

Are Pakistan's nuclear weapons safe?

*Malik Qasim Mustafa **

To question the safety of Pakistan's nuclear arsenal amounts in fact to doubting the very guarantee that assures the existence and survival of the country. However, before moving on to taking a closer look at the major theme of this study, there is a need to briefly identify the main motives for Pakistan to become the world's eighth nuclear-weapon State in May 1998. That would help us better understand the importance of nuclear weapons for the country.

According to Kenneth Waltz, the following are some major motives for a State, in general, to develop nuclear weapons under a conventional explanatory model:

- To counter the nuclear weapons of other States;
- because its adversary has them;
- under the fear of the adversary's future strength;
- as a cheaper and safer alternative to conventional arms race;
- for offensive purposes and; and,
- for prestige.

It is a well known fact that since the birth of Pakistan, India has not accepted its separate identity and existence. Historical relations between India and Pakistan clearly suggest that competition between India and Pakistan was asymmetric; while the incentive for India's nuclear build-up were extra-regional, Pakistan's reasons were regional and originated from the Indian threat. The past 62 years of Indo-Pak antagonist relations have resulted in three major wars (1948, 1965, and 1971) and many near war situations (1990, Kargil 1999, 2002-2003 border mobilisation). Even today, both India and Pakistan, among other issues, still face territorial disputes (Kashmir and Sir Creek) and the issue of terrorism (most recently, the November 2008 Mumbai attacks). Especially after the Mumbai attacks, all major peace and confidence-building measures came to a halt. So, in order to neutralize and deter conventional superiority and nuclear capability of its traditional rival India, Pakistan was left with no choice except to go nuclear. Thus, Pakistan views nuclear weapons as an infrangible guarantee of its independence and physical integrity; they have made it possible for a weaker State to defend itself against a larger and more powerful adversary.

After going nuclear in May 1998, both India and Pakistan introduced the concept of minimum credible nuclear deterrence, with their respective command and control structures in place. However, both India and Pakistan share a common border, a short missile flight time, and virtually no time for reaction in case of an accident or unauthorized use of nuclear weapons.

Concerns over security of Pakistan's arsenal

After the 9/11 terrorist attacks, Western nations, particularly their think tanks and the media, started to propagate about the safety and security of Pakistan's nuclear assets. On September 18, 2001, the Institute for Science and International Security (ISIS) raised concerns that "increased instability in Pakistan could make Pakistan's nuclear weapons and stocks of nuclear explosive material dangerously vulnerable to theft by militant groups." The report also highlighted the possibility of an armed attack on Pakistani nuclear installations by extremist groups linked to Osama bin Laden or the Taliban, and the role of security forces personnel sympathetic to the Islamic fundamental cause. That was a time when the nuclear security culture was still evolving in Pakistan, and Western nations were not fully aware of the location, status and safety and security of Pakistan's nuclear assets. In October 2001, a subsequent report of the ISIS identified the following security threat scenarios relevant to Pakistan's nuclear weapons:

- Outsider threat: an armed group or individual from outside of a facility gains access to nuclear weapons.
- Insider threat: a person from within the setup gets control on nuclear weapon and sells or gives it to outsiders.
- Insider/outside threat: insiders and outsiders conspire together to obtain weapons or weapon components.
- Leakage of sensitive information: someone provides key information about Pakistan's nuclear weapons to outsiders.
- Loss of Central Control of Storage Facilities: in the event of a civil war in Pakistan, clear lines of communication and control over weapons, weapons components, and information may be broken or lost entirely.

Over the years, this propaganda continued. Despite repeated official clarifications and adoption of robust measures by Pakistani authorities to secure the country's nuclear assets, the West, particularly the U.S., still believes that the security of Pakistan's nuclear weapons could be compromised. On November 12, 2007, in response to comments by former U.S. Ambassador to the U.N., John Bolton, and two reports published in the Washington Post and the New York Times on November 11, 2007, which stated that the U.S. had made contingency plans to stop Pakistan's nuclear weapons falling into the wrong hands, Pakistan's Foreign Office spokesman, Mohammad Sadiq, said that Pakistan had sufficient "retaliatory capacity" to defend its nuclear weapons. The spokesman said there was no risk of the weapons being taken by any group, and if another country tried to intervene, Pakistan was ready to defend its nuclear arsenal."

In January 2008, the head of the International Atomic Energy Agency (IAEA), Mohammad ElBaradei, said: "I fear that chaos, or an extremist regime, could take root

in that country, which has 30 to 40 warheads.” He also expressed the fear that “nuclear weapons could fall into the hands of extremist groups in Pakistan or Afghanistan.” However, Pakistan’s Foreign Office again rejected EBaradei statement, saying that, as the head of the IAEA, he should be more careful about his statements, which ought to remain within the parameters of his mandate.

Later, in February 2008, Ashley Tellis, Senior Associate with the Carnegie Endowment for International Peace, told the House Foreign Affairs Subcommittee on South Asia: “It is my judgment that Pakistan’s strategic assets - to include its nuclear devices, its delivery systems, and its stockpile of fissile materials - are fundamentally safe today... Compared to the situation in the late 1980s and early 1990s, when Pakistan’s nuclear arsenal was still relatively vulnerable to a variety of external and internal threats.”

On September 22, 2008, Chair of the Joint Chiefs of Staff, Admiral Michael Mullen, described U.S. concerns that, “to the best of my ability to understand it—and that is with some ability—the weapons there are secure. And, that even in the change of government, the controls of those weapons haven’t changed. Certainly at a worst-case scenario with respect to Pakistan, I worry a great deal about those weapons falling into the hands of terrorists and either being proliferated or potentially used.”

On March 31, 2009, General David H. Petraeus, Commander, U.S. Central Command, testified that “Pakistani State failure would provide transnational terrorist groups and other extremist organisations an opportunity to acquire nuclear weapons and a safe haven from which to plan and launch attacks.”

In a wide-ranging interview with the international media on April 28, 2009, Pakistan’s President, Asif Ali Zardari, said: “I want to assure the world that the nuclear capability of Pakistan is in safe hands as Pakistan has a strong command-and-control system for its nuclear weapons that is fully in place.”

On April 29, 2009, the U.S. President, Barak Obama, also addressed this issue, stating: “I’m confident that we can make sure that Pakistan’s nuclear arsenal is secure, primarily, initially, because the Pakistani army, I think, recognises the hazards of those weapons falling into the wrong hands.”

In May 2009, Adm. Mike Mullen, Chairman of the Joint Chiefs of Staff said that he was comfortable that Pakistan's nuclear weapons remained secure, but was gravely concerned about Taliban advances there and in Afghanistan. He further said the United States had worked with the Pakistanis to improve the security of their nuclear arsenal and he believed that the country's military was focused on keeping them secure.

On June 3, 2009, Pakistan Foreign Office spokesman said that Pakistan's nuclear security was completely indigenous, and Islamabad was not getting any help from other countries in this regard. He added: "Our command, control, safety and security systems are equal to, if not better than, other nuclear-armed States."

More recently, in October 2009, the terrorist attacks on Rawalpindi GHQ, police training centres in Lahore, the Aeronautical Complex in Kamara, the International Islamic University, the Mena Bazar in Peshawar and other related events have once again sparked fears among international community that Pakistan's nuclear installations would be the next target. However, on October 11, 2009, the U.S. Secretary of State, Hillary Rodham Clinton, during her five-day tour to Europe and Russia, said in London that extremists were "increasingly threatening the authority of the State, but we see no evidence that they are going to take over the State. We have confidence in the Pakistani government and military's control over nuclear weapons." Later, during her three-day visit to Pakistan at the end of October 2009, she once again expressed a high degree of confidence in Pakistan's nuclear weapons safety and security. However, she urged Pakistan to face up to the potential threat of nuclear-armed terrorists and encouraged the country to join nuclear non-proliferation talks.

So, if we analyse the overall concerns raised by the U.S. and Western media, we can sum them up in the following terms:

- Pakistan is a safe haven for terrorists and there is a likelihood that they will acquire nuclear weapons in the next three to five years. Al-Qaeda or Taliban will gain access to Pakistani nukes.

- The risk of extremism is growing in Pakistan which increases the possibility that an insider will collaborate with an outsider to provide nuclear weapons or materials.
- There may be other Pakistani scientists who would or have been willing to help other countries or terrorists to acquire nuclear weapons.
- As the Pakistani government could become weaker due to growing instability in the country, the command and control of nuclear weapons could become vulnerable. That could increase the risk that terrorists acquire a nuclear weapon or material.
- The rapid expansion of Pakistan's nuclear weapons programme will introduce new vulnerabilities into the security system.
- The risk of a WMD attack being planned and executed from the NWFP is growing.
- The West, particularly the U.S., should secure Pakistan's nuclear weapons.

In order to remove these concerns, Pakistani security officials and the Foreign Office have held many special briefings on the security of Pakistan's nuclear security for Western diplomats and journalists. Pakistan's officials have rejected all these concerns. They have rejected these claims as gross exaggeration which could lead to misguided policy perceptions by Pakistan's allies.

Measures taken by Pakistan to secure its nuclear arsenal

The nuclear safety and security culture in Pakistan is now almost 11 years old and it is constantly evolving. Although there is still a need for further improvement, Pakistan has, over the years, made its nuclear weapons as secure as other nuclear-weapon States

have done. Since the 1998 nuclear tests, Pakistani authorities have taken different measures to safeguard the country's nuclear assets.

The first step in this regard was the creation of the National Command Authority (NCA) in 1999, formally announced in 2000, to manage and safeguard nuclear assets and related infrastructures. The NCA has a three-tiered structure with two committees, the Employment Control Committee (ECC) and the Development Control Committee (DCC), constituting one tier; the Strategic Plan Division (SPD), the permanent secretariat of the NCA, another tier; and the three services Strategic Force Command, the final tier. The Employment Control Committee is the NCA's main policymaking organ. It functions as a political-military committee. It has the president of Pakistan as its chairman, the prime minister as the vice chairman, and the foreign minister as its deputy chairman. The Development Control Committee is a military-technical committee that translates the policy decisions taken by the Employment Control Committee into force goals and oversees their achievement by the strategic organisations.

With the establishment of NCA and SPD, the management of nuclear weapons acquired "institutionalized capability", with the reassurance that everything is under control. On December 13, 2007, President Musharraf formalised these authorities and structure in the "National Command Authority Ordinance, 2007". The NCA was established by administrative order, but now has a legal basis. Analysts point out that the timing of this ordinance was meant to help the command and control system weather political transitions and potentially preserve the military's strong control over the system.

The SPD plays a very important role in managing Pakistan's nuclear assets by collaborating with all strategic organisations. It has four main directorates:

- Operation and Planning Directorate: carries out operational planning.
- The C4I2SR (Computerised, Command, Control, Communication, Information, Intelligence and Surveillance) Directorate: responsible for developing and maintaining strategic command and communication links.

- The Strategic Weapons Development Directorate: carries out liaison with the strategic organizations, scrutinizes their budgetary demands, and carries out audits of funds.
- The Arms Control and Disarmament Affairs Directorate: provides policy recommendations on all arms control and disarmament issues and participates in relevant bilateral and multilateral non-proliferation discussions.

The SPD has also formulated a standard operating procedure to regulate the conduct of strategic organisations. It has established a system which requires approval, reporting and monitoring of travel for all scientific personnel, especially those that possess sensitive information or expertise. On May 28, 2009, the Director of Arms Control and Disarmament Affairs at the SPD, Air Commodore Khalid Banuri, claimed that Pakistan has a large force of nearly 10,000 people deployed to keep a tight vigil on the country's nuclear arsenal.

To ensure individuals' reliability based on generally accepted security norms, the SPD has instituted a Personnel Reliability Programme (PRP) for all scientists and officials working on sensitive projects. The PRP ensures that all people responsible for handling or guarding nuclear materials or weapons are reliable, trustworthy, psychologically stable and sober. Under the PRP, any individual assigned to a strategic project or a sensitive task now undergoes a security clearance by the Inter-services Intelligence, the Intelligence Bureau, the Military Intelligence, and the SPD. This is similar to the U.S. system, and lessons have been learned and adapted from the U.S. PRP.

After an initial screening, there are periodic clearance rechecks every two years or when a person is transferred from one area of the programme to another. Additionally, random checks can be carried out when required. This process includes complete background checks on family, educational career, political affiliations, and inclinations. Likewise, a Human Reliability Programme (HRP) has been instituted for all military personnel involved with the nuclear forces in Pakistan. Furthermore, that National Command Authority Ordinance, 2007, gives the SPD authority to investigate suspicious conduct, and can send for up to 25 years of imprisonment any serving and retired personnel, including military personnel, notwithstanding any other laws.

As far as physical security of Pakistan's nuclear weapons and infrastructure is concerned, the nuclear establishments are distributed geographically. There is a multilayered system of security over these nuclear installations. This includes highly trained Special Forces at the inner perimeter, air defence systems, no fly zones, fencing of structures, monitoring by state of the art equipment, close-circuit cameras, sensors, and check posts at second and third level, and counterintelligence teams to identify any threat to nuclear installations.

In 2001, in an effort to secure Pakistan's nuclear weapons, President Pervez Musharraf ordered the re-deployment of nuclear weapons to at least six secret new locations, and reorganised the military oversight of nuclear forces. It is estimated that Pakistan has around 60 nuclear warheads which are kept separate from their delivery systems, with the nuclear core removed from their detonators. According to General Khalid Kidwai, head of the SPD, the bombs can be assembled very quickly when the need arises.

In addition to their disassembled status, Pakistan's nuclear warheads are now equipped with Permissive Action Links (PAL), which was publicly confirmed by General Kidwai in 2006. According to Brigadier (retired) Naeem Salik, Pakistan has developed its own PAL systems which obviously ensure that even if an unauthorised person gets hold of a weapon, he cannot activate it unless he also has access to the electronic codes. Pakistan follows a two-man rule to authenticate the codes that call for the release of the weapons. It may in fact be a three-man procedure in some cases. Such authentication processes are standard in advanced nuclear-weapon States.

As far as transportation of nuclear weapons and material is concerned, it is very difficult to protect them when they are on the move. Pakistan ratified the Convention on the Physical Protection of Nuclear Materials (CPPNM) in October 2000 and is working to ensure it meets all the guidelines included in the Convention. However, Pakistan is relying on secrecy in transporting its nuclear weapons rather than a highly visible security profile.

The actions of Abdul Qadeer Khan from the late 1980s through the 1990s that resulted in the transfer of sensitive technologies to Iran and Libya, among other activities, was due to flaws and in the previous oversight system. Prior to the Abdul Qadeer Khan's black market scandal, Pakistan's nuclear export control framework was governed by

statutory regulatory orders and ordinances. In 2004, Pakistan consolidated most of the previous regulations in a single legislation: the “Export Control on Goods, Technologies, Material, and Equipment related to Nuclear and Biological Weapons and their Delivery Means Act, 2004.”

The 2004 Export Control Act was established to strengthen controls on the export, re-export, trans-shipment and transit of goods and technologies, material and equipment related to nuclear and biological weapons and missiles capable of delivering such weapons. The Act extends to whole of Pakistan and maintains a control list which is consistent with the Nuclear Suppliers Group, the Missile Technology Control Regime, and the Australia Group. Exporters are required to maintain detailed inventories and records and to notify the relevant authority if they are aware or suspect that goods or technology are intended to be used in connection with weapons. Offenders face tough penalties, which include imprisonment of up to 14 years, a fine of up to five million rupees, and the seizure of all assets and property.

The 2004 Export Control Act led to the creation of a Strategic Export Control Division (SECDIV) in the Ministry of Foreign Affairs, but it is multidisciplinary and includes personnel from the Customs department; the Ministries of Foreign Affairs, Commerce, and Defence; the Central Board of Revenue; the PAEC; the PNRA; and the SPD. The SECDIV was established to formulate and enforce rules and regulations for the implementation of export controls in accordance with the Export Control Act 2004 and also to act as a licensing body.

The civilian side of Pakistan's nuclear security is governed by the Pakistan Nuclear Regulatory Authority (PNRA), which was established in 2001. The PNRA regulates all aspects of civilian nuclear energy which include licences for imports and exports, to create necessary legislations and regulations, and to ensure the physical protection of nuclear installation and nuclear material. In 2002, the PNRA streamlined nuclear disaster management by announcing a host of new measures for protecting “the plant and society from hazards that could be man-made or natural.” The PNRA has also developed a five-year National Security Action Plan (NSAP) to enhance safety and security of all nuclear and related facilities. Under the NSAP, the PNRA has established safety and security training centres, the National Security Emergency Coordination Centre, launched campaigns to locate and secure orphan sources and provision of detection equipment at strategic points to help prevent illicit nuclear smuggling.

Being a responsible nuclear-weapon State, Pakistan has contributed significantly to international efforts to control the proliferation of nuclear weapons and other weapons of mass destruction. Pakistan is a State party to the Convention on the Physical Protection of Nuclear Materials (CPPNM), the Convention on Nuclear Safety, the IAEA code of Conduct on Safety and Security of Radioactive Sources, and the U.N. Security Council Resolution 1540. Pakistan was among the very first countries that submitted a report to the U.N. to fulfil its obligations under UNSCR 1540. It has also joined the U.S.-sponsored Container Security Initiative (CSI) in March 2006.

Conclusion

All nuclear-weapon States are equally concerned about the safety and security of their nuclear assets; so is Pakistan. Pakistan is passing through a troubled phase and confronting a lot of challenges. At this turning point, the propaganda by the Western nations, particularly their media, against the security of Pakistan's nuclear programmes is baseless. The West, especially the U.S., is using this propaganda as a pressure tactic to pursue its interests. Cases of nuclear theft, smuggling, and information leakage are on the rise even in the advanced nuclear-weapon States because more and more countries are seeking this technology. This heightened interest in nuclear technology will continue to pose safety and security challenges around the globe. However, international cooperation is required in this regard to make the world a secure place.

Notes & References

* The writer is Research Fellow at the Institute of Strategic Studies, Islamabad.

[1] E. Sridharan, ed., *The India-Pakistan Nuclear Relationship: Theories of Deterrence and International Relations* (Routledge: New Delhi, 2007), p. 151.

[2] Ibid.

[3] It is important to note that the already existing model of nuclear deterrence emerged during the Cold War due to the U.S.-Soviet Union rivalry, but there emerged a fundamental difference between the Cold War model of deterrence and South Asian deterrence, i.e., “geographical proximity”.

[4] “The First Causality of the War on Terrorism Must not be Pakistan: Pakistan's Nuclear Weapons Must not Fall into Terrorist Hands”, The Institute for Science and International Security, September 18, 2001, <http://www.isis-online.org/publications/terrorism/tpakistan.html>

[5] David Albright, Kevin O'Neill and Corey Hinderstein, “Securing Pakistan Nuclear Arsenal: Principles for Assistance”, ISIS, Issue Brief, October 4, 2001, <http://www.isis-online.org/publications/terrorism/pakassist.html#notes>

[6] “Fears Rise over Pakistan's N-weapons”, Daily Times, November 12, 2007.

[7] “ElBaradei's Remarks Irresponsible, says FO”, The News International.

[8] “Strategic Planning Directorate (SPD) Combat Development Directorate (CDD)”, Global Security, <http://www.globalsecurity.org/wmd/world/pakistan/spd.htm>

[9] Paul K. Kerr and Mary Beth Nikitin, “Pakistan's Nuclear Weapons: Proliferation and Security Issues”, Congressional Research Service (CRS), Report prepared for Members and Committees of Congress, June 12, 2009.

[10] Ibid.

[11] Ibid.

[12] “Adm. Mullen: Pakistan Nuke secure But...”, CBS News, May 4, 2009. <http://www.cbsnews.com/stories/2009/05/04/world/main4989726.shtml>

- [13] "Pakistan's Nuclear Security Completely Home Grown: FO", Daily Times, June 3, 2009.
- [14] "U.S., U.K. Confident of Pakistan Nuclear Security", The Associated Press, October 11, 2009.
- [15] "U.S. Urges Pakistan on Nuclear Security", Gulf Times, October 28, 2009.
- [16] World at Risk, report 2008.
- [17] Rolf Mowatt-Larssen, "Nuclear Security in Pakistan: Reducing the Risk of Terrorism", Arms Control Today, 39: 6, July/August 2009, p. 8.
- [18] Kenneth N. Luongo and Brig. (Retd.) Naeem Salik, "Building Confidence in Pakistan's Nuclear Security", Arms Control Today, December 2007, http://www.armscontrol.org/act/2007_12/Luongo
- [19] Ibid.
- [20] P. Cotta-Ramusino and M. Martellini, "Nuclear Safety, Nuclear Stability and Nuclear Strategy in Pakistan", Landau Network, a concise report of a visit by Landau Network to Pakistan, January 21, 2002.
- [21] Updated version, Paul K. Kerr and Mary Beth Nikitin, "Pakistan's Nuclear Weapons: Proliferation and Security Issues", Congressional Research Service (CRS), Report prepared for Members and Committees of Congress, September 28, 2009.
- [22] Kenneth N. Luongo and Brig. (Retd.) Naeem Salik, "Building Confidence in Pakistan's Nuclear Security", op. cit.
- [23] Khalid Banuri and Adil Sultan, "Managing and Securing the Bomb", Daily Times May 30, 2008.
- [24] Ibid.

[25] Ibid.

[26] Kenneth N. Luongo and Brig. (Retd.) Naeem Salik, "Building Confidence in Pakistan's Nuclear Security", op. cit.

[27] "Pakistan Moves Nuclear Weapons: Musharraf says Arsenal is Now Secure", Washington Post, November 11, 2001.

[28] P. Cotta-Ramusino and M. Martellini, "Nuclear Safety, Nuclear Stability and Nuclear Strategy in Pakistan", op. cit.

[29] "How Secure is Pakistan's Bomb?", BBC, February 4, 2008.
http://news.bbc.co.uk/2/hi/south_asia/7225175.stm

[30] Kenneth N. Luongo and Brig. (Retd.) Naeem Salik, "Building Confidence in Pakistan's Nuclear Security", op. cit.

[31] Ibid.

[32] For further details, see, "Export Control on Goods, Technologies, Material, and Equipment related to Nuclear and Biological Weapons and their Delivery Means Act, 2004".

[33] Kenneth N. Luongo and Brig. (Retd.) Naeem Salik, "Building Confidence in Pakistan's Nuclear Security", op. cit.

[34] Khalid Banuri and Adil Sultan, "Managing and Securing the Bomb", op. cit.