ADDRESSING GLOBAL CONCERNS & CHALLENGES: A WAY FORWARD

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Ten years after Pakistan became a nuclear weapons state, it is useful to asses where this has taken us, and the challenges that we face. There can be no doubt that in the face of the overt nuclearization of India, we had no choice but to follow to preserve the strategic balance. Our demonstrated nuclear capability, coupled with our conventional capability, has been responsible for limiting crises with India from spiralling to unwanted levels. The Indian coercive arms build up on our borders in 2000-2001 neither achieved its aims, nor led to an outbreak of hostilities due to this factor.

At the same time the very possession of nuclear weapons carries with it an overriding national and international responsibility that these weapons, the assets, materials, technologies, on which they are based, are under strong and failsafe custodial and operational control, that their purpose is meant to deter and that they would only be used in an extremis necessity. In essence every nuclear state has to credibly demonstrate and project that it is "a responsible nuclear state".

Important Concerns and Challenges

At the national and international level, there are a number of important concerns and challenges that Pakistan faces, which are as follows:

- Global concerns about the safety and security of our nuclear assets.
- Internal public concerns on the prioritization of scarce resources to defence sector at a time of rising food and energy prices, inadequate delivery of Government services in education, health and civic services, as well as inflation.

- Generating resources for Pakistan's socio-economic and technological development to enhance the resource base for building up our civil nuclear programme and strengthening our nuclear capability as well.
- A more specialized critique that since we have a nuclear capability to deter, less should be spent on conventional defence.
- A minority view that the nuclear capability is not required to deter India, and the alternative view that it is inadequate to deter India.
- The challenge of the appropriate mix of conventional and nuclear deterrence to face India.
- Future nuclear and conventional CBMs with India.
- The public articulation of our nuclear strategy.
- Enhancing capability to counter India's growing potential nuclear capability. Its correlation does international efforts towards an FMCT.

Global Concerns

An important global concern about nuclear weapons and nuclear capabilities in general revolves around the potential threat of nuclear terrorism. We may debate the extent of such a threat, and its use to enforce controls, both national and pluri-lateral, and also as a pressure point. However the concern is real and has to be appreciated and met.

The IAEA in the context of potential nuclear terrorism has highlighted four key areas:

- Theft of a nuclear weapon
- Theft of material to make an improvised nuclear explosive device
- Theft of other radioactive material for an RDD
- Sabotage of a facility or transport

In the context of Pakistan, there have been concerns regarding the nuclear security of Pakistan in general, based on a number of assumptions that will be examined in this essay.

The perceived threats to Pakistan's nuclear assets, which have been highlighted by the western media and academics, revolve around four main scenarios.

- Extremist Government in Power
- Radicals' take over
- Terrorist attacks on nuclear installations
- The Insider Dimension

The scenarios of an extremist Government gaining power in Pakistan, or of a take over by radical elements, were mainly projected before the elections in Pakistan. The holding of free and fair elections, in which the previous government was voted out of power, and replaced by major political parties at the federal and provincial level should take care of this apprehension.

At the same time we have to recognize that strengthening the democratic process, and the attainment of long term political stability is vital for our credibility as a responsible nuclear state. Our command and control, custodial and export control systems are second to none. It is also not fully appreciated that unlike some of the other nuclear states, apart from technical controls and safeguards, in addition, as a developing country, we can and do afford maximizing specialized personnel and troops dedicated for safeguarding our assets against internal and external threats.

Therefore the threat of any terrorists attack on our facilities to try to seize any of our assets or fissile material, in reality, does not exist. Multiple physical and personnel reliability systems, as well as inventory controls and checks, rule out any insider-outsider threats.

However, terrorist attacks and incidents within Pakistan, coupled with extremist movements and tendencies, while they have no bearing on our nuclear assets, will continue to give grounds for motivated and other concerns being expressed. As political stability

increases and terrorism and extremism is brought under control, such apprehensions and projections will abate.

On the subject of best practices, and export controls, Pakistan has interacted with other countries, including Japan, U.K, U.S and the EU. In the field of nuclear security, without in any way compromising its national security, Pakistan has also interacted with the U.S. While we do not need a good chit from any quarter, it is but prudent to meet international concerns, and this is the policy of every nuclear state. We have fully projected our strong, world class command and control and custodial systems as well as our strategic export controls. It is for this reason when media hype was at its high water mark, those foreign officials and academics, who were best informed, including for that matter the official spokesman of the U.S Government, expressed full confidence on the safety and security of our nuclear assets.

We should also have no doubt that for Pakistan; we are not standing still on what we have achieved in the field of safeguarding our assets and capabilities. There is a constant process of reviewing all aspects of our controls with a view of improving them continually.

Coming to the nuts and bolts of our nuclear security and safety systems, we have put in place a comprehensive institutional framework. At the apex is the National Command Authority (NCA). It is for Policy Formulation, Employment and Development of Strategic Systems. I have given at table 1, the Organization of the NCA. The President, who is a civilian, is the Chairman, with the Prime Minister as the Vice Chairman. The Strategic Plans Directorate (SPD) is the Secretariat to the NCA.

There are two Committees. The Employment Control Committee has as its Deputy Chairman, the Foreign Minister. Its members are, the Minister for Defence, the Minister for Interior, the Minister for Finance, the Chairman JCSC, the Chief of Army Staff (COAS), the Chief of Naval Staff (CNS) and the Chief of Air Staff (CAS). Others if required, can attend, by invitation. Its Secretary is the Director General of the SPD.

The Development Control Committee has as its Deputy Chairman, the Chairman Joint Chiefs of Staff Committee, with its members, the COAS, the CNS, the CAS, and the Scientists who head the Strategic Organizations. DG SPD is the Secretary of this Committee as well.

Then there are the Services Strategic Forces of all the three Armed Forces of the Army, Navy and Air Force. While technical, training & administrative control rests with the respective services, operational control is vested with the NCA.

I have given at Table 2, a chart of the Security Division of the SPD. It can be seen that this important Division, which has been significantly expanded since its inception, maintains a close watch on all aspects and organizations of the nuclear programme, with a special security emphasis on sites, activities, materials management, materials inventory, personnel reliability and counter intelligence. It also controls a significant armed security force for physical security as well. There is also a training academy to impart specialized training and skills.

There is also now the NCA Ordinance which gives legislative cover to the administrative and executive order which set up the NCA in 2000, formulizing at that time the structure put into place in 1998. The purpose of the Ordinance is to establish an Authority for complete command and control over research, development, production and use of nuclear and space technologies and other related applications in various fields and to provide for the safety and security of all personnel, facilities, information, installations or organizations and other activities or matters connected therewith or ancillary thereto.

In effect, the Ordinance provides a legislative basis covering the functioning of the already existing NCA with three major areas of responsibility;

- effective command and control of the strategic programmes;
- safety and security of strategic programmes and

- Maintenance of a system of personnel reliability. The Ordinance has a very wide scope extending to the whole of Pakistan and applies to any person who commits an offence under the Ordinance. The application of the Ordinance is, therefore, not limited to the employees of the strategic organization only. It empowers the NCA to bring charges against any citizen of Pakistan as well foreign nationals.

There are a variety of legislations which deal with the safety, security and export control in the strategic field, and these have been legislatively brought under the overarching centralized control of the NCA.

Our export controls are amongst the best in the world. Pakistan's export controls legal framework is governed by the following legal and administrative instruments:

- The Import and Exports (Control) Act, 1950 Act No. XXXIX of 1950. This Act authorizes the Federal Government to prohibit, restrict or control the import or export of goods and regulate all practices and procedures connected therewith. Section 5(1) of the Act provides for penalty of an individual, without prejudice to any confiscation to which he may be liable under the provisions of the Customs Act 1969-(IV 0f 1969), as applied by sub-section (3) of this Act, be punishable with imprisonment for a term which may extend to one year, or with fine, or with both.
- Pakistan Nuclear Safety and Radiation Protection (PNSRP) Ordinance of 1984 and Regulation of 1990 which contains provisions for control of import/export of nuclear substances and radioactive materials, extending to whole of Pakistan, has been further strengthened with Pakistan Nuclear Regulatory Authority Ordinance 2001.
- Pakistan's Trade Policy 2004-05: This encompasses Import Policy Order and Export Policy Order to regulate trade on all items. These orders take into account all previous Statutory Regulation Orders (SROs) and

Ordinances issued by the Government of Pakistan from time to time. Under (a) Import Policy Order 2004 and (b) Export Policy Order 2004 (EPO), import and export of sensitive materials is regulated.

- Chemical Weapons Convention Implementation Ordinance- 2000, Ordinance No. LIV of 2000. The law enables the full implementation and enforcement of the provisions of the Chemical Weapons Convention and fulfils Pakistan's obligations under Article VII of the Convention mandating national implementing measures. This legislative framework regulates and controls the import and export of chemicals in accordance with the CWC and provides for criminal penalties in case of violations. Para 12 of the EPO 2000 pertains to export control of chemicals as required under the Chemical Weapons Convention. The National Authority established in the Ministry of Foreign Affairs is the focal point for the implementation and enforcement of the provisions of the Ordinance. These measures constitute fulfilment of the requirements of resolution 1540 in the context of CWC.
- Pakistan Nuclear Regulatory Authority Ordinance (PNRA), 2001. Ordinance No. III of 2001. Under this Ordinance, PNRA issues the required "no objection certificate" (NOC) for all imports and exports of any radioactive materials or radiation sources. The PNRA is responsible for controlling, regulating and supervising all maters related to nuclear safety and radiation protection measures in Pakistan. Any person who contravenes any of the provisions of sections 19, 20, 21, 22 or 23 of the Ordinance shall be punishable with imprisonment for a term which may extend to 7 years, or with fine which may extend to one million rupees, or with both. Notification SRO.III(1)2004 as amended on 16 February 2004; Nuclear substances, Radioactive Materials and any other substance or item covered by PNRA Ordinance, 2001 (III 0f 2001); and Equipment used for production, use, or application of nuclear energy or activity, including generation of electricity and spares, are subject

to NOC from PNRA as per procedure notified by the Pakistan Nuclear Regulatory Authority (PNRA).

In September 2004, new legislation was enacted, Act No. V of 2004 to provide export control on goods, technologies, material and equipment related to nuclear and biological weapons and their deliver systems. It was passed by the National Assembly on 14th September, 2004 and by the Senate on 18th September, 2004. The Act received the assent of the President on 23rd September, 2004 and entered into force the same day.

Salient elements of the new Export Control Act include:

- Controls over export, re-export, transhipment and transit of goods, technologies, material and equipment covered. Prohibition of diversion of controlled goods and technologies.
- Wide jurisdiction (also includes Pakistanis visiting or working abroad).
- Provide for an authority to administer rules and regulations framed under this legislation. Also provides for the establishment of an Oversight Board to monitor the implementation of this legislation.
- Comprehensive control lists and catch all provisions.
- Licensing and record keeping provisions.
- Penal provisions: Up to 14 years imprisonment and Rs.5 million fine or both, and on conviction, offender's property and assets, wherever they may be, shall be forfeited to the Federal Government. Right of appeal provided for.
- For the purposes of the Export Control Act, the authority rests with the Federal Government and the Federal Government, as and when necessary, may -
  - make such rules and regulations as are necessary for
  - implementation of this Act;
  - delegate authority to administer all activities under this Act to such Ministries, Division, Departments and Agencies as it may deem appropriate;
  - establish a government Authority to administer export controls established under this Act;

- designate the agency or agencies authorized to enforce this Act;
- establish an Oversight Board to monitor the implementation of this Act;
- require licenses for exports from Pakistan of goods and technology, and the re-export of goods and technology that originated in Pakistan.

- Moreover, officials of the designated agency or agencies are authorized to inspect consignments declared for export and review, acquire or confiscate records or withholding an export license under this Act. The Federal Government may vest any investigatory powers and powers of arrest authorized by law in officials of the customs administration or other appropriate agencies.

It should also be noted that the Act provides for catch-all controls, and covers intangible transfers. Section 5(3): An exporter is under legal obligation to notify to the competent authority if the exporter is aware or suspects that the goods or technology are intended, in their entirety or in part, in connection with nuclear or biological weapons or missiles capable of delivering such weapons.

Under the Act the definition of 'technology' includes: on-the-job training, expert advice and services attached therewith. The definition of 'services' includes: 'training and technical assistance including intangible transfer such as disclosure of technical data relating to the purposes of the Act'.

Under this Act in October 2005, under a Statutory Notification, the GoP notified comprehensive control lists of goods, technologies, material and equipment. These lists fully covered the control lists of the NSG, MTCR and the Australia Group, which are the world class goal standard in this respect.

Under the Act in 2007, the Strategic Export Control Division (SECDIV) was set up in the Ministry of Foreign Affairs, as the authority to implement the 2004 Act. SECDIV is staffed by officials from the various departments and Ministries dealing with

all aspects of this important task. SECDIV includes official from the Ministry of Foreign Affairs, the Strategic Plans Division, Pakistan Nuclear Regulatory Authority (PNRA), Pakistan Atomic Energy Commission (PAEC), Ministry of Commerce, and Pakistan Customs and Customs Intelligence.

An Oversight Board to monitor the implementation of the Export Control on Goods, Technologies, Materials and Equipment related to Nuclear and Biological Weapons and their Delivery Systems Act No.V of 2004, and also the setting up and functioning of SECDIV, has also been set up in 2007. It has 11 members, 10 of whom are Government officials in their *ex-officio* capacity. It is headed by the Secretary of the Ministry of Foreign Affairs. Director General SECDIV is a member and acts as the Secretary to the Oversight Board. The other Members of the Board are the Additional Secretary (UN&EC) of the Ministry of Foreign Affairs, the Additional Secretary (CS&M), Cabinet Division, Additional Secretary (III), Ministry of Defence, Additional Secretary (I), Ministry of Interior, Member Exports, Central Board of Revenue, Director General Security Division, National Command Authority(NCA), Director Arms Control and Disarmament Affairs, Strategic Plans Division (SPD), Executive Member, Pakistan Nuclear Regulatory Authority(PNRA), and a Pakistani Expert, with experience in export controls, serving in an honorary capacity.

In the process of improving and institutionalizing our export control system, which was built on a number of longstanding ordinances, rules and practices, there was frequent interaction with friendly countries to learn and to benefit from best practices elsewhere in export controls against WMD proliferation.

Under UN Security Council Resolution 1540, in whose negotiation Pakistan as a member then of the Security Council fully participated, national export controls against WMD proliferation are enjoined and reports have to be submitted. The second required report had an extensive matrix requiring detailed information. Pakistan's response to this matrix, in its second report, can be said to be a model in this respect.

The Government of Pakistan, through the Ministry of Foreign Affairs and its Missions abroad, and through the SPD, in interactions within the UN, in the IAEA, bilaterally, in academic conferences, and with the media has constantly projected our strong national commitment against proliferation of WMD, our second to none, command and control and custodial systems, and our export controls, as well as the institutional basis on which they rest. Some have argued that we should do more, while a few have argued that perhaps we have overdone it since criticism at times is motivated and is not lessened by our efforts. The second argument is somewhat emotional. We have to continue our efforts across the board.

I will now turn to challenge the assumptions behind which international concern is being focused on Pakistan. The question can be asked why there is focus only on Pakistan, despite the fact that political uncertainty is largely over after the elections, and our strong safety, security and export systems are in place. Those quarters which raise concern about Pakistan in the nuclear field, do not make comparisons with the security of nuclear weapons, fissile material and nuclear facilities in other nuclear weapons states, including Russia and India.

In Russia, the threat has been much greater. It necessitated the American, Nunn-Lugar legislation for assistance for safeguarding Russian facilities and fissile material after the breakup of the Soviet Union. Russian nuclear and other WMD production facilities deteriorated and some Russian scientists went abroad. There has been some leakage of fissile material. One of Russia's leading military commanders stated that some of Russia's suitcase nuclear bombs, designed for their Special Forces operations, had gone missing. While this was refuted by the Russian Government, there are causes of concern across the spectrum. However, international attention is muted.

In the context of India, arguably fissile material and nuclear weapons, are in greater danger. Unlike as in Pakistan, many Indian facilities are under the supervision of civilian security. There are 17 ongoing insurgencies which are pertinent to potential terrorist

threats. India has also displayed an unwillingness to engage with other countries on security practices.

Furthermore, most of the Indian reactors are outside IAEA safeguards. Even if the US-India nuclear deal goes through, 8 of the existing reactors will be outside safeguards, India having the discretion of placing future reactors within or without IAEA safeguards. Since the majority of the Indian reactors have been outside safeguards, it is difficult for the international community to asses the status of past and present safety of the spent fuel generated by these reactors.

Indian scientists working in Iran have been sanctioned by the U.S. There have been some media reports of trans-border leakage of some fissile material. There have also been some reports of problems faced in Indian reactors during their operation cycles. Due to fact that the reactors are not under IAEA safeguards, and because India ratified the Convention on Physical Protection of Nuclear Material (CPPNM) only last year, information is limited.

In the field of countering WMD proliferation, Pakistan took firm steps to deal with the A.Q Khan affair and to completely shut down the entire network as it pertained to Pakistan. A.Q was only part of a much wider network or networks, which in fact have existed in one way or another since the dawn of the nuclear age. However the same firm and decisive action has not been taken by other countries. Many key individuals who were part of the network into which A.Q was drawn, have been let go off by the countries to which they belong or in which they operated.

In December 2002, the then Iraqi Government presented to the Security Council its full disclosure of its WMD programme, in an effort to avoid the serious consequences with which it has been threatened with. This some 12,600 page documentation contained details and names of the foreign suppliers and companies which had significantly contributed to Iraq's nuclear weapons, missiles, chemical and biological weapons programmes. However the western members of the UN Security Council directed that all names and identifications of the individuals and companies which had supplied

materials, weapons and technologies for Iraq's WMD programme should be blacked out. This extensive list of some 283 individuals and companies has never been made public. The IAEA inspection teams and the UN inspection teams have yet to publish the voluminous material available to them which includes details of the contracts entered into by Iraq with foreign companies and individuals of various networks.

Recently Iraqi scientist responsible for Iraq's centrifuge programme has published a book which details how Iraq obtained the schematics and plans for advanced URENCO centrifuges from representatives of the MAN Company of Germany. While its representatives may carry the main blame, the company itself has gone on to thrive and according to media reports, not long ago, it purchased the SCANIA Company's transport Division for around $ 5 billion.

All this leads to an examination of what are the objectives and motivations about certain media and international concerns about Pakistan in the nuclear context. It would be fair to conclude that either these apprehensions are due to unrealistic fears of what can happen in Pakistan, or due to a deliberate campaign. Whatever the rationale, these concerns have generated suspicion that such a campaign is part of a plan to try to destabilize Pakistan and to try to neutralize Pakistan strategic assets and nuclear deterrent capability.

A number of other conclusions can be drawn. The reality is that there is no credible threat to Pakistan's nuclear assets, and that potential threats are under control. There are similar or higher levels of threat elsewhere. This issue should not be used to try to destabilize Pakistan or to try to neutralize or erode its strategic capability.

It can also be said that international concerns from the west are closely linked to a lack of comfort at Pakistan, a Muslim state, having a nuclear capability. The occupation of Iraq and of Afghanistan, with their attendant consequences for the Muslim world, including the blow back for Pakistan in terms of accentuated extremist and terrorist movements; the task of Pakistan to counter

terrorist and extremist tendencies through a multidimensional strategy has been compounded by this blow back effect, particularly from the continuing turmoil in Afghanistan and the need for NATO and ISAF to support the Government of Afghanistan in implementing an effective strategy for a political settlement and developmental package which accords with the traditional structures of the Afghan state and society, while avoiding collateral damage in its military efforts.

This entire situation arising from Iraq and Afghanistan has unfortunately generated perceptions of mistrust both in the Western and Muslim societies, which has led to its own dynamics accentuated pre-existing misgivings, which have impacted on the nuclear issue as well.

On the nuclear concerns issue, a new approach is required. Two ways confidence should be the overall objective of the international community. It should be recognized that Pakistani authorities are not complacent and are continually upgrading their systems and vigilance. The suspicion gene has to the clearly countered. Unreasonable suspicions and allegations would be counterproductive. Presently Pakistan's nuclear weapons are not on alert status. However if this campaign questioning Pakistan's nuclear safety and security continues, there will be voices within Pakistan calling for keeping its nuclear weapons on high alert. This is not what Pakistan and its declared policy of restraint and credible minimum deterrent wants nor would any such change serve the interest of overall international and regional security, which Pakistan fully subscribes to.

I will now turn to some internal areas of concern, which we also must take into account. The civic society in Pakistan is extremely patriotic but is facing systemic problems, which have accentuated over time. Better economic planning and implementation required to meet the emerging food and energy crises, which due to rising global prices for food crops and energy supplies, will continue to be factors requiring mitigation strategies. We also need to improve public education, observance of the rule of law, infrastructure, internal security and the delivery service of the

Government. If this is not done, over time, more people will question resource utilization by the defence budget, of which our nuclear capability maintenance is a part.

We have to generate more resources for socio-economic development. It is generally held that the gearing ratio for defence purposes is usually 1:3 over any offensive force in terms of conventional capabilities. India is some 6 times larger than Pakistan in terms of population and economic resources. Therefore, for our defensive objectives, to match India's defence expenditure, per capita we have to spend at least twice as much. This leads to the simple conclusion that we must grow and expand our economy at least as much as that of India in percentage terms, to comfortably maintain a defensive capability, or we will have to sacrifice more.

A strong civil nuclear power infrastructure is essential for our economic growth, and energy security, given our limited fossil fuel reserves, and increasing worldwide energy prices. I have no doubt that if we had funds to outright purchase civil nuclear power stations, the attitude of the major suppliers would change over time. I give this as another example of the need for economic growth.

I believe that given limited resources, concentration on education and infrastructural development the keys for economic take off. Reliance on external assistance is subject to various conditionalities which hamper our freedom of action in all fields including foreign relations.

The argument has been made by some national observers that our nuclear capability should lead to less spending on conventional forces Our deterrence is based both on preserving a conventional balance, as well as on the nuclear deterrent. Reducing the conventional capability would lead to reduction of our deterrence in general. It would also lead to lowering the nuclear threshold. We are pursuing both nuclear and conventional CBMs with India, within the peace process. India has shown little or no interest in conventional CBMs, or on the need for conventional balance and strategic restraint to avoid an arms race, which are our stated objectives.

Other critics, from Pakistan have maintained that we do not need a nuclear capability to deter India. Others, mainly academics from abroad, including from India, have argued that our nuclear capability is inadequate to deter India, and will remain inadequate. No Pakistani can forget India's policy and actions which resulted in the 1971 dismemberment of Pakistan.
The 2000-2001 stand off with India, which I have already mentioned, demonstrated the deterrent value of our strategic capability.

Some foreign and Indian strategists have postulated that India's nuclear weapons capabilities and stockpiles will grow to out match our capabilities, thereby offsetting our deterrent. They also try to make the point that due to our lack of territorial depth, in any hypothetical nuclear exchange forced on us, we would lack an effective 2nd strike capability. This they hold would make us vulnerable to limited strikes, particularly location specific in AJK and Southern Pakistan, as well as to proxy irregular low intensity conflict. The Indian "cold start" doctrine is viewed by some Indian strategists as a credible ability to inflect territorial and political damage while remaining under the nuclear threshold.

Such arguments do not take into account a number of ground realities. When faced with the possibility of initiating any chain of events which may lead to a nuclear exchange, the political leadership of any country would not be guided by estimated calculations of the strike capability of the other side and projection of the ability to discount its impact. At the same time, Pakistan will always strive to maintain a conventional capability to meet conventional threats as well. To my mind, the Indian cold start doctrine, while it represents a continuing aggressive approach, and cannot be discounted by our military planers, is largely motivated to try to mount physiological pressure. It may also represent in part a mechanism for increased for gaining increased funding and inter service claims from the Indian Armed Services.

Our strategic and conventional capabilities are sufficient to deter India now, and we have the will and ability to enhance our capabilities to meet future requirements.

There has also been some discussion on Pakistan's counter force and counter value capability. Undoubtedly, as is the case with targeting planners in other nuclear powers, our targeting strategy in case we are faced with this ultimate scenario due to aggression, will consist of a pragmatic mix of counter force and counter value targets. Some analysts have theorized that for Pakistan, theatre nuclear weapons have been ruled out. It would be unwise to come to such a conclusion, in the case of Pakistan, as in the case of any other nuclear country.

For Pakistan there is the continuing challenge of putting into place an appropriate mix of conventional and nuclear forces to face India, and for that matter any other threats that may arise. Given scarce resources, inter se allocation is a continuing process requiring constant readjustments, by assessing all potential threats. Conventional defence needs constant revisiting to address threats on our eastern and now western borders. There is still room for innovative or modified approaches. Selective conscription, as in the case of many other countries, including Turkey, may become necessary and provide a partial answer for a smaller standing establishment. A better tooth to tail ratio always remains a prime objective. The challenge of improving indigenous conventional production is another important objective. Till then we have a major reliance on high tech arms imports, which require good relations with the major exporters.

What is the future of Nuclear and Conventional CBMs with India? There has been some progress on both these fronts, which stand out as substantial achievements in relation to what has been achieved in the entire peace dialogue process. Two nuclear CBMs have been concluded and put in place. Both sides agreed in the first Nuclear CBM meeting in June 2004, that the nuclear capabilities of both countries, which are based on their national security imperatives, constitute a factor for stability. The Nuclear CBM process has a useful linkage in the bilateral and international context. The nuclear flashpoint perception is now over for both countries. It is no longer a bar to external investment. At the same time India has not been willing to discuss our longstanding proposal

for a strategic restraint regime, which would incorporate strategic restraint, conventional balance and dispute settlement.

There has been some modest progress on conventional CBMs. The new hotline put in place between the two Foreign Secretaries, during the nuclear CBM talks, serves for a direct channel of communication for relations in general. The up gradation of the existing hotline between the two Director Generals of Military Operations also provides a faster and more reliable means of communication in case of need. Some others conventional CBMs are near finalization. These include an agreement to avoid incidents at sea between Naval vessels, and measures along the line of control.

However, on the conventional CBM side, the Indian response has been slow. Other conventional CBMs proposed by Pakistan, which are either Kashmir related, or for across the international border have not been accepted by India. While India projects in these talks, as it does in its national statements that it has no aggressive or coercive designs against Pakistan, despite its continuing military build up which is 95% directed against Pakistan, its military doctrine continues to be dominated by aggressive concepts, such as its relatively new, post 2001 standoff, 'cold start' doctrine and the attendant military exercises along Pakistan's borders.

Despite some forward movement in the nuclear and conventional CBMs processes, there has been no movement by India on substantive issues, including on the core dispute issue of Kashmir, on Siachin, the Sea border, and on the issue of up river dams. If all the projected series of upriver Indian dams, were all constructed, in violation of the Indus Water Treaty limiting dams for run of the river power generation usage, and not for purposes beyond that for storing water, this series of dams would have the capability of denying water to Pakistan for up to 40 days during the Rabi season.

There is also a need to more clearly publicly articulate our nuclear doctrine. Probably now that a new Government in place, this will be done. So far it has been based on certain high level

statements. The main elements of what has been declared are; Pakistan is a responsible nuclear state; that Pakistan believes in a policy of restraint; would like to avoid any arms race; and that Pakistan's policy is to maintain a credible minimum deterrence for defensive purposes and to maintain this capability to meet all emerging eventualities.

In terms of what has not been said is that Pakistan does not subscribe to any no first use doctrine. In respect of this strategic ambiguity, the policy is the same as that of the USA, the NATO alliance, Russia, the U.K and France. India which has a declared no first use policy, has qualified it somewhat by declaring that it will not apply if it is subject to any biological or chemical weapons attacks anywhere. In practical defence terms, India does not place any reliance on the no first use policy of the People Republic of China.

For India, any declaration of no first use by Pakistan could provide encouragement and comfort for a conventional attack doctrine, given its larger conventional forces. Pakistan has also ways countered suggestions by India implying the need for mutual policies in this regard, by recommending that agreement should be reached for a no first use of force policy and commitment by both sides.

The nuclear strategy policy, when it is articulated, should be very brief and to the point. Apart from the already declared elements of responsibility, restraint, against an arms race, and for a credible minimum deterrence, should reiterate that Pakistan will never use nuclear weapons against a non-nuclear weapons state, and that these weapons will only be used if the existence of Pakistan and its people are at stake. This would also cover a response to any attack on Pakistan's nuclear facilities and assets. While our capabilities have been geared to deter threats from India, the policy should also make it clear that it is to deter threats from any other quarter as well that fields nuclear weapons.

There is also the continuous challenge of maintaining strategic capability to counter India's growing nuclear potential. The

US-India Agreement would free India's limited uranium reserves for fissile production. Under the U.S-India nuclear agreement, the Pu production capacity of the 8 Indian CANDU reactors which will be kept out of safeguards, if run for weapons grade Pu production as a potential of 2000 kg annually, sufficient for some 400 nuclear weapons. If run for electricity generation, coupled with some fissile material production due to the online fuelling system of the heavy water CANDU design, these 8 reactors could produce some 5000 kg of weapons grade Pu annually, sufficient for some 100 nuclear weapons. The online fuelling capacity of these natural uranium heavy water reactors makes them most suitable for fissile material production, whether run as dedicated facilities for this purpose or combined with power generation. Nowhere else in the world are power reactors kept outside safeguards? I give at table 3 a brief analysis of the fissile production capability of the 8 Indian reactors, with both high case and low case projections.

The ambitious Indian breeder reactor programme, aiming for some 13 breeder reactors will also remain outside safeguards. Indian Government scientists have emphasized in their statements that keeping the breeder reactor programme is essential for national security. All other breeder reactor programmes in other countries have been based on Pu generated by civil power reactors utilizing Pu from fully burnt up fuel, which is not suitable for efficient nuclear weapons design. The penalty of higher natural uranium usage for weapons grade production is the main factor behind such a practice, where the objective has been to extent fuel availability and usage for greater utilization for civil power programmes to surmount probable declining world uranium reserves, both proven and potential.

Therefore there is no rational justification to keep breeder programmes, their reactors and the fissile material produced outside safeguards. The only possible justification is to keep the option of enhancing potential weapons grade fissile stocks.

In the Nuclear CBMs talks between Pakistan and India, both sides had agreed in their first Joint Statement of June 2004 that the strategic capabilities of both countries are a factor of stability in South Asia. Maintaining this strategic stability is essential for South

Asia and indeed international stability. As the National Command Authority inter alia noted on 2 August 2007, "the US-India Nuclear Agreement would have implications on strategic stability as it would enable India to produce significant quantities of fissile material and nuclear weapons from un-safeguarded nuclear reactors. The objective of strategic stability in South Asia and the global non-proliferation regime would have been better served if the United States had considered a package approach for Pakistan and India, the two non-NPT Nuclear Weapons States, with a view to preventing a nuclear arms race in the region and promoting restraints while ensuring that the legitimate needs of both countries for civil nuclear power generation are met."

India is developing its submarine based second strike capability. It is also working on a nuclear submarine and continues to lease Russian nuclear submarines, whose nuclear reactors also remain outside safeguards, in violation of Russia's NPT obligations. We have no option but to develop a submarine based second strike capability of our own. Submarine based capability constitutes the only secure long term second strike capability for deterrence. This we will need not only because of Pakistan's lack of depth, but also as such a capability is relied upon by all the nuclear powers.

Unlike India, we have been slow to develop our space launch capability, even though we have held our own in missiles technology. SLV capability gives any country not only immense peaceful uses options for development and communications, but also the ability to launch and maintain observation satellites.

In the Conference on Disarmament in Geneva, efforts have been initiated to begin negotiations on a Fissile Material Cut Off Treaty (FMCT). The draft FMCT circulated earlier by the U.S calls for an unverified FMCT, where production of fissile material would not be curtailed, but only not for use in nuclear weapons. The Shannon mandate for a verifiable FMCT, which has guided the CD, and also adopted in the 13 steps of the NPT review conference, has been jettisoned. For Pakistan which has always called for a verifiable FMCT and for existing stocks to be taken into account, it is not possible to join any consensus for initiating negotiations in the

CD which do not include the essential verification and stockpiles requirements in the negotiating mandate.

In light of the US-India deal, Pakistan will have no option but to maintain a fissile production capability for the foreseeable future to meet the challenge.

In conclusion I would stress a number of important and continuing objectives. First of all addressing global concerns is a constant process to demonstrate that we are a responsible nuclear power. Maintaining political stability and countering extremism are important factors in this regard, because irrespective of our very strong command and control systems and export controls, these it is the optics of these factors which fuel global concerns, motivated or otherwise. At the same time we have to continually strengthen our export controls, while interacting with others to learn from their evolving best practices.

Secondly the NCA has to constantly upgrade protection of our assets from any internal and external threats. The NCA and the SPD may find it useful, as is done in other countries on important issues, to have a "B Team" to assess challenges and responses to counter check what is no doubt being done.

Thirdly we have to project all dimensions of this issue so that any national concerns, from however limited a circle they may come from, are responded to through dialogue and understanding. Fourthly the base of our national security rests on our socio-economic, educational and technological development.

Fourthly, we are a nuclear power, and we do not need recognition or legitimization from any quarter in this regard. As a nuclear power we should display the self-confidence that goes with this status.

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