance. The bitter rivalry between India and Pakistan, which dates to the partitioning of the subcontinent in 1947, remains the impetus behind the proliferation of nuclear weapons and missiles in the region.

Nuclear issues in South Asia focus on the policies of India and Pakistan. Both, India and Pakistan had nuclear programmes to facilitate the process of development in these countries. These civilian programmes became the basis of the technological capability to move from a purely civilian programme to a weapons option. India exploded its first nuclear device at Pokhran on 12 May 1974. This was the first demonstration of nuclear weapons capability. Pakistan had also started to move towards a nuclear weapons option in the 1970s. It is with the nuclear tests conducted by India and Pakistan in 1998 that both the countries formally announced their nuclear weapons capability.

Today, both India and Pakistan maintain active nuclear and missile programmes, and both are producing fissile materials for nuclear weapons. Neither country has signed the Non-Proliferation Treaty (NPT) or the Comprehensive Test Ban Treaty (CTBT), although they adhere to self-imposed moratoriums on nuclear tests. The security dynamics of the region are complicated further by India's perception of China as a threat. Pakistan's efforts to develop nuclear weapons and missile systems are intended

primarily to counter India's substantial conventional military advantage and its perception of India's nuclear threat.

26.2 HOW AND WHY OF NUCLEAR TESTS?

The nuclear tests conducted by India and Pakistan in 1998 had generated a great deal of debate on the rationale and implications of these tests. Both the governments have now announced that they are nuclear weapon powers. This means that the number of states having nuclear weapons has risen from the original five to seven. The decision to produce nuclear weapons has raises two questions: (i) why do nations produce nuclear weapons? (ii) How do they produce nuclear weapons?

Nations choose to go in for the production of nuclear weapons for several reasons. Security is obviously the most important reason. Nations may perceive certain security threats that they would like to be prepared to confront. In the nuclear age, nuclear weapons have offered nations with technological capability to consider their use as a deterrent against aggression. Nuclear weapons also provide an increased strategic autonomy in their security policy.

Nations also opt for nuclear weapons to increase their international status. Historically, military power has always determined one's power status in the world. Nuclear weapons are looked as one of the important path to achieve this status. Some developing countries also feel that the possession of nuclear weapons would provide a method of bargain against the industrialized nations.

Finally, in some cases domestic political pressures also force the political leadership to decide to go in for the nuclear weapons option.

How do nations acquire nuclear weapons? The core of a nuclear bomb is made up of highly enriched uranium or plutonium. Fifteen to twenty-five kilograms of highly enriched uranium or five to eight kilograms of plutonium are generally considered the necessary minimum for the core of a multi-kiloton atomic bomb

A nation seeking to manufacture nuclear weapons must have a source of this fissile material. This is a major technical barrier. Nuclear material can be obtained by any one of the three main ways:

- a) Diversion of material from a civilian nuclear programme: Diversion of material from civilian facilities, atomic power plants, can be done by either evading safeguards or using unsafeguarded facilities. The International Atomic Energy Agency (IAEA) is an agency that works to ensure that diversion of nuclear materials from peaceful uses to military purposes does not take place. Its main purpose is to institute 'safeguards' or controls on nuclear facilities.
- b) Construction of facilities specially designed for its production: A nation that decides to build a nuclear facility has two basic options: (a) construct a plutonium production reactor plus a reprocessing plant to separate plutonium from spent fuel. A variant of this option is to feed a dedicated reprocessing plant with spent fuel from an already existing research or power reactor; and (b) construct an enrichment plant to produce weapons grade uranium from natural or low enriched uranium.
- c) Illegal trading in nuclear weapons components or theft of either the weapon itself or the necessary raw material.

26.3 INDIA'S NUCLEAR PROGRAMME

Indian nuclear policy as it came to be formulated in the early years, revolved around two principles: promotion of research and development for harnessing nuclear energy for peaceful purposes and attainment of self sufficiency in the nuclear programme. The key architects of this policy were Pandit Jawaharlal Nehru and Homi Bhaba.

Based on these principles India designed a three stage nuclear strategy. Its main elements were as follows: (i) building of heavy water moderated reactors which could produce power as well as plutonium needed to start the breeder reactors; (ii) utilizing the plutonium produced from the first stage reactors in the fast breeder. This stage was to continue until suitable thorium-uranium 233 reactors become available; and (iii) to run the II type of breeders on the thorium-uranium 233 cycles.

The Sino-Indian war of 1962 and the Indian debacle in the war brought in some rethinking about defence policy. However, the direction that defence rebuilding took was essentially in the area of conventional weapons systems. The detonation of the Chinese nuclear device in 1964 led the Indian decision makers to look at the nuclear option. Homi Bhaba, then the Chairman of the Atomic Energy Commission stated that India could produce a bomb within eighteen months, if it so wished. Prime Minister Lal Bahadur Shastri admitted to the Parliament that he was willing to consider the use of nuclear blasts for peaceful purposes. In late 1964, Shastri is reported to have authorized the Indian Atomic Energy Commission to go ahead with the designing of a nuclear device and preparing the non-nuclear component so that the lead-time required to build an explosive could be reduced from eighteen to six months.

The decisions of 1964 were followed by a protracted debate on the Nuclear Non-proliferation Treaty. Both, Shastri and Homi Bhaba died in 1966. The early years of Indira Gandhi's Prime Ministerial tenure saw a lot of political uncertainty in India. At the level of technological capabilities, there remained some uncertainty. Indian decision of not signing the NPT confirmed the end of the uncertainty of the sixties.

In the early seventies, Indian nuclear agenda began to take a definitive direction. In September 1971, the Chairman of the Indian AEC announced at the Fourth Atoms for Peace Conference that India had been working, on top priority basis, in the field of nuclear explosive engineering for peaceful purposes. Prime Minister Mrs. Indira Gandhi also made it clear that the AEC was constantly reviewing the progress in the technology of underground nuclear explosion from, both, the theoretical and experimental angle. Mrs. Gandhi, however, denied that there was any schedule fixed for a nuclear explosion. India conducted its first nuclear test in 1974 at Pokhran in Rajasthan. This was an underground test. This test has been called a Peaceful Nuclear Explosion (PNE) as its purpose was to pursue research in peaceful applications of nuclear technology and not construct a bomb.

It was after the nuclear test in 1974 that India finally developed a coherent nuclear doctrine to suit the changed circumstances. The test had demonstrated the Indian capability of producing a nuclear explosion. India now had the raw materials, the scientific and technological know-how and the personnel to construct an atomic bomb. What remained in question was the intent. India made it clear that this test was not conducted for production of a nuclear weapon and that India had no intention of going in for nuclear weapons. At the policy level, the earlier Shastri position of peaceful uses of nuclear energy with a go ahead for research in PNE was now further expanded. The test did not divert Indian stand on nuclear disarmament and peace policy. In her statement to the Indian Parliament, Mrs. Gandhi went at great length to stress that the test was part of the research and development work, which the AEC had been carrying out in pursuing the national objective of harnessing nuclear energy for peaceful purposes.

By conducting the Peaceful Nuclear Explosion, India demonstrated its capability to produce a nuclear bomb. But it simultaneously stated that it would not produce a nuclear bomb. This created a sense of uncertainty about India's real intentions. It is because of this that one can describe Indian policy as being a deliberately vague nuclear posture. This was to remain the basis of Indian nuclear policy for a long time.

This underwent a change in the early nineties following some important initiatives taken by the nuclear weapons states, namely, to indefinitely extend the NPT in 1995, to sign the Comprehensive Test Ban Treaty in 1996 and to begin discussions on the Fissile Material Cut-off Treaty. Nuclear debate in India in the first half of the nineties focused on the need to enhance nuclear capability.

On 11 and 13 May 1998 India conducted series of tests at Pokhran. India declared that it was now a nuclear weapon power. In his statement to the Parliament Prime Minister Vajpayee spelt out the nuclear policy of his government in the post Pokhran II phase: One, India would maintain a minimum but credible nuclear deterrent. To achieve this India did not require further testing and hence it was accepting a voluntary moratorium on further nuclear testing. Second, India would adhere to a 'no first use' doctrine as regards nuclear weapons. Finally, India continued with its commitment to global nuclear disarmament.

The Indira Gandhi line about a deliberately vague nuclear doctrine had been continued by successive Congress governments of Rajiv Gandhi and P.V.Narsimha Rao. It was I.K.Gujral, Prime Minister of the United Front government who sought to end this ambiguity. Gujral wanted to keep the nuclear weapons option open as a security measure. However, he refused to define the exact nature of threat that forced him to articulate a clearer position on the nuclear issue. The BJP in its National Agenda was still more specific about keeping the option open. The 1998 nuclear tests ended the lingering ambiguity in Indian posture.

A lot of discussion took place about Indian nuclear policy after the tests. Questions came to be asked about the exact nature of Indian nuclear policy and its long term direction. The Draft outline of Indian Nuclear Doctrine was prepared by the government and released on 17 August 1999. It argues for autonomy in decision making about security for India. It takes the long established Indian line that security is an integral part of India's developmental process. It expresses concerns about the possible disruption of peace and stability and the consequent need to create a deterrence capability to ensure the pursuit of development. It argues that in the absence of a global nuclear disarmament policy, India's strategic interests require an effective credible deterrence and adequate retaliatory capability should deterrence fail. It continues to hold on the 'no first use doctrine' and the civilian control of nuclear decision-making. It also expresses India's strong commitment for global nuclear disarmament.

Check Your Progress 1

Note: i) Use the space below for your answers
 ii) Check your answer with the one given at the end of this unit.

1) Why do nations go nuclear?

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2) The main elements of India's three stage nuclear development strategy are:

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3) What prompted the shift in India's nuclear posture in the 1990s?

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26.4 THE PAKISTANI NUCLEAR PROGRAMME

Pakistan's nuclear programme began in the mid 1950s when the Pakistan Atomic Energy Commission was created under the chairmanship of Dr. Nazir Ahmed. For a decade from the mid Fifties through the Sixties, several hundred Pakistani scientists received training under various 'Atoms for Peace' type programmes in the United States. Pakistan's principal nuclear research facility was established at Nilore near Rawalpindi in 1965. This facility, the Pakistan Institute of Science and Technology, provided for research and training facilities for scientists and technicians in the country. The first reactor, PARR is also located here. This reactor was supplied by the US in 1965 and operates under IAEA safeguards.

Zulfakir Ali Bhutto was the key architect of the Pakistani nuclear programme. Single-handed and with great determination, he built the nuclear programme from almost scratch to a viable nuclear deterrent capability. His primary concern had always been the Indian threat. He firmly believed that India was on the path to produce a nuclear weapon and if Pakistan did not follow suit, it would have to face a nuclear blackmail from India.

The 1971 war and the creation of Bangladesh had a far-reaching impact on Pakistan's nuclear programme. Bhutto promised to restore his country's lost pride. In 1972 he is reported to have held a secret meeting of nuclear scientists at Multan. It was at this meeting that the decision to develop an atomic bomb was taken. In 1974 Indian conducted its first nuclear test. Pakistan's reaction was sharp. Pakistan considered it a fateful development that had brought about a qualitative change in the situation in the subcontinent.

Initially, Pakistan focused on the plutonium path for building a nuclear weapon. Plutonium can be obtained from fuel that has been reprocessed from nuclear power plants, and in October 1974 Pakistan signed a contract with France for the design of a reprocessing facility for the fuel from its power plant at Karachi and other planned facilities. However, over the next two years Pakistan's international nuclear collaborators withdrew as Pakistan's nuclear ambitions became more apparent

Pakistan's nuclear programme got a fillip with the arrival of Dr Abdul Qadeer Khan in 1975, who brought with him the plans for uranium enrichment centrifuges, and lists of sources of the necessary technology. On this basis, Pakistan initially focused its development efforts on highly enriched uranium (HEU), and exploited an extensive clandestine procurement network to support these efforts. A.Q. Khan evidently persuaded Pakistan to work with Uranium as compared to Plutonium. Pakistan's activities were initially centred in a few facilities. A.Q. Khan founded the Engineering Research Laboratories at Kahuta in 1976, which later became the Dr. A. Q. Khan Research Laboratories (KRL).

Pakistan's nuclear linkage with the Arab world came into existence around 1973. The economies of West Asia changed after the 1973 war. The phenomenal rise in oil prices opened up new opportunities for Pakistan to trade its technology for oil. Libya soon emerged as the key supplier of uranium to Pakistan and also its main financier. Bhutto's testament that 'only the Islamic civilization was without it (the bomb), but that position was about to change' has been singled out as the indication of a Pakistani-Arab ambition to build the bomb. This has led to the labelling of the Pakistani bomb as an 'Islamic Bomb'. The reasons include the economic need of Pakistan and the Arab

need to deter Israel. There has also been a lot of discussion about the Chinese help to Pakistan in its effort to build its nuclear arsenal. The impetus provided by Bhutto continued to be pursued after Zia-ul-Haq came to power in 1977.

In the late 1970s, Pakistan had become a country of paramount geo-strategic importance for the United States following the Soviet invasion of Afghanistan. The United States considered Pakistan a "frontline state" against Soviet aggression and offered to reopen aid and military assistance deliveries. Despite the acquisition of new weaponry from the United States, Pakistan believed that it could never match India's conventional power and that India either had, or shortly could develop, its own nuclear weapons. President Zia therefore continued to pursue the nuclear programme initiated by Bhutto.

As long as Pakistan remained vital to United States interests in Afghanistan, the United States generally ignored Pakistan's developing nuclear programme and no action was taken to cut off United States support. Western nations, led by the United States, however began to strengthen controls on export of nuclear and other advanced technologies and began to enforce them with some stringency. One result of these Western export controls and stringent enforcement mechanisms was the increasing dependence of Pakistan's on China. Even before the signing of the Sino-Pakistani atomic cooperation agreement of 1986, China began to transfer some of the most critical nuclear technologies to Pakistan in the early Eighties. China is reported to have provided Pakistan with the design of one of its warheads, as well as sufficient Highly Enriched Uranium for a few weapons. As of the mid-1990s it was widely reported that Pakistan's stockpile consisted of as many as 10 nuclear warheads based on a Chinese design.

On 28 May 1998 Pakistan announced that it had successfully conducted five nuclear tests. On 30 May 1998 Pakistan tested one more nuclear warhead. The tests were conducted at Balochistan, bringing the total number of claimed tests to six. It has also been claimed by Pakistani sources that at least one additional device, initially planned for detonation on 30 May 1998, remained emplaced underground ready for detonation. These tests came slightly more than two weeks after India carried out five nuclear tests of its own, and after many warnings by Pakistani officials that they would respond to India.

Check Your Progress 2

Note: i) Use the space given below for your answers.

ii) Check your answer with the one given at the end of this unit..

- 1) Who can be regarded as the architect of Pakistan's nuclear weapons programme and why?

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- 2) What does the term Islamic bomb connote?

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26.5 NUCLEAR STATUS

India is believed to have enough weapons-grade plutonium for 45-95 nuclear weapons. However, the number of fully assembled weapons is likely to be smaller, and warheads are currently stored separately from aircraft and missile delivery systems. Pakistan lacks

an extensive civil nuclear power infrastructure, and its weapons programme is not as broad-based as India's. Almost its entire nuclear programme is focused on weapons applications. However, Pakistan is believed to have enriched enough uranium for 30-50 nuclear weapons, and now has a facility in Rawalpindi capable of reprocessing enough plutonium for approximately two weapons per year. Unlike India, Pakistan is thought to have used much of its fissile material to manufacture nuclear weapons.

India's missile force consists of approximately 50 short-range, liquid-fuelled Prithvi missiles and a limited number of solid-fuelled Agni-I missiles. In January 2001, India tested the 2500 kilometer-range Agni-II, which now appears ready for operation. In addition, a naval version of the Prithvi is under development, as is the 3500 kilometre-range Agni-III, which will be able to hit targets deep in Chinese territory. In April 2001, India successfully launched an experimental satellite into space using rocket booster technology that could also be used to develop an intercontinental ballistic missile. However, it is believed that most of India's nuclear weapons are intended for delivery by aircraft. For this purpose, India possesses Mirage 2000 fighters of French origin and Sukhoi SU-30 fighters acquired from Russia.

Pakistan possesses between 30 and 80 short and medium-range ballistic missiles. The liquid-fuelled Ghauri-I and II are most likely derived from the North Korean No-Dong, while the solid-fuelled Shaheen-I borrows Chinese technology. Two other medium-range missiles- the Ghauri-III and Shaheen-II- are being developed. Pakistan's force of nuclear-capable aircraft includes A5 fighters of Chinese origin, Mirage fighters from France, and 32 American-made F-16s.

INDIA AND PAKISTAN: STATUS OF WMD PROGRAMMES

Nuclear Weapons	: Both possess fissile material.
Chemical Weapons	: India, with its large industrial base, can produce precursors for chemical warfare agents. Pakistan must obtain precursors for chemical agent production.
Biological Weapons	: Pakistan is conducting research and development with potential biological warfare applications. India's efforts are geared towards defense.
Delivery Systems	: Both have aircraft capable of delivering nuclear and chemical weapons. Both are developing missiles.
	India: has two missile programmes:
	Prithvi - short range (150-250 km)
	Agni - intended range (2,000 km)
	Pakistan: has two missile programmes:
	Hatf I - short range (80 km)
	Mobile SRBM - approx. 300 km range

26.6 NUCLEAR DISARMAMENT

Indian stand on nuclear disarmament goes back to the call for a 'stand still' agreement that Pandit Nehru made in 1954. The Indian position had been that any agreement on a test ban would help reverse the process of competitive armament. It would also pave the way for an agreement on disarmament. By the end of 1956, the different approaches of the States to the issue of a test ban had become clear. The Soviet Union and India advocated an early and separate agreement on a ban on all nuclear tests without international verification; as such nuclear tests would not go undetected in any case.

The Western countries sought limitation of and an eventual ban on nuclear testing with adequate verification. Eventually, the United States, Britain and Soviet Union began negotiations for the Partial Test Ban Treaty. This treaty was formalized in 1963 and India became party to it. The late Sixties saw a concern being expressed by India that the nuclear powers were reluctant to institute any checks on their own stockpiles. The concern was articulated in the debates on the NPT. The NPT had sought to divide the countries into those who possess a nuclear bomb and those who do not. The 'have nots' had to undertake not to produce nuclear bomb, while the 'haves' could continue to increase their nuclear arsenal. In fact this discriminatory nature of the NPT became the single point of mention for its rejection by India.

The NPT Review Conference in 1995 decided to extend the NPT for an indefinite period. The Comprehensive Test Ban Treaty was signed in 1996. The debate on the CTBT provides for a clearer articulation of the disarmament policy of India. Indian stand at the CTBT had been that the treaty was to 'contribute effectively to the prevention of proliferation in all its aspects, to the enhancement of international peace and security'. It was thus anchored in the commitment to nuclear disarmament, to the achievement of a nuclear weapon free world within a time bound frame. Indian opposition to the final version of the CTBT came because it permitted the nuclear weapon states to continue their weapons related research and development activity using non-explosive technologies. It lacked any meaningful commitment to disarmament and instead only served to retain the existing status quo. It must be noted that India continues to call for universal nuclear disarmament even after the tests.

Pakistan's refusal to join the NPT has its roots in its perception of the strategic situation in the region. Pakistan called for an effective security guarantee that would contain the following provisions: (i) prohibition of first use of nuclear weapons by nuclear weapon states; (ii) immediate assistance for a non-weapon state which is a victim of a nuclear aggression; (iii) assistance before the Security Council can act; and (iv) a security guarantee which would include all non-weapon states which have renounced the manufacture or acquisition of nuclear weapons, irrespective of whether they have signed the NPT.

Following the Indian nuclear test of 1974, Pakistan made a public declaration of its intention to enter the nuclear field. It also introduced in the United Nations the concept of a Nuclear Free Zone in South Asia and the Indian Ocean. In the later years, Pakistan's posture on the CTBT came to be closely linked to the Indian stand. Pakistan did not oppose the CTBT but abstained on the issue in the United Nations.

The Indo-Pakistan nuclear relationship attempted a significant step in form of a non-formalized 1985 agreement that neither India nor Pakistan would attack the other's nuclear facilities. The second step was a joint agreement for inspection of all nuclear sites by the International Atomic Energy Agency. A pact between the two countries to allow for mutual inspection of sites was also proposed. Pakistan had also proposed a South Asian nuclear-free zone.

In the post 1998 scenario, Pakistan has rejected Indian proposals for a treaty of no-first-use of nuclear weapons, and has said that it would consider using nuclear weapons if it felt its existence to be threatened. Pakistan relies on this threat of first-use because India possesses superior conventional military forces.

26.7 POST 1998 NUCLEAR ISSUES

Regional Security

Regional security problems have been articulated as some of the key determinants of the nuclear tests. In the case of Indian nuclear policy, both Indian and Western analysts have sought to highlight the threats from Pakistan and China. The growing nuclear capability of China and the close links that China has with Pakistan in the nuclear area have been a matter of concern to India. In case of Pakistan, the Indian nuclear capability has been identified as the key source of threat to Pakistan. India has a strong conventional military

base that is recognized to be far superior to Pakistan. Pakistan has failed to gain any military advantage in the past conflicts with India. Kashmir has been highlighted as the critical element in the bilateral dispute. Here too, Pakistan strategy has shifted from conventional warfare to low intensity conflict. Pakistan looks at nuclear option as an important deterrent against India.

Global Issues

The post-Cold War era has brought about a change in the perception of security threats to Indian and Pakistan. These can be identified as non-military pressures like trade, intellectual property rights, environment and technology control as threats to national security. Non-strategic pulls and pushes by foreign nations that affect the nation's economy should be looked upon as a security threats and not as an isolated trade related activity. Trade embargoes, technology control regimes and diplomatic pressures to sign various treaties were growing in recent times. This has had an adverse impact on the South Asian economy.

Restrictions on nuclear and related dual-use technology had begun with the NPT in 1968. The Nuclear Suppliers Group formed after the Indian test of 1974 had placed restrictions on the transfer of nuclear related technology and material to such nuclear capable states like India. The Missile Technology Control Regime (MTCR) instituted in 1987 had placed restrictions on the transfer dual-use technology related to missiles. It was under this regime that the Russians were forced to cancel the technology transfer agreement on the cryogenic engines for the ISRO programme. In 1995 came the Wassenaar Arrangement that further prohibited the transfer of dual-use technology. The CTBT and the proposed Fissile Material Cut-off Treaty further strengthened the nonproliferation regime. Besides these international arrangements, bilateral restrictions of the United States in form of nonproliferation legislations have also affected India. Both India and Pakistan, as have some of the other nuclear (technologically) capable states, have been at the receiving end of this regime that has been sponsored by the developed world.

Over the years these restrictions had come to symbolize the core of the developed world's status quoist agenda. The first symbolic defiance of this restraint came in form of the 1974 nuclear test at Pokhran. The May 1998 tests of India and Pakistan represent this defiant independence at an age when the nonproliferation regime has become more stringent over the years. The Indian nuclear tests were a demonstration of capabilities - technological and political. The former in the context of the ability to develop in the face of restrictions; the latter was the demonstration of the political will to take on the developed world. The Pakistani tests were also a demonstration of their defiance of the pressures instituted by the developed world in form of the threat of sanctions. It is this reassertion of the ability to take independent decisions in the face of anticipated sanctions that makes the nuclear tests a symbol of the a resurgent Third World.

Dialogue

Looked at through the conceptual lenses of this approach, one can argue in favour of a dialogue between India and Pakistan

The bilateral level dialogue would rest on the new equation of a nuclear weapon capable India and Pakistan. The Western logic of deterrence has been based on the premise that the mutual vulnerability to attack proves a deterrent and an eventual nuclear confrontation is avoided. This logic accepts that the number of weapons is not the real determinant, that the minimal nuclear deterrence is possible through even a single weapon with a reliable strike capability. Arguably therefore, India and Pakistan would have achieved this mutual deterrence with their stated weapon capabilities. To extend this argument further, neither of the countries needs to enter into the much publicised nuclear arms race to further their security. Of seminal concern is the fact that the crucial problems of security faced by both the countries are in the area of internal

security and not border war. Insurgency, terrorism, low intensity conflict and such kinds of internal security threats are not tackled by nuclear weapons; they require a combination of political, social and economic policies. The security level argument therefore does not lead one to fear the rapid escalation of, or proliferation of nuclear weapons in an Indo-Pakistan scenario.

In case of China, the Indian position is slightly different. Here too the key problems are mainly in the area of internal security. Over the last decade or so, the arena of the border dispute has shifted to the discussion tables rather than the field level skirmishes. The main arena of India-China confrontation remains the diplomatic one. At the nuclear level, India can only expect to create a minimal level deterrence against the vast Chinese capability. The main asset of the nuclear capability is to raise India's diplomatic leverage in the bilateral dialogue.

It is at the global level that the parameters of an India -Pakistan dialogue become clear. In the post test phase both India and Pakistan have had to face the brunt of international and bilateral sanctions. These have had an adverse impact on the economies of both the countries. Both the countries have been asked to accept the NPT - CTBT as a precondition to lifting of sanctions. The success of the Western world in containing the spread of nuclear technology depends on the manner in which they are able to quarantine the two countries, raise their bilateral disputes to explosive levels and force a compromise on nuclear issues. It is in this context that Indian and Pakistan would have to realise their vital national interests and rise above these pressures to initiate a dialogue. This dialogue should enable them to cooperatively tackle the developed world rather than accept their agenda and comply.

Check Your Progress 3

- Note:** i) Use the space below for your answers
 ii) Check your answer with the one given at the end of this unit.

- 1) Identify some of the technology control regimes that seek to check the proliferation of nuclear and related capabilities in the Developing countries.

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- 2) What are the compulsions for an Indo-Pakistan dialogue on nuclear issues?

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26.8 LET US SUM UP

Nuclear issues in South Asia relate to the nuclear policies and programmes of India and Pakistan. Both India and Pakistan had civilian nuclear programmes which became the basis of the technological capability to move to a weapons option. India exploded its first nuclear device at Pokhran on 12 May 1974 and demonstrated its nuclear weapons

capability. Pakistan had also started to move towards a nuclear weapons option in the 1970s. It was, however, only in 1998 that both the countries conducted a series of nuclear tests and formally emerged as nuclear weapon states.

Pakistan, however, lacks an extensive civil nuclear power infrastructure. Moreover, its weapons programme is not as broad as India's.

The security dynamics of the region are complicated by India's perception of China as a threat and Pakistan's perception that India's substantial conventional military advantage could only be offset by nuclear weapons.

In the post test phase, both India and Pakistan have had to face the brunt of international and bilateral sanctions.

Neither country has signed the Non-Proliferation Treaty (NPT) or the Comprehensive Test Ban Treaty (CTBT), although they adhere to self-imposed moratoriums on nuclear tests.

The success of the Western world in containing the spread of nuclear technology depends on the manner in which they are able to quarantine the two countries, raise their bilateral disputes to explosive levels and force a compromise on nuclear issues. It is in this context that Indian and Pakistan would have to initiate a dialogue which will enable them to cooperatively tackle the Western nation's pressures to accept and comply with their agenda.

26.9 SOME USEFUL BOOKS

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26.10 ANSWERS TO CHECK YOUR PROGRESS EXERCISES

Check Your Progress 1

- 1) To meet their security requirements, to enhance their international standing and in some cases due to domestic political pressures.
- 2) The key features of Indian nuclear programme included (i) natural uranium fuelled reactors, (ii) fast breeder reactors fuelled with plutonium from the first phase, and (iii) a thorium-uranium fuel cycle utilizing the country's large reserves of thorium sands.
- 3) The indefinite extension of the NPT, the signing of the CTBT and the negotiations for a Fissile Material Cut off Treaty.
- 4) Indian Nuclear Doctrine: (i) No first use; (ii) minimal nuclear deterrence and (iii) nuclear disarmament

Check Your Progress 2

- 1) Zulfikar Ali Bhutto. Believing that India was on the verge of acquiring nuclear weapons which could be used to blackmail Pakistan, he initiated nuclear weapons development programme in the early 19870s.
- 2) In the early 1970s, linkages emerged between Pakistan and oil-rich Arab nations mainly in the form of supply of uranium and funds for the formers nuclear programme. Pakistan's weapons programme came to be described as a Islamic bomb.

Check Your Progress 3

- 1) The Nuclear Suppliers Group, the Missile Technology Control Regime, the Wassanaar Arrangement are some of the multilateral technology control regimes. Besides, there are bilateral restrictions on transfer of nuclear and related technologies.
- 2) From the security point of view, both the countries have achieved the mutual deterrence with their stated weapon capabilities. Western nations have placed sanctions and technology denials on both the countries to comply with their non-proliferation agenda. In this context, any escalation of tensions between India and Pakistan would give the Western world a leverage to quarantine the two countries and press for the denuclearisation. An Indo-Pakistan dialogue should enable them to cooperatively tackle the pressures from the Western world to accept their agenda.